IDENTITY PROCESSES DURING THE TRANSITION TO ADULTHOOD:

THE EFFECT OF SELF-VIEWS AND REFLECTED APPRAISALS

ON HEALTH RISK BEHAVIORS AND MENTAL HEALTH

by

ELIZABETH TOMLIN CULATTA

(Under the Direction of Jody Clay-Warner)

ABSTRACT

What does it mean to be an adult? How do views of self as an adult affect health behaviors?

How does the perception of others' expectations for what it means to be an adult affect mental

health? The transition to adulthood is a pivotal point in the life course for establishing

individuals' trajectories for both family and career. This study contributes to our understanding

of how identity and feedback from significant others affect health outcomes for young adults.

Using an original sample of over 500 18 to 29 year-olds in the United States, I explore how

identity processes shape health outcomes. I draw from social psychological theory on identity, a

life course theoretical framework, and empirical data on health during the transition to

adulthood. In particular, I seek to establish if the adult identity serves as a resource to limit

participation in health risk behaviors of marijuana use, problem alcohol use, and inebriated sex.

Consistent with theoretical predictions, I find that viewing oneself as an adult is associated with

lower levels of participation in these health risk behaviors. Additionally, I explore how the

source of feedback about meeting adulthood expectations affects anxiety and depression.

Overall, as expected, there is a positive relationship between falling behind others' expectations

and psychological distress even while controlling for own expectations about at what age one should accomplish markers of adulthood. In particular, I find that falling behind perceived expectations of peers regarding markers of adulthood is associated with anxiety and that falling behind the perceived expectations of parents and society regarding markers of adulthood is associated with depressive symptoms. Substantive, theoretical, and policy implications of these findings are discussed.

INDEX WORDS: Identity; Life Course; Transition to Adulthood; Health Risk Behaviors; Psychological Distress

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by

ELIZABETH TOMLIN CULATTA

B.A., University of North Carolina Asheville, 2009

M.A., University of Georgia, 2012

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ELIZABETH TOMLIN CULATTA

Major Professor: Jody Clay-Warner
Committee: Dawn T. Robinson
                   Ronald L. Simons

Electronic Version Approved:

Suzanne Barbour
Dean of the Graduate School
The University of Georgia
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When I was a child, I talked like a child, I thought like a child, I reasoned like a child.

But when I became an adult, I set aside childish ways. - 1 Corinthians 13:11

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CHAPTER 1

INTRODUCTION

The transition to adulthood in the United States looks different today than it did in previous generations. On average, contemporary young people are taking longer to accomplish milestones of adulthood such as finishing school, finding a stable job, establishing their own household, getting married, and having children than did their parents or grandparents. While these milestones used to be ubiquitous for young adults in their early 20s, now many young people do not achieve these markers until their 30s. A number of factors contribute to this extended transition to adulthood including educational, economic, and cultural shifts in our society (Kimmel 2009; Silva 2013; Arum and Roska 2014).

Some scholars highlight that the current generation of young adults face an economic climate that has destabilized traditional pathways to adulthood. Young adults who do not graduate college have dismal job prospects, and the job prospects for young adults with college degrees are not as good as many have been led to expect, especially since many graduate with crippling debt (Arum and Roska 2014). Working-class young adults describe the distinctive obstacles that those from lower socioeconomic backgrounds face in transitioning to adulthood (Silva 2013). In particular, an increasing emphasis on neoliberal ideology and policy in combination with a declining industrial working class has left young people with little faith in institutions and limited options for self-supporting career paths (Silva 2013).

But this lengthening transition to adulthood is not purely economic – many young adults today feel social pressure to delay adopting an adulthood identity too quickly. Research on boys becoming men ("Guyland") examines the liminal state in which many young men are socialized

to put off the responsibilities of adulthood (Kimmel 2009). Young men conform to a "guy code" of overt masculinity involving binge drinking, hazing rituals, and risky behavior that is "coerced and policed relentlessly by other guys" (Kimmel 2009: 51). Due to shifts in our economic structure, which have prompted shifts in our educational and cultural expectations, young people in the United States today are, in general, taking longer to enter established adulthood.

On the cusp of adulthood, individuals make choices and form habits that can have long-lasting effects on their life course trajectories. Young adults engage in experimentation and take risks as a form of self-exploration before settling down into the roles and responsibilities of adult life (Arnett 2000:475; Ravert and Gomez-Scott 2015). However, some of that experimental behavior can have lasting consequences for their health and well-being. The habits formed in early adulthood around substance use and sexual behavior can have a major influence on the life course trajectories of young adults. An arrest due to the illegal possession of marijuana or underage drinking can greatly limit job prospects; acquiring a sexually transmitted infection (STI) or having an unintended pregnancy can restrict family formation opportunities. In short, the effects of certain forms of exploratory behavior in early adulthood can be enduring.

Further, mental health issues can affect one's ability to achieve family and career goals, as young adults dealing with depression and anxiety struggle to fulfill their daily responsibilities at home and at work. Rates of anxiety and depression are rising, especially for young adults in the 18-29 year-old age range. Studies of generational differences in psychological distress suggest that the levels of anxiety and depression that 18-29 year olds report is higher today than in previous generations (Twenge 2000; Twenge, Gentile, DeWall, Ma, Lacefield, and Schurtz 2010; Hidaka 2012; Twenge 2015; Booth and Anderson 2016). As more young adults are

struggling with mental health issues during this pivotal time in the life course, their ability to accomplish their life goals is impacted.

In the midst of newfound independence from their families of origin, people in the 18 to 29 year old age range are exploring who they are and who they want to be in their personal and professional lives. This age range is a critical time for laying the groundwork for family formation through dating and mate selection. Simultaneously, this is a vital period for working to build a career path by attaining postsecondary education and working jobs at the bottom of the career ladder to gain experience in a field of interest. In order to evaluate how well they are accomplishing the transition to adulthood, young adults imagine how others assess their progress and turn to those who know them best for feedback. Relying on this feedback from others to understand the normative progression to adulthood could leave young adults vulnerable to feeling distress from being unable to meet expectations.

Over a century of research in social psychology has shown that how we view ourselves affects our behavior (Cooley 1902; Mead 1934; Goffman 1959). In recent decades, as the transition to adulthood has become extended and the pathways have become uncertain, many people in their late teens and early twenties do not yet see themselves as being adults (Arnett 2000; Côté 2000; Benson and Elder 2011; Schwartz, Zamboanga, Luyckx, Meca, and Ritchie 2013; Silva 2013). But the adult identity – seeing yourself as an adult and perceiving that others view you as an adult – could have a dramatic influence on health outcomes. In this dissertation I aim to demonstrate an association between self-views and health. While I will not be making causal claims, an important first step is to examine associations given the scarcity of research linking self-views to health behaviors during the transition to adulthood. There are two aspects of this idea that I will explore: (1) how one's own self-identification as an adult is tied to health

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risk behaviors and (2) how meeting others' expectations regarding accomplishing milestones of adulthood is associated with mental health.

First, I propose that identifying as an adult will be associated with lower rates of behaviors that put individuals at higher risk for negative health outcomes. This argument follows a line of research that identifies the "risk factors for health," which Jessor (1991: 597) defined as the agents or conditions associated with an increased probability of outcomes that compromise health, quality of life, or life itself. While often the search for these risk factors is primarily focused on the biological or physical environment factors, my research adds to the literature on the importance of the social environment in identifying and understanding the "web of causation" that leads to established risk factors (Jessor 1991: 600). Recent research on health behaviors at this point in the life course suggests that social position can "provide a code of decision making by defining behaviors considered to be (in)appropriate" (Daw, Margolis, and Wright 2017: 183; Cockerham 2013). In addition to factors such as race-ethnicity, gender, and socioeconomic status, which have been shown to influence health behaviors, I suggest that adulthood status – both self-identified and as viewed by significant others – influences health.

Consistent with social psychological theory and empirical research on identity (McCall and Simmons 1966; Stryker 1968; Stryker and Burke 2000; Granberg 2011), if an individual identifies as an adult, this self-view could guide behavior, motivating that individual to act in ways that align with the adult identity. Thus, my first argument is that viewing oneself as an adult serves as a resource for limiting health risk behaviors. Individuals may deem behaviors such as illicit drug use, problem drinking, and risky sexual behaviors as inconsistent with an adult identity and accordingly limit their involvement in these behaviors because they do not align with their views of self as adult. This argument is congruent with Identity Theory (McCall

and Simmons 1966; Stryker 1968; Stryker and Burke 2000) and empirical literature suggesting

that identity guides behavior (Abrams, Allen, and Gray 1993; Youngreen, Conlon, Robinson,

and Lovaglia 2009; Hesse-Biber, Livingstone, Ramirez, Barko, and Johnson 2010; Granberg

2011; Stets and Carter 2011).

Second, perceptions of others' views regarding age norms – and whether or not an

individual is meeting those norms – could have a profound impact on that individual's mental

health. Young adults are aware of a set of milestones such as achieving financial independence,

leaving home, finishing their education, and being in a serious relationship that signal to

themselves and to others that they have reached adulthood. Some researchers highlight a

generational mismatch in the perception of the appropriate timing of those milestones – many

young adults today are not achieving adulthood markers by the age at which their parents and the

wider society think they should (Nelson, Padilla-Walker, Carroll, Madsen, Barry, and Badger

2007; Trzesniewski and Donnellan 2014). Falling behind the perceived expectations of others in

accomplishing those milestones may cause psychological distress – even if an individual is

meeting his or her *own* expectations for at what age those events should occur.

Foundational social psychological literature has shown that in times of uncertainty,

feedback from others is extremely important for understanding ourselves (Gollwitzer, Wicklund,

and Hilton 1982). The transition to adulthood is a time of great turmoil and individual-level

personal growth (Arnett 2000; Schwartz et al. 2013; Panagakis 2015), and currently our macro-

level cultural understandings of adulthood are shifting (Benson and Furstenberg 2007; Silva

2013; Eliason, Mortimer and Vuolo 2015). During this tumultuous point in the life course,

individuals rely heavily on real or perceived appraisals of significant others to determine their

own progress along a normative timeline of development (Neugarten, Moore, and Lowe 1965; Elder 1998; Sharp and Ganong 2007).

Fundamental changes in our economic structure and cultural narrative have permanently disrupted the traditional pathways to adulthood – a shift which affects both middle-to-upper class young adults as well as working-class young adults. Silva (2013) describes an economic and ideological shift in recent decades towards an emphasis on neoliberalism, which values self-reliance, rugged individualism, and minimal government interference with labor markets. Simultaneously, achieving financial independence is becoming increasingly difficult as extended education is required for many jobs that provide a living wage. To achieve this education requires continued reliance on one's family of origin well past the legal age of adulthood. I argue that one result of this new economic reality is that young adults are often unable to match the age-expectations of their parents, peers, or society in general for accomplishing the normative markers of adulthood – and this causes distress.

Examining the precursors and correlates for psychological distress is particularly important at this stage in the life course as this is a critical time for positioning oneself for personal and professional goals. Mental health problems in early adulthood can have uniquely detrimental effects on career and family trajectories. Feeling distress about failing to meet expectations of significant others regarding the milestones of adulthood could create additional obstacles for young adults to meet those milestones resulting in a problematic and reinforcing cycle. If individuals want to be seen as adults and achieving those milestones is important to accomplish that identity, then falling behind perceived expectations for adulthood may be associated with psychological distress.

Identity processes during the transition to adulthood may affect health outcomes in important ways. In this dissertation I explore how views of self and perceived views of others regarding adulthood shapes health outcomes by asking two central research questions consistent with the life course theoretical framework and using theories of identity from social psychology. First, I ask, "how are views of self as an adult associated with participation in health risk behaviors?" Second, I ask, "How is falling behind own and others' expectations regarding achieving markers of adulthood associated with psychological distress?" To address these questions, I designed and administered a survey to over five hundred 18-29 year olds in the United States (N=502).

In the next chapter, I will present a review of relevant literatures including theoretical overviews on identity, the life course, and transitions to adulthood as well as empirical literature on health at this stage in the life course. In Chapter 3, I outline my theoretical predictions with specific hypotheses regarding identity processes during the transition to adulthood. Chapter 4 presents the methods including my approach to data collection, sample descriptives, measures, and the analytic strategy I used to answer these research questions. In Chapter 5, I present the results regarding the association between an adult identity and health risk behaviors. In Chapter 6, I present the results regarding falling behind the expectations of others and psychological distress. Finally, in Chapter 7, I provide a discussion of these findings including substantive, theoretical, and policy implications of this research, as well as limitations and future directions.

CHAPTER 2

LITERATURE REVIEW

This dissertation explores the impact of views of self during the transition to adulthood and how the social construction of adulthood affects individuals' lives in meaningful ways. The purpose of this chapter is to provide an overview of the literature in four relevant areas of research. In the first section, I present social psychological theory on processes of identity and empirical evidence that supports how identity has been shown to guide behavior. This section also includes a brief discussion of the uniqueness of the age identity. Second, I present literature on the life course theoretical framework focusing on the concepts of age structuring, age norms, and cultural age deadlines. I also discuss how the life course concept of a "cultural lag" (Ogburn 1922; Byrne and Carr 2005; Fingerman 2017) might be particularly relevant with the changing meaning of adulthood. Third, I outline what we know about the transition to adulthood and how our societal understanding of adulthood has shifted in recent decades. In this section, I also discuss demographic shifts in the markers of adulthood and describe this time in the life course that some scholars label "emerging adulthood" (Arnett 2000). Finally, I review life course and epidemiological research that shows that both health risk behaviors and psychological distress occur at a lifetime high during this stage of early adulthood.

IDENTITY

This dissertation is focused on young adults' health outcomes as they relate to views of self. In this section, I first define what I mean by "identity." Then, I introduce key aspects of one social psychological theory of identity, Identity Theory, that proposes mechanisms through which identity guides behavior. Next, I describe empirical research on how identity guides

behaviors. Finally, I explain how social psychologists think about the "age" identity and present empirical research on how the adult identity guides behaviors.

Defining Identity

Identity is an individual's understanding of who they are in relation to other people (Owens 2006). Classic symbolic interactionism suggests that we form our identities through internalizing how others see us and act in ways that match how we want to be seen (Cooley 1902, Mead 1934). In this dissertation, *identity* should be understood as the "internalization of social positions within a self-structure" (Owens, Robinson, Smith-Lovin 2010). In this conception, identity arises from social structural positions (e.g., gender, class, race, age) and is dependent on social roles (e.g., teacher/student, doctor/patient, mother/child), but is not completely defined by those indicators. Instead, individuals act in line with how they see themselves and how they think others see them. This viewpoint draws on McCall and Simmons (1966:67) notion of a role-identity as an individual's "imaginative view of himself *as he likes to think of himself being and acting* as an occupant of that position" (cited in Owens, Robinson, Smith-Lovin 2010: 480 and McCall 2003: 11). Identities, then, can be thought of as internalized understandings of role expectations (Stryker and Burke 2000: 286).

So how do individuals understand who they are in relation to other people? Individuals understand who they are and how others see them through feedback from the significant others in their lives – their peers, romantic partners, parents, teachers, and anyone with whom they interact who holds expectations about how they should act. An individual's perceptions of the expectations of others can be thought of as *reflected appraisals* (Felson 1985). Reflected appraisals influence both individuals' views of self and their emotions. This idea can be traced back to Charles Horton Cooley's (1902) notion of the *looking-glass self.* According to Cooley,

individuals' understandings of self are achieved through "the imagination of our appearance to the other person, the imagination of his judgment of that appearance, and some sort of self-feeling" (Cooley 1902: 152). In other words, our own appraisals of ourselves are shaped by the perceived appraisals of others. This process results in a "self-feeling," which could either be positive (e.g., pride, contentment) or negative (e.g., shame, anxiety).

Since Cooley's original work, many other symbolic interactionists have reconfirmed the idea that the self develops from the reflected appraisals of others and that the perceptions and expectations of significant others strongly shape individuals' conceptions of themselves (Mead 1934; Goffman 1959; Felson 1981). Kinch (1963: 481) formalized this idea about self-concept, writing that "the individual's conceptions of himself emerges from social interaction and, in turn, guides or influences the behavior of that individual." This summary emphasizes that individuals' views of self are shaped by the feedback they get from others, which then affects their actions. In particular, if individuals are just beginning to adopt a role-identity, or to value a role-identity, the validation from their social networks is especially important for shaping their social reality. Thus, feedback from significant others about whether a young person is successfully accomplishing the adult identity may be particularly important for that individual who is just transitioning into this role.

Identity Guides Behaviors: Mechanisms and Empirical Support

Identity Theory

Identity Theory (Burke 1991; Burke and Stets 2009) (an extension of Stryker's (1968) Identity Theory) presents a cybernetic model of the self (Powers 1973) in which identity standards guide behavior. According to Identity Theory, an identity is composed of four basic components that make up a "feedback loop" or continuously operating cycle comparing

perceptions: an identity standard, an input, a comparator, and an output. These four components describe the system that operates to coordinate the feedback received in interaction and self-conceptions.

An *identity standard* is how individuals see themselves based on a set of culturally prescribed meanings. For example, individuals hold gender identities in which they can be characterized as more feminine or more masculine. *Inputs* are the perceptions of feedback from others, specifically related to the identities an individual holds. For example, if an individual considers herself an "A" student but gets a "D" grade on a test, the inputs (not a good student) do not match her identity standard (good student). The *comparator* is the portion of the feedback loop that compares inputs (perceptions of feedback) and the identity standard (self-conception). Finally, the *outputs* are the meaningful responses in a situation based on this comparison. So in the example of getting a "D" grade on the test, the outputs would be the actions the individual takes in response to the input not matching her identity standard. These outputs could include a behavioral response or a redefinition of either the situation or her own identity. A behavioral response would be to study extra hard for the next test or drop that class and enroll in another one in which she would anticipate getting higher grades. A redefinitional response would be to say that the teacher did not create a good test or to redefine herself according to another identity, such as "good friend" or "Mom" for spending her study time helping a friend with a crisis or tending to a sick kid.

In the more structural view of Identity Theory, *identity salience* is the likelihood that a particular identity will be invoked across a variety of situations (Stryker and Burke 2000:286). All individuals have multiple identities which are organized into a *salience hierarchy* in which identities are located higher in the order if they are more likely to be invoked across situations.

The higher the salience of an identity relative to other identities incorporated into the self, the greater the likelihood of behavior congruent with the expectations attached to that identity. Particular identities are higher in the salience hierarchy both due to an individual valuing those identities (e.g., strongly identifying as a student) and through social feedback (e.g., people often remarking on or drawing attention to gender or race). An adult identity, for example, might be particularly salient for individuals who are just beginning to adopt new roles associated with adulthood for which they receive attention or praise and that they value as a part of gaining independence from their family of origin. An identity higher in an individual's salience hierarchy is more likely to be invoked in an interaction and is most likely to influence behavior and self-feelings.

Identity Theory describes how individuals balance multiple identities by seeking to support the identities that are higher in their salience hierarchy in two ways. One way that people will confirm their most salient identities is by performing behaviors in line with that identity. A second way people support salient identities is to surround themselves with others who will give them feedback that they are successfully achieving that identity. So, for example, if an individual values the identity of *student*, that individual will study and attend class and surround themselves with teachers and other students. If an individual does not value a certain identity (e.g., a man not wanting to be seen as feminine) than he will act to show that he is *not* someone who would fulfill that identity (i.e., by over-emphasizing masculine behaviors).

Identity Theory can provide an explanation as to the ways in which identity might guide behavior. The perceptual control model developed by Burke and colleagues (Burke and Tully 1977; Burke 1980; Burke and Stets 2009) describes a system in which feedback from others affects individuals' perceptions of themselves. In this model, people seek consistency between

their identities and their actions. The Identity Theory framework of a feedback loop could be applied to the adult identity. If certain behaviors are seen as ones that adults should "grow out of" then viewing oneself as an adult may be associated with less participation in those behaviors. Identity Theory predicts that individuals will incorporate information from their environment to determine their behavior based on the identities they claim and how they want to be seen by others.

Scholars have also used Identity Theory to predict that negative emotions will result from a discrepancy (either positive or negative) between inputs and one's identity standard (Large and Marcussen 2000; Stets and Tsushima 2001). If individuals receive feedback that they are not successfully accomplishing a valued identity, they will feel distress. This theory has not yet been applied to particular life course stages, although it would be useful for understanding how individuals choose how to behave during the prolonged transition to adulthood.

Identity Guides Behavior – Empirical Support

Research has shown that an identity can act as a goal to motivate behavior (Abrams et al. 1993; Youngreen et al. 2009; Granberg 2011; Shuttlesworth and Zotter 2011; Springer and Mouzon 2011; Stets and Carter 2011). This literature focuses on wide-ranging types of identities and behavioral outcomes, but the process is the same: how people view themselves guides their behavior. One study focused on the "moral" identity, based on self-views as being honest, caring, fair, and nine other morality-related characteristics, in a survey of 500 college students (Stets and Carter 2011). The researchers demonstrated that people who held a moral identity more central to their sense of self were more likely to avoid immoral behaviors like stealing, letting a friend drive drunk, or keeping found money. In a follow-up laboratory study, people who held moral identities more centrally were less likely to cheat on a test when given a clear

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opportunity to do so. These studies show that individuals who hold self-views as being moral more highly in their salience hierarchies enact behaviors to confirm that identity.

Another study highlights how confirming a centrally held identity (undergraduate major) motivates behavior (test performance) by tracking if a student was led to believe a test of general aptitude measured their ability in their desired career or a contrasting career (Youngreen et al. 2009). In this experiment, college students taking an identical mental ability test scored 2.5 points higher when they were convinced that the test confirmed their undergraduate major identity (e.g., business, social work, education) than when they thought the test verified a contrasting identity (Youngreen et al. 2009). This study shows that participants performed significantly better on a standardized mental ability test when they were told it measured the attributes and skills relevant to a centrally-held identity.

Identity has also been shown to guide health-related behaviors (Abrams et al. 1993; Granberg 2011; Shuttlesworth and Zotter 2011; Springer and Mouzon 2011). Examples from the literature include individuals' desire not to have an overweight identity motivating diet and support group meeting attendance, holding an ethnic identity affecting disordered eating behaviors, and adhering to a traditional gender identity shaping health-seeking behavior. A desire to shed a stigmatized identity (such as "fat" or "overweight") has been shown to motivate behavior in order to gain informal social feedback that validates a new more highly desired identity (Granberg 2011: 31). Illustrating the feedback loop from Identity Theory, Granberg (2011) shows that individuals are motivated to reduce the discrepancy between an internalized identity standard of how they see themselves and perceived social feedback from significant others by enacting weight loss behaviors such as going on a diet and attending meetings for Overeaters Anonymous or Weight Watchers.

Certain identities can be protective from dangerous health behaviors such as anorexia and bulimia. The low prevalence of restrictive eating disorders among Black women has been tied to the holding an "ethnic identity" (Abrams et al. 1993). Black women who reject their Black identity and idealize a White identity are more likely to endorse negative attitudes about body image as well as dietary behaviors associated with eating disorders. More recent research confirms the connection between holding an ethnic identity and disordered eating. In Shuttlesworth and Zotter (2011), women who strongly identify with African American beauty ideals were less likely to report disordered eating to lose weight. Though the authors predicted that these women might be at greater risk for binge eating to attain the fuller ideal female figure compatible with African American beauty ideals, they found that African American women with stronger ethnic identities had lower likelihoods of *all forms* of disordered eating behaviors. They suggest this is consistent with African American beauty ideals, which value other aspects of beauty besides thinness in judging attractiveness (Rubin, Fitts, and Mako 2003). Further, they found that African American women who indicate *low* levels of ethnic identity were more likely to report binge eating and bulimic pathology (Shuttlesworth and Zotter 2011).

However, identities can also lead to behaviors that are detrimental to health outcomes. Men with strong masculinity beliefs have been shown to be half as likely as men with more moderate masculinity beliefs to receive preventive care such as a flu shot, general exam, and a prostate exam (Springer and Mouzon 2011). Men who held strong masculinity ideals enacted their masculine identity by showing self-reliance and independence – and by not going to the doctor.

These empirical studies show that identities relating to morality, college major, weight, ethnicity, and masculinity are associated with measurable changes in behavior – could these

processes work similarly for an identity related to age? While research has shown that an identity can motivate behavior (Youngreen et al. 2009; Stets and Carter 2011) and, more specifically, that an identity can motivate health behaviors (Abrams et al. 1993; Granberg 2011; Shuttlesworth and Zotter 2011; Springer and Mouzon 2011), the literature is far less conclusive on how age identities are associated with health behaviors. What remains unclear is how the age-related adult identity – both embracing or trying to distance oneself from it – might motivate health behaviors.

Age Identity

Identities based on age are unique in two ways. First, boundaries of group membership in age-related social categories are permeable and always experiencing an influx of new members into a given age category in a manner identities based around race, class, or gender are not (Midwinter 2005). As individuals move through the life course they adopt and discard identities such as child, adolescent, teenager, and adult. Both the recent discarding of younger identities and the anticipated adoption of future identities could affect behavior in ways unique to age-related identities. Secondly, age identities are both ascribed and achieved (Howard 2000). Each age-related identity is based partially on age, but also on other physical, social, and economic developmental milestones. This means that especially when individuals are on the cusp of transitioning from one age category to the next, they may seek to support desired identities through their actions. For example, getting a driver's license, holding a job, or finishing school would serve as indicators to others that an individual has fully discarded the identity of child. Identities based on age are unique from other types of identities and thus require special consideration.

Researchers have answered Howard's (2000) call for more explicit attention from social psychologists to focus on age-based identities largely by focusing on *subjective aging* – how individuals perceive their own aging process (e.g., Kotter-Grühn, Kornadt, and Stephan 2016). In the social psychological literature on the life course literature, "age identity" refers to the subjective evaluation of a person's age, subject to individual and historical experiences (Kaufman and Elder 2002). Social psychologists who study age identity have suggested factors that influence perceptions of subjective aging such as role transitions (Johnson, Berg, and Sirotzki 2007; Eliason et al. 2015), hardship while growing up (Johnson and Mollborn 2009), and turbulence in family relations and health declines (Schafer and Shippee 2010). The literature exploring the effects of subjective aging on health outcomes is mostly focused on older adults (Schafer and Shippee 2010; Westerhof, Miche, Brothers, Barrett, Diehl, Montepare, Wahl, and Wurm 2014). The focus of this literature is on the idea that older adults who feel younger have better health outcomes, with policy suggestions for promoting youthful identities and more positive attitudes towards own aging for older adults (Westerhof and Wurm 2015). Some research, however, focuses on adolescents who feel older than their chronological age (Johnson et al. 2007; Benson and Johnson 2009; Eliason et al. 2015) and who may make health choices consistent with their self-perceptions.

The health risk behaviors of drinking and smoking have been shown to be symbols of maturity among adolescents, but those same behaviors begin to seem immature as individuals get older. Moffitt (1993) identified a "maturity gap" in which a discrepancy between biological and social maturation results in adolescences emphasizing their independence through acts of delinquency. Strain from not being able to express their fledgling adulthood status leads adolescents to seek alternative (and often illegal) ways of expressing their maturity. Indeed, a

direct test of this idea using longitudinal data showed that a maturity gap predicted minor forms of delinquency and drug use for young men (Barnes and Beaver 2010). Other research showed that adolescents who feel older than their chronological ages reported higher levels of health risk behaviors such as substance use (Galambos, Kolaric, Sears, and Maggs 1999). Adolescents with less autonomy and especially more conflict with their parents also showed higher levels of substance use and delinquency among both boys and girls (Dijkstra, Kretschmer, Pattiselanno, Franken, Harakeh, Vollebergh, and Veenstra 2015). If adolescents feel blocked from certain mature adult behaviors, they may resort to delinquent behaviors as a way of emphasizing their independence. For adolescents, then, drinking and smoking might symbolize maturity in a way that does not hold once these behaviors are legal – in fact, those same behaviors may be seen as juvenile among established adults with the ability to enact their adult identities in other ways.

Among people making the transition to adulthood, the adult identity can serve as a guide for behavior (Arnett 1994; Massoglia and Uggen 2010; Shannon, Uggen, and Osgood 2017). Drawing on Neugarten et al. (1965)'s classic research on age norms, Massoglia and Uggen (2010) suggest that socialization as an adult includes the internalization of societal beliefs about age-appropriate behaviors that guides desistence from crime. They find that people who *do* persist in delinquency are less likely to view themselves as adults. In a survey across the age ranges of adolescents (ages 13-19), early adults (ages 20-29) and young-to-midlife adults (ages 30-55), Arnett (2001) demonstrated that people identify "norm compliance" (e.g., using contraception, driving the speed limit) as definitional to being an adult. The majority of respondents across age ranges indicated that avoiding behaviors such as driving drunk, using illegal drugs, and committing petty crimes were necessary for achieving adulthood status.

Young adults may change their use of leisure time in order to be perceived as an adult. Shannon, Uggen, and Osgood's (2017) qualitative study illustrates that young adults engage in activities they believe others may see as mature or age-appropriate in order to "solidify a comprehensive adult identity" (Shannon et al. 2017: 168). By enacting leisure behaviors that reflect the adult identity, young people signal to their significant others – and themselves – that they should be seen as adults. Many young adults describe reducing or ceasing substance use in favor of family time, home maintenance, and outdoor activities. A dominant theme from the interviews is that adults decrease substance use in order to better comply with adult norms and adult roles such as worker, homeowner, and parent (Shannon et al. 2017). These studies show that young adults believe that certain behaviors such as drinking, drug-use, and risky sex are seen as appropriate in earlier stages in life, but limiting or eliminating those behaviors is necessary to achieve adulthood status.

Finally, Laz (1998) describes age as something to be accomplished akin to West and Zimmerman's (1987) "doing gender." She argues that when we remind each other to "act your age," classify ourselves as being "ahead of" or "behind time" related to advancement in careers and family, or censure others for not complying with age norms that we are demanding a performance of behaviors in line with age expectations. Viewing age as a process and an outcome of ongoing interactional work suggests that age is far more social than chronological. In line with classic theories of identity (Goffman 1959), this view asserts that age is an identity that can be accomplished through social interactions. Recent research has explored this idea related to early adulthood by exploring how young adults in the United Kingdom discuss the "gap year" between high school and college education (King 2011). Young adults in this sample discussed how their relationship with friends, employers, teachers, and parents changed based on

their behavior during their gap year. Young adults who demonstrated maturity and perseverance during their gap year reported feeling as if they were able to present themselves as adults and thus accomplish the adult identity (King 2011).

LIFE COURSE THEORETICAL FRAMEWORK

This dissertation is focused on the identity and health processes that occur at a particular stage in the life course – the transition to adulthood. My arguments draw heavily from concepts and ideas used in life course research. Thus, this section will first include a general introduction to the literature and description of the theoretical framework of the life course. Next, I will introduce some particularly pertinent life course concepts that I will later use to explain outcomes of health risk behaviors and mental health during the transition to adulthood. Finally, I will suggest that a cultural lag exists in our society today between the ideals and the reality of adulthood.

The Life Course

The *life course* can be defined as a "sequence of socially defined events and roles that the individual enacts over time" (Giele and Elder 1998: 22). *Roles* are sets of behavioral expectations that are attached to positions in social structure such as student, wife, or worker (Thoits 1991: 104). Role entry and exit (i.e., becoming a parent; graduating high school or college) are *transitions*. Sociological research on life course transitions explores the normative and non-normative changes in roles that individuals experience over time (George 1993). This research focuses on sequencing of role transitions and identifying mechanisms by which role transitions affect outcomes. The empirical literature on life course transitions can be divided into two categories based on unit of analysis: population based studies and studies of individuals.

Population based studies often examine the timing of transitions, the sequencing of transitions, and transitions as life course markers among groups of individuals born in a similar time and place, called *cohorts*. In tracking the *timing* of transitions, research compares the average age of people in one cohort to another cohort as they make transitions such as getting married, becoming parents, or retiring from the workforce. *Sequencing* refers to a normative order in which role entry and exit occurs for most of the population. For example, Hogan's (1978; 1981) classic studies tracked the normative sequence of role transitions for entry into adulthood and found that most American men between 1907 and 1952 first left school, then got a full-time job, then got married and that men who experienced "disorderly sequences" experienced some negative outcomes such as less prestigious jobs and higher rates of divorce (cited in George 1993:360). More recent research linking health and role sequencing (Jackson 2004) finds support for a normative order of entering the paid labor force, getting married, and then later having children being associated with positive mental health outcomes, though findings differ by race and gender. Even as increased variation exists in the sequencing of traditional transitions, individuals persist in believing that there are proper ages and sequences of life course events (Berg 2007).

Finally, a body of research uses life transitions as *markers* of stages when they are highly prevalent and highly predictable. The markers surrounding adulthood status include moving out of family of origin's home, exiting the student role, getting a full-time job, getting married, and becoming a parent. Benson and Furstenberg (2007) find that certain markers are more closely tied to adulthood status for different social categories (e.g., parenthood increased the odds of feeling like an adult for women, but not for men) and that some markers were dependent on others (e.g., youths with full-time work did not feel fully adult unless they had *also* moved out of

their parents' household). Aronson (2008) found that parenthood and financial independence were associated with feeling like an adult for the women in their sample, while full-time work and marriage were not.

Another branch of life course transitions research focuses on the effects of role transitions at one point in time on subsequent life course outcomes. This includes macro-level historical events, such as Elder's (1975; 1997; 2009) studies of cohorts differentially affected by the Great Depression or World War II. This also includes micro-level personal transitions and choices, such as marrying (Uecker 2012) or becoming a parent (Mollborn and Mornignstar 2009) earlier than is socially normative. The central focus of this branch of life course transition research is that the role transitions experienced at one point in time often have far-reaching consequences for an individual's life course trajectory.

Age Structuring, Age Norms, and Cultural Age Deadlines

Life course researchers have long described a timeline for major life events and suggested that individuals are conscious not only of the "social clocks" that operate in their lives, but that they are also aware of their own timing in relation to those expectations (Neugarten et al. 1965: 711). Three important and related concepts in this line of research on normative patterns in the life course are "age structuring," "age norms" and "cultural age deadlines." *Age structuring* acknowledges that every society uses age to understand and define the experiences, roles, responsibilities, rights, and statuses that individuals hold (Settersten and Mayer 1997; Kertzer 1989). Rights and responsibilities are explicitly structured by chronological age through laws and social policies dictating at what age particular behaviors are allowed. For example, each society has age regulations determining how soon in life individuals are granted adult rights such as voting, driving, drinking, working, marrying, and being allowed to complete education

(Cain 1976; Bytheway 2005). Simultaneously, researchers acknowledge that chronological age

itself is an "empty" variable used to index the factor thought to be important and not the cause of

a behavior itself (Settersten and Mayer 1997: 239; Midwinter 2005). This has driven some life

course researchers to make distinctions among the constructs of chronological age, career stage,

tenure, generational age, life events age, subjective age, and normative age (Pitt-Catsouphes,

Matz-Costa, and James 2012). Societies (and life course researchers) use age as a predictor of

individuals' emotional maturity or readiness to assume responsibilities (Settersten and Mayer

1997; Pitt-Catsouphes and McNamara 2016).

Because age is such a salient indicator of these underlying individual traits, age norms

form around particular ages regarding what behavior is appropriate and expected at certain points

in the life course. *Age norms* are defined as "prescriptions or proscriptions about behavior in the

form of 'should' and 'should not'" that are supported by consensus and enforced through social

control (Settersten and Mayer 1997). Foundational research on age norms indicates that social

control includes both positive social sanctions (keeping people "on track") and negative social

sanctions (bringing straying individuals "back into line") (Neugarten et al. 1965; Berger 1963;

Settersten 2002). More recent research indicates that at least some young adults today continue

to expect markers of adulthood (such as marriage) to be tied to a "schedule" in that there is a

certain age by which those markers should occur (Kefalas, Furstenberg, Carr, and Napolitano

2017: 118). Age norms encourage individuals to accomplish life course milestones in a

predictable sequence in synchrony with peers.

As an update to the work that Neugarten and her colleagues conducted in the 1950s and

1960s, Settersten and Hagestad's work on *cultural age deadlines* regarding family transitions

(1996a) and work and education (1996b) explores whether individuals perceive particular ages

by which men and women should accomplish life events such as leaving home, marriage, parenthood, finishing education, and beginning a full-time job. In their research, the majority of respondents perceived "cultural age deadlines" for these milestones, identifying particular ages by which men and women should accomplish these life course events. Over 85% of respondents perceive an age deadline for marriage, 78% perceive an age deadline for leaving home, and 79% perceive an age deadline for parenthood. This research finds that the age of the deadline differs by life domain, but there are generally earlier deadlines expected for women than for men. The vast majority of adults interviewed report the existence of an age deadline as well as consequences for those who miss the deadline.

Cultural Lag

While our cultural understanding of what it means to be an adult remains relatively fixed, the experiences of many young adults today do not match those markers. The term "cultural lag" (Ogburn 1922) can be used to describe the slow-to-change cultural ideals that elevate a certain cultural narrative for a normative progression to adulthood that do not match many people's lived experiences. Macrosocial changes that encourage and sustain an extended transition to adulthood are at odds with an adulthood ideology that includes accomplishment of traditional markers of adulthood at earlier ages (Fingerman 2017). Byrne and Carr (2005: 84) describe a cultural lag in marriage trends in which there is a disconnection between actual demographic behavior (i.e., record high number of unmarried Americans) and ideology (i.e., "pervasive and largely uncontested support for the Ideology of Marriage and Family"). I suggest that this same idea could apply to the extended transition to adulthood as fewer and fewer people are achieving all five traditional markers of adulthood by their early twenties and yet there is the continued influence of a socially constructed ideology regarding accomplishing those adulthood

milestones. While previous researchers have applied these ideas to particular life domains associated with adulthood, especially marriage (Sharp and Ganong 2007; Carlson 2012; Eck 2013) and parenthood (Dykstra and Hagestad 2007; Hagestad 2007; Sharp and Ganong 2011), this dissertation will address a combination of those role transitions indicating adulthood status.

In recent years, life course researchers have emphasized a shift in understanding cultural age deadlines, particularly related to the transition to adulthood. Researchers suggest that (a) the deadlines for accomplishing these life course milestones have shifted later (Furstenberg, Kennedy, McLoyd, Rumabut, and Settersten 2004); (b) the consensus regarding cultural age deadlines is now weaker (Fussell and Furstenberg Jr. 2005); and (c) the criteria for adulthood is marked by generational differences (Nelson et al. 2007; Fingerman, Cheng, Wesselmann, Zarit, Furstenberg, and Birditt 2012). In response to these trends, Arnett (2000) has described this period of the life course, in which individuals have reached the chronological age at which society grants them adult rights and privileges, but do not yet view themselves as adults, as *emerging adulthood*. Based on these developments, the transition to adulthood represents a particularly uncertain point in the life course for young people in terms of self-views. This ambiguity requires them to rely on the feedback from their social networks about their own progress towards meeting cultural age deadlines.

TRANSITIONS TO ADULTHOOD

In this section, I examine our empirical understandings of adulthood. I begin by defining adulthood. Next, I present findings about the markers associated with adulthood and how the age at which most people in the United States are accomplishing those markers has shifted over the past half century. In this section I present demographic data on completing education, leaving home, becoming financially independent, getting married, and becoming a parent.

Finally, some psychologists have suggested that this extended transition to adulthood should be labeled as a new life stage, and I will define features and characteristics of that proposed developmental period.

Defining Adulthood

What does it mean to be an adult? When does an individual reach adulthood? On what basis do we determine that an individual has reached adulthood? Adulthood status is unquestionably tied to *age* for biological and legal reasons. Individuals reach biological adulthood when they have achieved certain markers such as reaching puberty, growing to a full height, and having the capacity to reproduce (Mayseless and Scharf 2003). Legal adulthood occurs in stages with certain rights and responsibilities granted at different ages – driving a car, drinking alcohol, serving in the military, or voting in elections.

Adulthood status is also tied to *milestones* such as becoming financially independent, finishing education, and leaving the childhood home. However, we know that individuals accomplish those milestones at drastically different ages and, as scholars have previously noted, the idea that people meet these markers in a linear fashion without skipping or reverting back feels untrue (Fincham and Cui 2011). Additionally, adulthood status is also tied to *roles* – being a full-time worker, getting married, or becoming a parent – and one stream of social psychological research emphasizes the importance of social roles in shaping adult identity (George 1990; Shanahan 2000; 2005; Johnson et al. 2007). For example, Shanahan, Porfeli, Mortimer, and Erickson (2005) highlight the importance of both individualistic personal qualities *and* demographic transition markers in self-views of having reached adulthood. In a national longitudinal study of 18-28 year olds Johnson et al. (2007) affirm the importance of social roles in shaping adult identity showing that the five traditional social transition markers partially drive

self-perception as an adult. Other research calls into question the importance of roles as

meaningful markers of the adult identity (Benson and Furstenberg 2007) and suggests that the

meanings of these roles vary by social position including gender (Kimmel 2008; Aronson 2008),

race (Phinney 1990; 2006), ethnicity (Arnett 2003), and class (Meier and Allen 2009; Silva 2012;

2013). It is important to note here that while these roles – worker, spouse, parent – can each

serve as a "visible badge of adulthood" (Kefalas et al. 2017), an individual can, of course,

identify as an adult without holding those roles. Still, the age at which individuals accomplish

these milestones and transition into these adult roles is important for understanding adulthood in

the United States today.

Demographic Shifts in Role Transitions

In recent decades, the role transitions related to adulthood have been occurring at later

ages than in previous generations. Demographers track the age at which people complete

adulthood markers such as finishing education, leaving home, getting married, and becoming

parents. In general, the timing of each of these adulthood milestones is shifting later (Vespa

2017). This section presents specific data on the demographic shifts in the age at which people

are accomplishing classic adulthood milestones.

Education

A primary reason that marriage, childbearing, and financial independence are pushed

later for some young adults in recent decades is an increase in extended education (Kefalas et al.

2017: 119). As more people complete high school, go to college, and get advanced degrees, the

average age at which people complete education is trending upwards (Trent, Orr, Ranis, and

Holdaway 2007; Schwartz 2013; Louie 2017). The trend of more people graduating means that

they are also are staying in school longer and finishing their schooling at an older age. Data

gathered by the National Center for Education Statistics (NCES) shows that high school graduation rates have steadily trended upwards since the 1940s, when educational statistics were first collected by the United States government. In the 1940s and 1950s, more than half of Americans completed their education after the eighth grade and did not attend high school (Snyder NCES 1993). In contrast, research shows that in 2015 four out of five students graduated with a standard high school diploma within four years of starting ninth grade (NCES 2017).

More young people than ever are enrolling immediately in college courses after completing high school. In 1960, less than half (45.1%) of high school graduates enrolled in 2-year or 4-year colleges for the following semester, and for decades the percentage of high school graduates who enrolled in college the following semester remained around fifty percent. In recent years more than two thirds of high school graduates enroll immediately in 2-year or 4-year colleges. By 2015, 69.2% of high school graduates enrolled in college courses the following semester (NCES Table 302.10: 2017).

Record percentages of young people are completing their bachelor's degrees and continuing on to post-secondary graduate degrees. The percentage of college graduates in 2000 was over four times the percentage of college graduates in 1950, and almost 30% of young people aged twenty-five to twenty-nine have completed a bachelor's degree or more (Settersten, Furstenberg, Rumbaut 2005). Acquiring those degrees takes time – pushing the average age at completing education upwards in comparison to previous generations.

The Census Bureau provides information on the percentage of people enrolled in school by age across time beginning in 1970 up until 2009 (NCES 2012). In 1970, less than half (47.7%) of 18 and 19 year olds were enrolled in school, while in 2009 the rate of school

enrollment for this age range was almost seventy percent (68.9%). For young adults ages 20 and 21, the school enrollment rate was 32% in 1970 and 51.7% in 2009. In line with the extended time young adults are spending in school, the school enrollment rate in 2009 was double the rate in 1970 for both the 22-24 year old (30.4% vs. 14.9%) and 25 to 29 year old (13.5% vs. 7.5%) age range. These rates show that the percentage of young adults in their late teens and early twenties still enrolled in school and working to complete their education has increased tremendously in recent decades.

Research also shows that higher education remains stratified and selective (Louie 2017; Silva 2013). The rates of high school and college completion remain lower for "traditionally underserved populations" populations (Social Science Research Council (SSRC) 2005; Louie 2017). Black and Hispanic students have much lower graduation rates than their White counterparts, and the dropout rate for students in the lowest income quartile is seven times higher than those in the highest income quartile (SSRC 2005: Table 2 on pg. 8). More people than ever graduating high school, college, and postsecondary schools – but those rates can hide the inequality in who is able to achieve those diplomas.

Leaving Home

The average age at which young adults leave their parents' home has increased steadily since the 1980s in postindustrial societies (Scabini and Cigoli 1997; Kins, Beyers, Soenens, and Vansteenkiste 2009; Leopold 2012). A recent headline from the Pew Research Center (Fry, May 24, 2016) pronounced, "For the First Time in Modern Era, Living with Parents Edges Out Other Living Arrangements for 18- to 34-year-olds" and suggests that broad demographic shifts in marital status, educational attainment, and employment have transformed the way young adults in the United States are living. Arnett (2015: 12) and other social scientists suggest that

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"diversity and instability" mark the residential status of emerging adults. While in the Post-WWII era of plentiful economic opportunities and a drive for young adults to leave home and begin families of their own, that is simply not the economic or cultural norm today. Beginning in the 1980s, researchers have charted an increase in young adults in postindustrial societies continuing to live with their parents or return to the parental home after a short period of living independently (Kins et al. 2009: 1417; Goldscheider and Goldscheider 1999).

While the age at which young adults leave home has increased, some research suggests the positive effects of young people staying home longer. Scabini and Cigoli (1997) show that extended living at home can provide young people with the psychological and financial support needed for a successful, if delayed, transition to adulthood. Leopold (2012) highlights the benefits for families with "late home leavers" reporting positive outcomes for those young adults compared to their "on-time siblings" including being more likely to both provide and receive intergenerational support and maintaining more frequent contact with aging parents. Thus, age at leaving home may have different associations with mental health outcomes than the other adulthood milestones.

Financial Independence

Research examining the transition to adulthood suggests that economic independence is a clear indicator of adult status (Booth, Crouter, and Shannahan 1999; Furstenberg et al. 2004; Corcoran and Matsudaira 2005; Mortimer 2003; Aronson 2008; Silva 2013). In 2002, the General Social Survey included a special unit on transitions to adulthood that focused on important adult milestones. Ninety six percent of their nationally representative sample of adults indicated that working full-time and being financially independent from parents are important benchmarks to be considered an adult (Furstenberg et al. 2004). In interviews with 21 and 22

year-old women chosen from the Youth Development Study, Aronson (2008) found that women who were still financially dependent on their parents felt discouraged about their situation because they did not feel like adults. Being financial independent from family of origin is one marker of adulthood status.

As with other markers of adulthood, financial independence is occurring at older ages than in previous generations (Tanner and Yabiku 1999; Henig and Henig 2012; Pew Research Center 2015). One primary reason for this delay in financial independence is increased expectation for education. Some researchers also highlight the tendency for people in the 18-29 year old age range to "job hop" or switch companies and/or occupations often (Settersten and Ray 2010:51-76; Henig and Henig 2012: 56-83;). Consistent with the idea that this is a time in a person's life for self-exploration and role-experimentation, many young people try one career and then another and starting over again in a new line of work can have obvious financial disadvantages.

However, many people change jobs in order to get a larger salary or a better work-life balance which may help with other adulthood goals. According to a 2015 survey of over ten thousand "recent job changers" by LinkedIn, a social networking site for professional connections, the number one reason people left their job was "concern about the lack of opportunities for advancement." Job changers selected new companies for perceived stronger career paths as well as the availability of better compensation and benefits. Although increased salaries was not the primary reason for a job change, 74% of people surveyed reported getting a higher salary in their new job (LinkedIn 2015). This may mean that these short-term delays in settling into a career ultimately lead to better career paths in the long run.

Further, job hopping is not new. In fact, according to a report from the Bureau of Labor

Statistics (BLS) in 2017, individuals born in the latter years of the Baby Boom (1957-1964) held

an average of 11.9 jobs from ages 18 to 50 with nearly half of these jobs held before age 25.

However, extended periods of unemployment or poor pay early in a career results in young

adults missing out on crucial on-the-job training and socialization that are prerequisites for future

economic mobility and employment stability (Corcoran and Matsudaira 2005: 360). Salary level

and occupational positions are largely based on job history, so being unemployed or

underemployed during this time period can disrupt young peoples' economic trajectory and

stigmatize them as unmotivated, unreliable, or lacking in career commitment (Noonan, Corcoran,

and Courant 2003). For these reasons, employment experience during the late teens and twenties

is particularly pivotal for long term financial security.

Marriage

The age at first marriage in the United States has increased steadily over time for both

women and men (Copen, Daniels, Vespa, and Mosher 2012; White 1999). In the U.S. the

median age at first marriage for women in 1996 was 25, in 2006 was 25.5, and in 2016 was 27.4.

For men, the median age at first marriage in 1996 was 27.1, in 2006 was 27.5, and in 2016 was

29.5 (U.S. Census Bureau, 2017). Looking back even farther, the median age at first marriage

has risen for both men and women from the 1950s and 1960s when the average age for men to

marry was 22.8 and for women was 20.3. The age at which young people are marrying for the

first time has risen substantially compared to their parents' generation.

Partially due to this increase in the age at first marriage, significantly more individuals

aged 18 to 32 are unmarried today than in previous generations, as presented in Table 1. In

2013, only 26% of individuals in this age range were married, compared to 36%, 48%, and 63%

of individuals in that same age range in 1997, 1980, and 1960, respectively (Pew Research

Center 2014).

Table 1: Individuals Ages 18-32 Currently Married

Year	% Married
1960	63%
1980	48%
1997	36%
2013	26%

Source: Pew Research Center, Retrieved June 14, 2017, http://www.pewresearch.org/fact-tank/2014/03/07/6-new-findings-about-millennials/

Unlike previous generations, most young people today are not getting married directly

out of high school. Some marriage scholars suggest that this is because young adults value

finishing their education (which now often includes further training), being financially stable,

and getting settled into their careers *before* getting married – and those milestones are taking

longer to accomplish (Kuo and Raley 2016). Thus the age at first marriage is trending upwards

across class boundaries. As Kefalas et al. (2017: 130) explain,

"For many educated and elite young adults, delaying marriage until personal and
professional goals are achieved is a rational response given the education, training, and time that
is needed to acquire full-time, well-paying, stable employment (Axinn and Thornton 2000).
Low-income couples may bear children, but they also delay marriage until they have met the
"economic" and "relationship" bars that [they] see as prerequisites for a marriage (Edin and
Kefalas 2005)."

While the average age at first marriage has trended upwards and the vast majority of

young adults in the 18 to 29 year old age range are unmarried, recent studies indicate the

continued importance of marriage among young people "during their prime family formation

years" (Kefalas et al. 2017: 128). Though reporting that they place no less value on marriage

than previous generations, many young adults state they want to accomplish other milestones,

such as finishing their education and becoming financially independent, prior to getting married.

In both qualitative interviews (White 1999; Kefalas et al. 2017) and in national survey data

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(Raley 2000; Copen, Daniels, Vespa, and Moser 2012), young people repeatedly report valuing

marriage and desiring to get married – just not yet.

Parenthood

The average age at which young adults first become parents has also trended upward,

with both teen and early 20s birth rates at historic lows (CDC 2012). In 1975, 60% of first births

were to women aged 20-29 and only 5% were to women aged 30 or over. In 2010, 56% of first

births were to women aged 20-29 and *25%* were to women aged 30 or over (CDC 2012). The

birth rate for women in their early 20s dropped 3% between 2014 and 2015, continuing its steady

decline which began in 2006 (Martin, Hamilton, Osterman, Driscoll, and Mathews 2017: 4).

The average age at first birth for women was 26.3 in 2014, up from 24.9 in 2000 (Mathews and

Hamilton 2016). Table 2 shows that the mean age of mothers at the birth of their first child has

trended upwards from the 1970s until the mid-2010s.

Table 2: Mean Age of Mother at First Birth

Year	Age
1970	21.4
1980	22.7
1990	24.2
2000	24.9
2010	25.4
2014	26.3

Sources: National Center for Health Statistics: Mathews and Hamilton (2002; 2009; 2016)

Notably, for the first time ever in the U.S., women in their early 30s are having more

babies than women in their late 20s (CDC 2017). While in 2000, 23% of first births were to

mothers under the age of 20, by 2014 that number was reduced by 10 percentage points. First

births to mothers in the age range of 20-24 remained the same between 2000 and 2014, but first

births to mothers in the age range of 25-29 increased by 3 percentage points (24.3 vs. 27.7) and

in the age range of 30-34 by 5 percentage points (16.5 vs. 21.1). On average, women today are older at their first birth than in previous generations.

This trend is not limited to mothers. In Khandwala, Zhang, Lu, and Eisenberg's (2017) four decade study of over one hundred million live births in the United States, the average age at the birth of his first child for men has also increased. In 1972, the mean age at the birth of his first child was 27.4 years old, while in 2015 the mean paternal age for becoming a father was 30.9 years old. Over the 44 year study period, the portion of newborns' fathers aged 40 or older more than doubled from 4.1% to 8.9% of the population.

Taken together, statistics and research on these five domains of adulthood status indicate a notable shift in the "timetable" for becoming an adult (Berlin, Furstenberg, and Waters 2010). I seek to contribute to the research documenting and exploring the changes in the timing, sequencing, and attainment of adult roles and how views of self as an adult and accomplishing those adulthood milestones are associated with behaviors and health.

Emerging Adulthood

In contrast to the sociological focus on age, milestones, and roles, the psychological literature emphasizes characteristics such as "taking responsibility for one's actions," "deciding on one's beliefs and values," and "making independent decisions," for determining adulthood status (Arnett 2015: xiv; Arnett 1994; 1998; 2000; 2001; 2003). This psychological approach to identifying adulthood through individualistic traits suggests that young people in this extended period of transitioning to adulthood could be called *emerging adults*.

This period of prolonged self-exploration and role-experimentation during the late teens and twenties is a recent social construct. Emerging adulthood occurs after late adolescence and before young adulthood, distinguished by relative independence from social roles and from

normative expectations (Arnett 2000). Individuals experience this stage from roughly ages 18-29 and, in terms of demographic characteristics, there is a great deal of variability. Emerging adults are uniquely heterogeneous on a number of factors such as whether they live with their parents, a romantic partner, a roommate or alone; marital status; school enrollment; and employment status. As a result, emerging adulthood is the only period in the life course in which "nothing is normative demographically" (Arnett 2000:471). Emerging adulthood is described as being "exceptionally unstructured," as it is the time of life when people are least likely to have their lives organized by social institutions (Arnett 2007:25).

The idea of a "roleless role" is not new – more than half a century ago, Talcott Parsons (1942) discussed the idea that certain periods of the life course "lack clear-cut definition" and that this can cause the individual to feel strain. Parsons (1942: 606) described youth culture as "more or less specifically irresponsible" and emphasizes having a good time in social activities with the other sex. As early as the 1940s, sociologists were describing this tendency for youth to "repudiate interest in adult things" and to exhibit a "certain recalcitrance to the pressure of adult expectations and discipline" (Parsons 1942: 607). What is more recent is the length of time individuals spend during the transition to adulthood, often unrestricted by high expectations in either economic or social roles.

Emerging adulthood is defined in the psychological literature as an age of 1) identity explorations, 2) instability, 3) self-focus, 4) feeling in-between, and 5) possibilities/optimism (Arnett, 2015: 9-17). In terms of being an age of *identity explorations*, this life stage is an opportunity for emerging adults to try out different ways of living and explore different possible choices for love and work during the unique window of time when they have become more independent from their families of origin but have not yet entered stable, enduring commitments

that they will hold in their adult lives through their careers, marriage and parenthood. While this exploration lays the groundwork for a more stable future and helps to clarify what kind of future that might be, this life stage is also marked by a distinctive *instability*. The lack of normative expectations for this life stage and the nature of identity exploration results in great instability in terms of love, work, and living arrangement for emerging adults.

With regard to *self-focus*, emerging adults are uniquely free to focus on their own needs, wants, and goals in the time between the restrictions associated with being a child or adolescent (and responding to rules and routines of parents and teachers) and being an established adult (with responsibilities and coordination with a boss and/or a spouse and/or children). Again, the loose goal is to build a foundation for adult lives with stability in love and work – but not yet. This self-focused period gives emerging adults the opportunity to gain a better understanding of themselves and their goals in life.

Emerging adulthood is a time of *feeling in between* "the restrictions of adolescence and the responsibilities of adulthood" as this life stage is a temporary and transitory one in which the next phase, established adulthood, is often thought about, if not quite achieved (Arnett, 2015: 14). Emerging adults exhibit a great deal of *optimism* about the *possibilities* the future will hold for them, and this is a life stage where "many different futures remain possible" (Arnett 2015: 15). Indeed, the direction one's life might take can be greatly altered based on the decisions one makes during this life stage, and major change is less possible once the obdurate routines of established adulthood begin.

While many parents of today's emerging adults had finished school, started on a career path, married, become parents, and even began paying a mortgage on a house by their mid-twenties, current economic realities make accomplishing those milestones unfeasible for many of

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today's emerging adults. Further, many emerging adults report feelings of ambivalence about adulthood unrelated to their economic situation (Arnett 2007:27). Knowing that their current stage is transitory and relatively brief, many emerging adults want to take advantage of the instability of their residential status and their minimal social obligations before marriage and parenthood to obtain experiences they believe they will not be able to have once they enter the commitments that structure adult life (Arnett 2007:26; Ravert 2015).

HEALTH OUTCOMES IN EARLY ADULTHOOD

Now that I have introduced the theoretical frameworks of identity and the life course and presented information on the transitions to adulthood, let us turn our attention to health outcomes. My motivation behind seeking to understand the shifting meanings of adulthood is to examine how cultural and individual conceptions of adulthood are linked with young adults' health outcomes. In this dissertation, I focus on two aspects of health: health risk behaviors and mental health. I will begin this section by (a) defining health risk behaviors and describing how other researchers have approached measuring and studying these behaviors. Next, I will present statistics on the (b) prevalence of these behaviors during this stage in the life course. Then, I will describe the documented (c) costs of these behaviors. Finally, I will present research that identifies (d) precursors to these behaviors.

In the second half of this section I will turn to empirical findings on mental health. Here, I present research on (a) the high levels of depression and anxiety at this stage in the life course as compared to other stages and previous generations at this age, as well as show (b) how off-time transitions have been shown to be associated with psychological distress. I will conclude this chapter by summarizing the gaps in the literature to which this dissertation aims to contribute.

Health Risk Behaviors

Defining Health Risk Behaviors

Certain constellations of behaviors are associated with undesirable consequences such as serious health issues, poor academic and economic outcomes, and an increase in injury, accidents, and violence. These patterns of behavior are sometimes labeled "health risk behaviors" as they place an individual at greater risk for a range of negative outcomes. This includes excessive substance use, risky sexual behaviors, and poor diet, exercise, and sleep habits. Health risk behaviors threaten health through impaired judgment, direct negative effects on health, and an increased risk of negative social, psychological, and economic consequences.

Researchers often examine "multiple health risk behaviors" (MHRBs) or "multiple risk factor prevalence and clustering" as associated with a range of negative effects on individuals (Mokdad, Marks, Stroup, and Gerberding 2004; Fine, Philogene, Gramling, Coups, and Sinha 2004; Lipschitz, Paiva, Redding, Butterworth, and Prochaska 2015). For example, Lipchitz et al. (2015) conceptualize an "overall behavioral risk profile" to include healthy eating, exercise, alcohol, smoking, and depression management. Other researchers conceptualize health risk behaviors to include some combination of alcohol use, cigarette smoking, illicit drug use, unhealthy nutrition, physical inactivity, and being overweight (Van Hoof, Bekkers, and van Vuuren 2014; Mokdad et al. 2004; Fine et al. 2004). Though the specific content of MHRBs may differ by study, researchers are interested in exploring factors that contribute to participation in health risk behaviors which increase the likelihood of negative health outcomes.

Prevalence of Health Risk Behaviors during Early Adulthood

Although much of the literature on health risk behaviors focuses on adolescence, early adulthood is actually the peak period for rates of injury and infection related to substance use,

risky driving behaviors, and unprotected sex (Arnett 1992; Maggs and Schulenberg 2004; Park, Mulye, Adams, Brindis, and Irwin, 2006; Daw, Margolis, and Wright 2017). Participation in health risk behaviors is linked to identity development as young people explore new lifestyles and experiment with risk (Arnett 2000; Schulenberg, O'Malley, Bachman, Wadsworth, and Johnston 1996). Young people seek to obtain a wide range of experiences as a means of understanding who they are and who they want to be before settling down into the roles and responsibilities of adult life (Arnett 2000: 475). Unfortunately, some of those experiences are potentially dangerous for their health and well-being.

The increase in health risk behaviors during the 18-29 year old age range is thought to be associated with increased independence and decreased monitoring by parents (Frech 2012) in which young adults engage in experimentation and take risks as a form of self-exploration (Arnett 2000; Ravert and Gomez-Scott 2015) during a time when peers often act as primary socializing agents (McDermott Dobson and Owen 2006). This combination of greater freedom and fewer constraints is acknowledged by the young adults themselves. In one study of college students, more than three quarters of young adults reported engaging in certain behaviors (including alcohol and drug use) "now or never" before they lost the opportunity to do so later in life (Ravert 2009: 379). In anticipation of losing opportunities as they grow into more responsibility, 76% of 18 to 23 year-olds in their sample reported engaging in at least one behavior that they might lose the opportunity to do as an established adult, and nearly 30% reported participating in these behaviors "often" or "all the time" (Ravert 2009: 386).

This reported "now or never" behavior mirrors nationally representative studies. Young people's alcohol use and abuse tends to increase, peak, and then decrease as they go through the transition to adulthood, defined as the late teenage years through the mid-to-late twenties (Maggs

and Schulenberg 2004: 195). In their synthesis of multiple national data sources, Park et al. (2006) compared a wide range of health indicators across age groups and found that young adults participated more heavily than adolescents in risk behaviors including marijuana use, binge drinking, and failing to use contraception during sexual intercourse, which results in the peak prevalence in onset of STIs occurring during early adulthood. As young adults transition to adulthood, they largely age out of these behaviors, which provides support for the idea that health risk behaviors are age graded activities.

Prevalence of Marijuana Use in Early Adulthood – According to the Substance Abuse and Mental Health Services Administration (SAMHSA), emerging adults report marijuana use in the past year at 2.5 times the rate of adolescents and 3 times the rate of older adults (National Survey on Drug Use and Health (NSDUH) 2017). The "Monitoring the Future" data, which includes a national sample of 19 to 55 year-olds, shows that the annual and monthly prevalence rates for marijuana usage are higher during early adulthood (ages 19 to 22: annual=41%; monthly=25%) than at any other period, as the rates generally decline through middle adulthood (age 45: annual = 12%; monthly = 7%) with greater proportions of older adults having discontinued use (Schulenberg, Johnston, O'Malley, Bachman, Miech, and Patrick 2017: 109). The same survey shows that daily marijuana use peaks in early adulthood with 6% of respondents reporting daily use at age 18, 10% at ages 23 to 24, and only 3% of respondents at aged 40 to 55 reporting daily usage of marijuana (Schulenberg et al. 2017: 90). Rates of marijuana use in this age range have also increased over time as another national longitudinal survey shows that the daily marijuana use among 19 to 22 year-olds has almost doubled in the past twenty years (1996: 4%; 2016: 7.8%) (National Institute on Drug Abuse, 2018).

Prevalence of Alcohol Use and Abuse in Early Adulthood – Alcohol use and problem

drinking behavior are at a lifetime high during this point in the life course (SAMHSA 2017;

Stone, Becker, Huber, and Catalano 2012; Schulenberg et al. 2017). Not only is alcohol use at

the highest rate for emerging adults as compared to other age groups, binge alcohol use (defined

as 4 or more drinks in a row for women, 5 or more drinks in a row for men) also peaks in early

adulthood (SAMHSA 2017: 11). While only 5% of adolescents aged 12 to 17 and 24% of adults

26 and older reported binge drinking during the past month, 38% of 18-25 year olds reported

binge alcohol use in the past month (SAMHSA 2017: 12).

A longitudinal panel study of 19 to 55 year-olds indicates that problem levels of alcohol

use are highest during young adulthood. This "Monitoring the Future" data supports the trend

that problem levels of alcohol use are highest during emerging adulthood and then progressively

lower across age groups (Schulenberg et al. 2017). Schulenberg and colleagues (2017: 95) found

that 38% percent of young adults ages 21-22 reported binge drinking in the past two weeks while

the rates were lower for older adults (e.g., age 40= 23%; age 45=24%; age 50=22% age 55=

19%). Rates of binge drinking for 19 to 20 year olds have decreased over time, reaching their

lowest levels in 2016 (23%) down from the all-time high in 1981 (43%) (Schulenberg et al.

2017: 152). Still, the trend holds that across the life course, the highest prevalence of alcohol use

and abuse is during the transition to adulthood.

Prevalence of Risky Sex in Early Adulthood – How common is risky sexual behavior in

early adulthood as compared to other stages in the life course? Much of the literature on this

topic has focused on young people on college campuses. According to this research, a

significant percentage of college students engage in risky sexual behaviors including using drugs

or alcohol prior to or during sexual activity, failing to engage in safe sex communication, having

sex with multiple partners, and inconsistently using condoms during intercourse (Lewis, Malow, and Ireland, 1997; Gullette and Lyons, 2006; Turchik and Garske 2009). Ford, England, and Bearak (2015) found that around half of their sample of over 20,000 college students at 21 public and private 4-year schools binge drank before or during their most recent sexual hookup. In another panel study of almost 3400 young adults, nearly 80% of young adults exhibited some degree of sexual risk including having multiple sexual partners and failing to use contraception (Ellickson, Collins, Bogart, Klein, Taylor 2005). Dozens of studies have found a positive relationship between substance use and risky sexual practices with the most common correlates of sexual risk taking among college students being drug use (Ross and Williams 2001; Turchik, Garske, Probst, Irvin 2010) and alcohol use (Weinhardt and Carey 2000; Cooper 2002).

Another form of sexual risk behavior is failing to use contraception. In a longitudinal "Monitoring the Future" dataset focused on risk and protective behaviors for HIV/AIDS among adults ages 21 to 40, over half of sexually active young adult respondents reported that they "seldom" or "never" used condoms during the past year (Johnston, O'Malley, Bachman, Schulenberg, Patrick, and Miech 2016: 48). Only about a third of young adults in this sample said they used a condom "most times" or "always" over the past year (Johnston et al. 2016: 52). While the empirical research exploring the causal linkage between alcohol use and condom use has produced mixed findings, especially on the event-level (for a review see: Weinhardt and Carey 2000), overall patterns of alcohol use and risky sexual behaviors suggest a positive association on the global level while highlighting the importance of other contextual factors (for a review see: Brown, Gause, Northern 2016). For example, one study of college students reported that for sexual encounters involving a non-steady partner, alcohol consumption was

associated with an increase in unprotected vaginal sex, while rates of condom usage did not vary by drinking status for those with a steady sexual partner (Brown and Vanable 2007).

The prevalence of health risk behaviors such as marijuana use, alcohol use and abuse, and risky sexual behaviors peaks in early adulthood. As the transition to adulthood has become increasingly extended, experimentation with health risk behaviors may fulfill developmental functions, but simultaneously places the young person at prolonged risk for negative health outcomes. A growing literature on health risk behaviors in early adulthood focuses on the costs of excessive alcohol, tobacco, and illicit drug use, as well as risky sexual behavior (for a review see: Stone et al. 2012). Health risk behaviors in early adulthood can have both immediate and long-term consequences for health.

Costs of Health Risk Behaviors during Early Adulthood

While much of the research on multiple health risk behaviors focuses on outcomes for the adult population as a whole, some scholars emphasize the particular importance of MHRBs in early adulthood for setting up life course trajectories. During early adulthood, young people are making decisions and setting patterns of behavior that have major impacts on their life course trajectories. Experiencing, for example, an arrest or an unexpected pregnancy at this critical time for career and family formation can alter the course of that individual's life in powerful ways. Thus, behaviors such as drug use, binge drinking, and risky sex carry with them particular costs for young adults, as trajectories for employment and personal relationships are solidified in early adulthood. Health risk behaviors can have serious social and physical consequences for young adults including poor academic achievement and performance in college (Trockel, Barnes, Egget 2000; Wolaver 2002; Arria, Caldeira, Bugbee, Vincent, O'Grady 2015; Meda et al. 2017), unemployment and lower wages post-college (Mullahy and Sindelar 1996; Jennison 2004), an

increase in injury, accidents, and violence (Gerberich, Sidney, Braun, Tekawa, Tolan, and

Quesenberry 2003; Asbridge, Hayden and Cartwright 2012; Li, Brady, DiMaggio, Lusardi,

Tzong, and Li 2012), a greater risk of serious health concerns such as various forms of cancer,

lung, liver, and heart diseases (Corrao Bagnardi, Zambon, La Vecchia 2004), and even mortality

(Fingerhut and Anderson 2008; Mokdad et al. 2004).

Costs of Marijuana Use in Early Adulthood – Marijuana use has been linked to negative

outcomes, largely through impaired judgment, lower academic performance, and increased risk

of arrest (Hall 2015; Asbridge et al. 2012; Li et al. 2012; Crane, Schuster, Fusar-Poli, and

Gonzalez 2013). In his review of the literature on cannabis use over the past 20 years Hall

(2015), highlights the connections between marijuana use and a range of adverse consequences.

Recently, scientists have demonstrated that cannabis use influences abstract reasoning, decision-

making, memory, learning, concentration and attention span both acutely (during intoxication)

and non-acutely (after effects have subsided) (for a review see: Crane et al. 2013). Research has

shown repeatedly that marijuana users who drive while intoxicated approximately double their

risk of car crash (Hall 2015: 21; Gerberich et al. 2003; Li 2012). In a large longitudinal cohort

study of college students, Arria and colleagues (2015) found that marijuana use adversely

affected GPA and time to graduation both directly and through the mediating variable of poorer

class attendance. Recent longitudinal research shows that students who consume both alcohol

and marijuana at moderate-to-high levels had lower GPAs than their sober counterparts (Meda et

al. 2017).

Marijuana use also increases the likelihood for arrest. Over the past few years in the

United States, arrests for possessing small amounts of marijuana exceeded the arrests for all

violent crimes (Williams 2016). While the Uniform Crime Report no longer tracks specific data

by substance, 1.57 million arrests occurred in 2016 for drug law violations, more than three times the number (515,151) of arrests for all violent crime combined (FBI, UCR 2016). The number of arrests for drug law violations in 2016 increased 5.63% from 2015. In 2015, the last year arrests for drug abuse violations were differentiated by substance, 33.2% of total drug abuse violations were related to marijuana, (FBI, UCR 2015) though this percentage is down from 2010 when more than half (52%) of the drug arrests were related to marijuana. According to recent Gallup Polls, there is record-high support for legalizing marijuana use in the United States (McCarthy 2017), and some state-level laws are changing, though marijuana remains illegal on the federal level. This means that marijuana usage continues to increase individuals' risk of arrest and legal punishment, which can have serious consequences for life course trajectories for both career and family.

Costs of Alcohol Use and Abuse in Early Adulthood – Research shows that binge drinking has both immediate and long term consequences for young adults (Stone et al. 2012; Meda et al. 2017). Immediate costs include poor academic performance, impaired judgment, and increased risk of arrest. In a nationally representative study of students at 4-year colleges, Wechsler, Lee, Kuo, and Lee (2000) found that frequent binge drinkers were seventeen times more likely to miss a class, six times more likely to not use contraception during sexual intercourse, and eight times more likely to get into trouble with police officers. Wolaver (2002) found that alcohol use had detrimental effects on long term aspects of a college education. Binge drinking and intoxication were associated with lower GPAs, reduced study hours, and decreased probability of choosing certain majors which was proposed to potentially reduce future earning potential (Wolaver 2002). The patterns set in early adulthood regarding alcohol use have been shown to be associated with problem drinking behavior and less favorable labor market

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outcomes a decade later (Jennison 2004). Research has shown a consistent association between alcohol use and abuse and a wide array of negative outcomes related to academic and career goals, physical safety, and other social factors.

Costs of Sexual Risk Taking in Early Adulthood – Sexually transmitted infections (STIs), unintended pregnancies, and risk of nonconsensual sex are all costs associated with inebriated sex (Lorenz and Ullman 2016). Substance use before or during sexual intercourse is associated with a lower likelihood of using protection, which increases individuals' risk of STIs and unintended pregnancies (Cook and Clark 2005). Incidence and prevalence estimates from the Centers for Disease Control (2017) suggest that young people aged 15-24 years acquire half of all new STIs. These STIs can have serious health consequences including chronic pelvic pain, cervical cancer, life-threatening ectopic pregnancy, and increased risk of infertility (CDC 2017). High and moderate risk for sexual transmission of HIV were higher for young adults who, among other factors, reported daily alcohol use (Ellickson et al. 2005). Inebriated sex increases risk of failing to use protection against STIs and unintended pregnancies.

Alcohol usage is a well-established risk factor for sexual victimization. Roughly half of sexual assaults involve victims consuming alcohol before the assault (Lorenz and Ulman 2016), and the majority of pre-assault alcohol use is voluntary (Lawyer, Resnick, Bakanic, Burkett, and Kilpatrick 2010). While some scholars emphasize that alcohol is not the causal factor in sexual assaults (Ullman 2003), alcohol may inhibit victim's ability to perceive and respond to high risk situations including detecting and correcting misperceptions about sexual intentions (Testa, Livingston, and Collins 2000; Davis, George, and Norris 2004). Most sexual assaults occur when the perpetrator, the victim, or both have been consuming alcohol (Kaysen, Neighbors, Martell, Fossos and Larimer 2006). One study finds that the most frequently endorsed reason for

unwanted sexual intercourse was impaired judgment due to alcohol (Flack, Daubman, Caron, Asadorian, D'Aureli, Gigliotti, Hall, Kiser, and Stine 2007). A potential consequence of inebriated sex is an increased risk of nonconsensual sex.

While health risk behaviors are linked to negative consequences at all points in the life course, they carry even more impactful risks in early adulthood. An arrest due to illicit drug use could derail a budding career, binge drinking behavior could set patterns for lifetime alcohol consumption, and becoming infected with a sexually transmitted infection could affect mate selection and family formation goals. Health risk behaviors are particularly problematic during the transition to adulthood.

Factors that Limit Health Risk Behaviors

These are largely preventable negative effects and researchers are interested in factors that may limit involvement in health risk behaviors (Frech 2012; Daw et al. 2017). Jessor (1991:52) and his colleagues urge scholars to identify and understand factors that lead to behaviors that have been socially defined "as a problem, as a source of concern, or as undesirable by the norms of conventional society." Sociological research has identified factors such as social support, role transitions (especially into marriage), and subjective views of self as an adult which each serve as mechanisms through which a range of risk behaviors are curtailed.

Frech (2012) used Add Health, a national longitudinal study of over 10,000 adolescents, to illustrate that social support resources (e.g., school connectedness, support from peers and parents, and living with non-smoking parents) are associated with higher levels of healthy behaviors (e.g., non-smoking, maintaining a healthy weight, and avoiding binge drinking) during the transition to adulthood. In their overview of how social relationships influence health behavior across the life course, Umberson, Crosnoe and Reczek (2010) suggest that social

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support can provide three forms of assistance that increases health outcomes: instrumental, informational, and emotional. *Instrumental* social support includes getting help with tasks, *informational* social support includes getting advice, and *emotional* social support includes the sense that one is loved, cared for and listened to – all factors that have been linked to an increase in health behaviors.

Role transitions have also been linked to limiting risky or deviant behaviors. Sampson and Laub (1998; 2001; 2003; 2006) have shown repeatedly that marriage can serve as a "turning point" for those with a propensity to offend that results in a desistence from crime. Most persuasively, in their prospective study of 500 high-risk boys from adolescence to age 32 and a targeted subsample of 52 of those same men from adolescence to age 70, they show that being married is associated with a 35% reduction in the probability of offending (Sampson, Laub, and Wimer 2006). Research has also linked marriage to *health* risk behaviors including a negative association between marriage and substance abuse (Chilcoat and Breslau 1996; Bachman, O'Malley, Schulenberg, Johnston, Bryant, and Merline 2002; Duncan, Wilkerson, and England 2006). In their longitudinal sample, Chilcoat and Breslau (1996) found that getting or staying married was associated with lower incidence of alcohol disorder symptoms compared to those who remained single or became divorced. Duncan et al. (2006) found that men's binge drinking and marijuana use was reduced following marriage (but not cohabitation) while women's binge drinking (but not marijuana use) was reduced following both marriage and cohabitation. Neither men nor women's cigarette smoking was reduced by either relationship change.

Why would marriage reduce risk behaviors? Umberson (1992) draws on foundational sociological research to propose a social control theoretical model suggesting that marriage is beneficial to health because spouses "monitor and attempt to control" their partner's behaviors.

Following this theoretical tradition, Duncan, Wilkerson, and England (2006) use data from a nationally representative longitudinal study to find that norms about "cleaning up one's act" result in married people reducing their binge drinking and marijuana use. In a separate longitudinal nationally representative study, Harris, Lee, and DeLeone (2010) link early marriage to a decrease in binge drinking for White men and women under age 26. Research suggests that role transitions such as getting married and working full-time are associated with subjective feelings of having reached adulthood status for young people (Shanahan, Porfeli, Mortimer and Erickson 2005; Johnson et al. 2007). I suggest that beyond social support and role transitions it is these subjective feelings of having reached adulthood status – identifying as an adult – that might reduce participation in health risk behaviors.

A couple of previous studies have shown that that perceptions of oneself as an adult are associated with fewer risk behaviors. Among a sample of 232 college students, Nelson and Barry (2005) find that 19-25 year olds who reported self-views of having reached adulthood were less likely to report behaviors such as getting drunk, using illegal drugs, committing petty crimes, and failing to use contraception. Utilizing a required online alcohol education program during orientation that reached over 8000 students, Rinker, Walters, Wyatt, and DeJong (2015) were able to examine if first-year college students who identify as an adult before entering college exhibited more responsible drinking behaviors one month into their first semester. In both of these studies, identifying as an adult was associated with fewer deviant and health risk behaviors among college students.

Mental Health at This Stage in the Life Course

High Levels of Depression and Anxiety

Many young people experience high levels of anxiety during the transition to adulthood. In his Clark University Poll of Emerging Adults based on over a thousand interviews of 18-29 year-olds, Arnett and Schwab (2014) find that emerging adults experience stress during this life stage, with 72% reporting "this time of my life is stressful." In terms of specific types of psychological distress, a substantial portion (32%) report that they "often feel depressed," and a majority (56%) report that they "often feel anxious." The work that Twenge and her colleagues conduct on generational differences in psychological distress confirms these findings. In a study using four surveys and a sample size of 6.9 million, Twenge (2015) finds that Americans reported substantially higher levels of somatic depressive symptoms (e.g., having a poor appetite, having difficulty concentrating, feeling everything was an effort) in the 2000-2010 decade compared to the 1980-1990 decade. Another study finds large generational increases in psychological distress in American college students from 1938 to 2007, with the current generation scoring about a standard deviation higher on the clinical scale for depression than previous generations (Twenge, Gentile, DeWall, Ma, Lacefield, and Schurtz 2010). Finally, rates of anxiety have increased such that younger birth cohorts show higher levels of anxiety than previous generations at the same age. Twenge (2000) used meta-analytic techniques to gather and analyze studies of samples of American college students between 1952 and 1993 and finds that anxiety scores have risen about a standard deviation during this time period. Acknowledging a potential bias of using only college students, she goes a step further to examine schoolchildren in approximately the same birth cohorts and similarly finds that self-reported

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anxiety increases in a linear fashion over time (Twenge 2000:1015). Taken together, the studies show an increase in both depression and anxiety among young adults in recent decades.

Scholars have speculated as to what might be causing this shift in psychological distress across time. In his cross-cultural review of studies showing rates of depression over time, Hidaka (2012) suggests that modern sedentary and socially-isolated lifestyles contribute to poor physical health and affect the incidence and treatment of depression. As depression and anxiety rates have increased for young adults, Twenge et al. (2000) emphasize a cultural shift that values extrinsic versus intrinsic goals and negatively affects the mental health of people transitioning to adulthood. Consistent with this argument, if individuals perceive that they are falling behind others' expectations for what it means to be an adult this would increase both anxiety and depression.

In recent years, a demographic shift in views of age-appropriate behavior has resulted in an extended transition to adulthood becoming more normative. This means that the understanding that 18-29 year-olds have for themselves and the expectations that their interaction partners have about their behaviors related to adulthood might differ. This increases the likelihood of experiencing psychological distress, and more specifically anxiety, when there is a discrepancy between one's own expectations for accomplishing adulthood milestones and the perceived expectations of interaction partners such as parents, peers, and society in general.

Indeed, Arnett's study of emerging adults shows that young people report high levels of stress, and perhaps one mechanism for that anxiety is the mismatch between their own expectations and the perceived expectations of their interaction partners. Arnett and Schwab (2012:8) report that most emerging adults believe their established adult lives will be better with a majority reporting that they see adulthood as "providing a relief from the instability and stress

of their current lives." In her longitudinal study regarding unfulfilled expectations, Mossakowski (2011) shows that failing to meet one's own expectations on particular domains of adulthood (e.g., education, parenthood, labor force) is predictive of higher levels of subsequent depressive symptoms.

Off-Time Transitions and Psychological Distress

In general, young adults are accomplishing the milestones of adulthood at older ages. As the expected age at those transitions becomes increasingly ambiguous, a social psychological framework would suggest that young adults may turn to their own social networks to understand appropriate timing. Young people may base their expectations for age at transitions on their parents' values or on their peers' timing with those same transitions (Panagakis 2015). We would expect young adults to have internalized an adulthood ideology that is a cultural narrative of when they think society expects them to have accomplished certain milestones. This ideology – separate from their own expectations for when young adults should accomplish milestones – exerts a powerful influence on their lives.

Age-graded life transitions provide predictability and structure for one's life (Elder 1998). Research has shown that off-time life course transitions are associated with psychological distress (Settersten and Hagestad 1996a; 1996b). There is some research that focuses on the psychological distress associated with individuals' accomplishment of markers of adulthood earlier than the peers. Examples of this work include Mollborn and Morningstar's (2009) examination of the effects of teenage childbearing and psychological distress or Uecker's (2012) study on early entry into marriage and mental health outcomes. Booth, Rustenbach, and McHale's (2008) research on early family transitions and depressive symptoms highlights the constraints of an individual's economic background, which may result in the benefits of early

cohabitation, marriage, and parenthood outweighing the costs. There is also research on the experiences and outcomes for individuals who "miss" the normative life course transitions such as those who do not graduate high school (Pirog and Magee 1997) or marry (Sharp and Ganong 2007; Carlson 2012) or become parents (Hagestad 2007; Sharp and Ganong 2011) at the age it is socially normative to do so.

Previous research has examined mental health outcomes for people who feel that they are falling behind expectations for achieving particular milestones of a normative life course by a particular age. There is empirical work about the effect of falling behind age expectations (either one's own or society's) for marriage (Sharp and Ganong 2007; Carlson 2012; Eck 2013), parenthood (Hagestad 2007; Sharp and Ganong 2011), educational attainment (Mossakowski 2011), entry into a career (Henig and Henig 2012), and leaving home (Kins et al. 2009) and the effect of delaying each of these milestones on young adults' mental health.

Perhaps the most studied aspect of expectations of timing for an adulthood marker is age at first marriage. Researchers have illustrated the negative mental health outcomes for men (Eck 2013), women (Sharp and Ganong 2007; 2011), and both men and women (Carlson 2012) who have deviations from expected or preferred age at first marriage. Eck (2013) interviews men who never married and describes an "identity turn" where men shape their narratives to offer an explanation for not marrying at the expected age. In a focused qualitative study of middle-class ever-single women, Sharp and Ganong (2011) find that women deal with public scrutiny about their status and pressure to conform to the conventional life pathway. In a large nationally representative study, Carlson (2012) finds that marrying both earlier and later than desired (compared to on-time) resulted in poorer mental health. These studies focus on the milestone of

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marriage, examining identity and mental health issues related to falling behind the age at which the individuals, or their social networks, expected marriage to occur.

Putting off beginning a family has also been linked to negative outcomes. Work on involuntary childlessness often focuses on infertility as the basis for the "transition to nonparenthood" (Matthews and Matthews 1986), but some studies examine women and men who remain unpartnered and want to marry before having children (Hagestad 2007). Sharp and Ganong's (2011) study reports that single women in their late 20s to mid-30s without children described frequent inquiries and unsolicited advice about their parenthood status, which prompted them to think about others' expectations for the age at which they would have children. This pressure to conform leaves many childless single women feeling stigmatized and as if they have a "deficit identity" (Reynolds and Taylor 2005).

Another avenue of research focuses on economic consequences of "job hopping" or holding several entry-level jobs in different fields during early adulthood (Mossakowski 2009; Settersten and Ray 2010; Henig and Henig 2012). Delaying choosing a career has severe economic costs, as two-thirds of wage growth that happens in the course of a career, occurs in the first ten years (Henig and Henig 2012). Henig and Henig (2012:60) use the career ladder metaphor to illustrate that if an individual spends those first ten years "bopping around from one entry-level job to another because you keep changing your mind about *which* ladder you want to climb, it's a lot harder to get as high." In addition to the economic consequences of a slow start to a career, duration of unemployment is predictive of depressive symptoms during the transition to adulthood, especially for men (Mossakowski 2009). Delayed family and career formation can have serious consequences for young adults' long term success.

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Among early adults, another indicator of independence and self-sufficiency is moving out of the home of their family of origin. In Western postindustrial societies, there is a trend of young adults leaving home at older and older ages. One might think this trend would be associated with negative mental health outcomes as adult children battle their parents for independence and autonomy. However, some research shows that there may actually be benefits to staying home past the legal age of adulthood, depending on the reason for continuing to cohabitate. Kins et al. (2009) found that the motivation for the living arrangement is more strongly related to emerging adults' well-being than the living arrangement itself. Leopold (2012) found some positive outcomes for young adults who continue to live at home including intergenerational financial and emotional support. In their nuanced study of young adults who are currently living with their parents, Copp, Giordano, Longmore, and Manning (2015) found that returning to the parental home after living independently is associated with higher levels of depressive symptoms only among those with employment problems. These studies indicate that the milestone of leaving home (and the expected age at which a young adult leaves) may have a complicated association with mental health.

In my view, this literature highlights two important sources for mental health. This literature indicates that normatively timed transitions a) can lead to a positive self-evaluation and b) are accompanied by both informal social support and institutionalized support. This applies to various markers of adulthood – marriage, parenthood, and general independence. One aspect of accomplishing these milestones is that they are positive in and of themselves. For example, those who marry at the normatively appropriate time evaluate themselves positively based on marriage as a valued status, especially for women (Sharp 2007). Several studies have shown marriage itself to be a source of emotional and personal fulfillment (Coontz 2004; Smock 2004;

Cherlin 2009) and numerous studies link marriage to positive health outcomes (e.g., Robles and

Kiecolt-Glaser 2003; Simon 2002; Umberson and Montez 2010) or to a positive evaluation of

one's life (Carr, Freedman, Cornman, and Schwarz 2014; Kalmijn 2017).

This study, however, moves beyond the benefits of achieving the milestones themselves

to the *expectations* about the timing of the milestones. Mossakowski (2011) used longitudinal

data to examine how one's own unfulfilled expectations for the transition to adulthood affect

symptoms of depression. She focused on the domains of educational attainment, employment,

marriage, and parenthood and found that achieving a lower level of education than expected,

becoming a parent unexpectedly, and being out of the labor force unexpectedly at ages 19-27

predicted higher levels of depressive symptoms at ages 29-37 even while controlling for

demographics, family background, and earlier mental health. Her work focuses on the

expectations of the young adults themselves – and not the perceived expectations of others – and

makes a similar and compelling argument to the one I make in this dissertation. The critical

factor is not the accomplishment of the adulthood milestones themselves, but fulfilling (or failing

to fulfill) expectations about at what age one should accomplish them.

GAPS IN THE LITERATURE

Study 1

While researchers are interested in understanding factors that might limit participation in

health risk behaviors, the literature is largely focused on adolescents, despite the fact that young

adulthood is the peak period of the life course for participation in these behaviors (Stone, Becker,

Huber, and Catalano 2012). With increased freedom and reduced social control, young adults

are uniquely positioned to experiment with substance use and sexual behavior as a means of self-

exploration, which may have detrimental and enduring consequences. The existing research on

young adults has emphasized the effects of these risky behaviors among traditional college students, limiting their findings to life on campus.

Only a handful of studies have examined the effect of self-views as an adult on participation in health risk behaviors (Nelson and Barry 2005; Rinker et al. 2015). Nelson and Barry's (2005) study encompassed a wide age range of early adults (ages 19-25) and a long list of health risk and deviant behaviors (e.g., getting drunk, using illegal drugs, committing petty crimes, and failing to use contraception), but the cross-sectional sample was limited to just over 200 college students in a human development or psychology class. The authors emphasize the need for future research among a population that includes young adults who are not full-time college students. The study by Rinker et al. (2015) utilized a large sample (N=8,230) and gathered longitudinal data (Wave 1: summer before first semester of college; Wave 2: one month after the start of classes). However, their focus on first year college students (mean age = 18), their attention to only drinking behaviors (without other forms of health risk behaviors such as drug use or risky sexual behaviors) leaves unanswered questions remaining. How do views of self as an adult affect a range of health risk behaviors during the extended transition to adulthood for both full-time college students and non-student populations?

Study 2

Research has examined missed life course transitions on individual markers of adulthood, but more research is needed to examine the composite effect of falling behind expectations (i.e., own, parents', peers', or society's) on multiple life domains. This dissertation is broader than previous studies as it explores the collective outcome of falling behind on any combination of these life domains associated with adulthood, and not just falling behind on one domain in particular. Research indicates that combinations of adulthood roles affect self-perception as an

adult. For example, Benson and Furstenberg (2007) found that the effect of being a full-time worker was not enough for individuals to see themselves as having reached adulthood if they were still living in their parents' household. Taking this a step farther, feeling behind on a combination of adulthood roles would logically result in higher levels of psychological distress than previous research focusing on just one role associated with adulthood has demonstrated.

Research suggests that young people's expectations for when someone their age ought to accomplish those markers reflect the demographic shifts in our society (Nelson et al. 2007). However, this research also indicates that there are generational differences in the content of the expectations. Neslon et al. (2007) show that young people place greater importance on some categories of adulthood markers (e.g., role transitions and biological transitions), while their parents rate other criteria as more important (e.g., norm compliance and family capacities). Along with differences in the content of adulthood criteria, young adults may perceive that their parents or society in general think that they should accomplish adulthood milestones at earlier ages. As foundational life course research has established (Neugarten et al. 1965:716), "respondents uniformly attributed greater stricture to age norms in the minds of other people than in their own minds." I suggest that the conflict between a young adult's achievement of those milestones and the reflected appraisals regarding age norms generates psychological distress.

CONCLUSION

This dissertation emphasizes that views of self as an adult and perceived expectations of others regarding adulthood markers are associated with health outcomes during the transition to adulthood. This chapter has provided an overview of literature on identity, the life course, transitions to adulthood, and health outcomes during early adulthood. Our societal understanding of adulthood is in flux as traditional narratives regarding independence and the

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assumption of adult roles come into conflict with the expectation of extended education that delays marriage, childbearing, and residential and financial independence. The lengthening transition to adulthood provides increased opportunity for experimentation and self-exploration – but may also create dangerous situations for vulnerable young adults. As traditional markers of adulthood become more difficult to achieve, the potential stress of failing to meet perceived expectations of significant others may have negative consequences for mental health. This shift in the patterns of achieving adult markers and the complexity and uncertainty of contemporary pathways to adulthood may impact health and well-being for young adults. In the next chapter, I will draw from and expand upon this literature to situate the current studies within social psychological theory.

CHAPTER 3

THEORETICAL PREDICTIONS

Three literatures are described above – (1) social psychological literature on identity, (2) life course literature on developmental stages and demographic trends during the transition to adulthood, and (3) health literature concentrating on health risk behaviors and mental health in early adulthood. These three areas of research all contribute to the issues that are the focus of the present research – how views of self as an adult are associated with involvement in health risk behaviors and how falling behind the expectations of others in accomplishing adulthood milestones is tied to anxiety and depression.

The empirical literature on health indicates that there are particularly high levels of health risk behaviors and negative mental health outcomes in early adulthood. The life course literature provides language for describing and understanding stages in life and highlights that one stage – the transition to adulthood – has been extended in recent years. But it is the social psychology literature that provides the theoretical mechanism to relate the two trends. In particular, Identity Theory provides a theoretical explanation for how views of self (as an adult) are theorized to be tied to these health behaviors and outcomes.

This project has two central research questions. The first research question is "How are views of self as an adult associated with participation in health risk behaviors?" The second research question is "How is falling behind own expectations and the reflected appraisals of others regarding markers of adulthood associated with anxiety and depression?" I will outline the theoretical predictions for both studies in this chapter.

USING IDENTITY THEORY TO LINK ADULT IDENTITY WITH HEALTH RISK BEHAVIORS

Individuals act in ways that align with their views of self and try to avoid behaviors that are inconsistent with how they see themselves (Swan 1983; Burke 1991; Stets and Carter 2011). In this study, I argue that young people who identify as adults will avoid immature behaviors that are not consistent with the adult identity, including drug use, excessive drinking, and high risk sex. To develop this argument, I draw from a long tradition of symbolic interactionism, self-verification, and more specifically Identity Theory to provide a theoretical explanation for trends in the literature on the life course and health. This section will begin with a brief review of symbolic interactionism, self-verification, and Identity Theory and then provide empirical evidence consistent with Identity Theory's model of a feedback loop, and conclude with predictions about the adult identity limiting participation in health risk behaviors.

Relevant Theoretical Traditions

Symbolic Interactionism

Social scientists have long asserted that views of self guide behavior (Cooley 1902; Mead 1934; Goffman 1959; McCall and Simmons 1966; Stryker 1968; Stryker 1980; Serpe 1987; Burke 2006). The three basic premises of symbolic interactionism are that (1) humans act towards objects (including other individuals) on the basis of the meanings they have for them; (2) meaning is created through interaction and (3) people use meanings created in interaction to serve as a guide for future behavior and interaction (Blumer 1969; Mead 1934). The third premise, in particular, can be applied to self-conceptions to suggest that the meanings that people attach to themselves shape their actions. Many scholars in this tradition have applied these symbolic interactionist premises to individuals' views of self.

An individual's *self* is based on a reflexive classification of locating oneself within the social structure and recognizing the social categories to which one belongs. This understanding of self develops in the individual as a result of one's social experience and imagining how one is viewed by others (Mead, 1934). Mead suggested that only when individuals could understand how society in general (i.e., "generalized other") views them would that person have a fully developed self (1934: 219). As people move through the life course they develop self-conceptions of who they are and how others see them and those self-views shape their actions.

Self-Verification

A central tenant of many theories of self is that consistency is the fundamental motive that guides behavior. Individuals act in ways that are consistent with how they see themselves in order to generate feedback from others that supports those views. In a classic psychology experiment, Swann and Hill (1982) demonstrated that when people are given disconfirming feedback about a self-conception, they will refute that feedback by behaving in ways that are consistent with their views of self. Participants who were given the opportunity to respond to discrepant feedback regarding their dominant/submissive self-views actively rejected the misclassification. This study showed that people will challenge feedback that does not align with their self-conceptions in an attempt to verify their views of self.

Self-verification (Swann 1983) is the process through which people create a social reality that verifies and confirms their self-conceptions. If the process is successful, these views of self are confirmed both in their own minds and in their wider social environment such that their interaction partners also accept their views of self. When both interaction partners hold the same views for an individual, those views of the individual's self are mutually instantiated. Self-verification theory (Swann 1990; 2005; Swann, Griffin, Predmore and Gaines 1987) deals with a

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global view of self in which people are motivated to verify their views of self to confirm that the world is predictable and controllable (Burke and Stets 2009:58).

Swan (1983) suggests three strategies through which people can confirm their views of self: a) by acquiring signs and symbols of who they are b) by selectively choosing appropriate interaction partners who confirm their self-views and c) by adopting certain interaction strategies. For example, a person who sees himself as *athletic,* and wants to confirm that view of self, might wear athletic clothes or carry the equipment from his sport even when not playing (a. signs and symbols), might choose to exclusively associate with other athletes, coaches, and fans as much as possible and avoid people who do not care about sports (b. interaction partners), and might interject into conversation stories of recent games or practices or otherwise demonstrate his athletic skills (c. interaction strategies). Through displaying signs and symbols, selective affiliation, and using interpersonal prompts, individuals work to get others to behave towards them in a manner congruent with their views of self. According to self-verification theory (Swann, Rentfrow, and Guinn 2003), people seek to confirm what they already believe about themselves and try to maintain their self-views even when they receive discrepant feedback from others.

One interesting aspect of self-verification theory is that people are driven to verify their self-views even if those self-views are evaluated by society as negative. This means that the preference for self-confirming feedback is not limited to positive views of self. Someone with a negative view of self would seek feedback confirming those negative self-views and, somewhat counterintuitively, reject feedback that supports a positive view of self. For example, we can think of "athletic" as a positive self-conception and thus "un-athletic" as a negative self-conception. Someone who views himself as un-athletic, but gets disconfirming feedback

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suggesting that he is actually quite athletic, might display signs and symbols of laziness or being out-of-shape, interact with people who confirm his un-athletic self-concept perhaps by being more athletic than him, and act clumsy or uncoordinated. In contrast to theories of self-enhancement (Jones 1973), in which people are motivated to receive the most positive evaluation possible, theories of self-consistency suggest that evaluations by others that are more negative *or* more positive than the individual's own view of self will produce distress (Burke and Harrod 2005). The key aspect of self-verification is that people desire to confirm what they already believe about themselves and will use specific strategies to avoid discrepancies.

Identities

Identities are how people understand who they are in relation to other people and provide guidance for how to behave (Stryker 2001; Owens 2006). Self-verification theory focuses on a global understanding of the self. Within those wide-ranging views of self are subsumed identities, which are related to roles, group membership, and personal characteristics.

Most scholars agree that identities are classified in three ways: role-based identities, social identities, and person identities[1] (Owens 2006; Stets 2006). *Role-based identities* are meanings that individuals attach to themselves while enacting a given role. The meanings come from socialization into what it means to be, for example, a father or a teacher or a doctor. Role-based identities have counter-roles – there is complementarity to others during interactions such as with a father/son or a teacher/student or a doctor/patient (Burke 1980; 2004). *Social identities* are based around group membership in which an individual is similar to in-group members and different from out-group members. Examples of social identities include being a woman, an

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[1] Although some identity scholars label this a "personal identity" consistent with social identity theory (McCall and Simmons 1966; Hogg and Abrams 1988; Hogg, Terry, and White 1995; Owens 2006: 214-216), since I am using this term in the context of Identity Theory (Burke 1991), I follow the decision and rationale of Stets and Burke (2009: 124) to use "person identity" throughout.

American, or a Democrat. Social identities can overlap with roles depending on the context such as a father in a parent support group, a teacher at a faculty meeting, or a doctor at an academic conference of peers.

Finally, *person identities* are meanings attached to the self that define the individual as distinct from others, based around one's unique values and goals along dimensions such as morality or dominance. Unlike role and social identities, person identities operate across various roles and situations – they are not limited to the context of the interaction, but are still subsumed under the individual's broader sense of self (Stets and Burke 1994). Person identities are based on traits or personality characteristics that an individual values more or less such as being moral, friendly, or responsible. It is difficult to differentiate between a personality trait and a person identity – but the distinction rests with the motivation. A personality trait is simply a descriptor of a behavior or characteristic an individual displays. A person identity, or the self-meanings a person attaches to themselves, *motivates* individuals to act in ways that support his or her understanding of self. Each of these conceptualizations of identity has been demonstrated to work in Identity Theory's feedback loop model.

Identity Theory

Identity Theory (Burke 1991; Burke and Stets 2009) describes a model of self-verification that operates on the level of identities. This theory suggests a process in which individuals hold a set of identities that they value and seek to support through their actions. As in self-verification, people perceive how others view them and adjust their behavior to minimize the distance between that feedback and their own views of themselves.

Identity Theory suggests that there is a "continuously operating, self-adjusting feedback loop" through which people seek to generate feedback that confirms their most valued identities

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(Burke 1991: 840). If individuals get feedback from others that they are not convincingly enacting their desired identity, they respond affectively and behaviorally. Affectively, they feel distress from the disconfirmation of a primary identity. In an effort to lessen those negative self-feelings that result from identity disconfirmation, they will cease any behaviors that do not align with that identity and act more clearly in line with the way they want to be seen. If the behavior modification is successful, the result is identity verification. This perceptual control system is based on Powers (1973) cybernetic model, which in Identity Theory is labeled the "feedback loop."

The feedback loop has four components (Burke 1991; Burke and Stets 2009). Identities are defined as sets of self-meanings that individuals hold for themselves in social situations and may include role-based, social, or person identities. That set of meanings serves as a reference for who a person is, which Identity Theory labels as the *identity standard*. According to Identity Theory, in any social situation in which one of these identities is activated, the feedback loop process is established. The second component is the *input,* which is how individuals think that others see them. Input comes from others in the social situation who give verbal or nonverbal feedback about an individual's identity performance. These inputs, also called "reflected appraisals," are the perceived meanings an individual applies to others' actions, and those perceptions are what drive the identity process. The third component is the *comparator* which is the process in which an individual compares the input (perceived self-meanings from others) with their identity standard (own self-meanings). Note that the comparison is based on the individual's perceptions of others' feedback, regardless of the others' intended meaning. Finally, the fourth component is the *output* or the behavior resulting from the comparison process that an individual believes will more closely align the input and the identity standard. In other words,

people will behave in ways that confirm their identities, and they adjust their behavior based on the feedback they perceive from others regarding their identity performance. The goal of this control system is to match the perceived external inputs to the internal identity standard (Burke 1991: 837).

An example of a feedback loop in process can be illustrated through a person's political identity. If an individual sees herself as a Democrat based on political beliefs and past voting behavior, but gets the feedback from a friend that she is not successfully achieving the criteria expected of someone who wants to claim that identity, this would cause her to have negative emotions. One response to deal with those feelings would be for her to change her behavior. She might talk more to her friends, family, and coworkers about her political beliefs, join a political organization that does outreach to encourage people to vote, and place a bumper sticker proclaiming her support for a Democratic candidate on her car. Similar to the signs and symbols, selective affiliation, and interaction strategies from self-verification theory, Identity Theory also suggests that people employ strategies to verify valued identities. In terms of a feedback loop, the disconfirming feedback from the friend (input) is a disturbance because it does not match the individual's self-views (identity standard) and when she compares the reflected appraisals to her reference (comparator) she feels negative self-feelings and a drive to alter her behavior (output).

Similar to self-verification theory, Identity Theory assumes that individuals desire to confirm who they are even if that identity is considered to be negative. Identity Theory, like self-verification theory, does not suggest that these processes only work when the identity is positive. Instead, these theories suggest that when individuals see themselves in certain ways, they will seek feedback that aligns with those views from their interaction partners. According to Identity Theory, and all theories of self-consistency, people will resist feedback that both

under-evaluates and over-evaluates their views of self in the drive for consistency (Burke and

Harrod 2005). In self-consistency theories, individuals seek to minimize discrepancy if feedback

from others is more positive (also in line with self-enhancement theories) *or* more negative

(directly contradicts self-enhancement theories) than the individual's own views of self.

Evidence of a Feedback Loop

Identity Guides Behavior

There is some evidence in the literature that the effort to support a valued identity results

in enacting particular behavior in line with that identity that is consistent with the feedback loop

model (Abrams et al. 1993; Youngreen et al. 2009; Granberg 2011; Shuttlesworth and Zotter

2011; Springer and Mouzon 2011; Stets and Carter 2011). While most of these studies do not

explicitly test Identity Theory, they provide evidence in line with the control process model of

identity confirmation. Study 1 contributes to this literature supporting a perceptual control

system that models how the process of confirming a valued identity can result in performing

behavior that generates feedback to verify that identity.

Indeed, research has shown that people enact behavior in line with their valued identities.

Some research focuses on the salience of a moral identity deterring cheating on a test (Stets and

Carter 2011) while other research examines how the perceived consistency of the college major

identity affects test performance (Youngreen et al. 2009). Some scholars are interested in how

identity plays a role in motivating moral action (Blasi 1983; Colby and Damon 1993; Gibbs

2003; Hardy and Carlo 2005; Stets and Carter 2011). According to these scholars, when

morality is central and important to an individual's sense of self, this increases the sense of

obligation and responsibility an individual feels to behave consistently with stated moral values

(Hardy and Carlo 2005). Stets and Carter (2011) apply Identity Theory to demonstrate that

individuals who identify as moral avoid immoral behaviors. In their study, moral identity was

measured through both self-views and the reflected appraisals of imagined others. Those who

held a moral identity were more likely to avoid immoral behaviors like stealing, letting a friend

drive drunk, or keeping found money and were less likely to cheat on a test when given a clear

opportunity to do so.

Other research has also demonstrated that individuals will enact behavior that confirms

an important identity. One example of an important social identity for college students is

undergraduate major – students who share a major are in-group members and see themselves as

different from out-group members who are preparing for a different career. Using another

cybernetic model of self (Heise 2007), Youngreen et al. (2009) illustrate how this social identity

can result in disparate behavior on a general cognitive ability test. In their study, students who

think that this neutral aptitude test confirms their college major perform better and get higher

scores than if they think the same test does not support that valued social identity. In line with

arguments of self-consistency, in an effort to confirm their central identity of business major,

students worked harder and were more focused on the test than if they were told that the same

test was measuring abilities associated with careers in social work or education (Youngreen et al.

2009). Knowing that the test was an opportunity to confirm their identity provided students with

maximal motivation to perform better on the test in an effort to receive positive feedback about

that important identity. Indeed, students who thought that the test verified their valued identity

scored 2.5 points higher than those students who thought the same test verified a contrasting

identity (Youngreen et al. 2009). A model of self-enhancement would suggest that students will

always strive to do well on a test in order to get positive feedback. In contrast, a model of self-

consistency would suggest that if the students think the test would confirm an undesired identity

(contrasting major), they will not perform as well in order to get consistent (negative) feedback. This illustrates the identity verification process in which individuals act in ways that support their valued identities.

Identity Guides Health Behavior

More specifically than how identities might guide behavior in general, Study 1 is about how seeking to verify a valued identity would be associated with enacting particular *health* behaviors. One study applies Identity Theory's model of a feedback loop to health-related behaviors associated with weight loss. Granberg (2011) suggests that individuals who are attempting to exit the stigmatized identity of "fat" take actions to receive confirming feedback for their new "thin" identity. In addition to the structural and cognitive dimensions of the exit from the stigmatized identity, Granberg (2011: 47) describes a behavioral dimension that includes successfully losing weight and sustaining that weight loss over time. In an effort to receive reflected appraisals in line with their new, and very much desired, "thin" identity, individuals going through this stigma exit enact behaviors associated with their desired identity including adjusting their diets and attending Weight Watchers meetings. As a part of the identity change process, they also seek out others who provide identity confirming feedback and avoid others whose reflected appraisals contradict the individual's new view of self. In an effort to minimize the discrepancy between the feedback from others about their weight-related identity and their own weight-related identity standard, individuals change their health behaviors.

Other research has shown that, in an effort to confirm a centrally held identity related to gender or race, people will implement particular health behaviors (Abrams et al. 1993; Shuttlesworth and Zotter 2011; Springer and Mouzon 2011). One study in line with the control process model of identity verification shows that identifying strongly with the masculine identity

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reduces the likelihood that older men will seek preventative health care (Springer and Mouzon 2011). Men who view themselves as "macho men" enter into a mindset of feeling invincible and exhibiting reluctance to ask for help. These behaviors, in line with a macho man identity, have potentially negative consequences for health outcomes. Despite the fact that acting in this way actually conflicts with their best interests, men who held strong masculine ideals were half as likely as men with more moderate masculinity beliefs to receive preventive care such as a flu shot, general exam, or prostate exam (Springer and Mouzon 2011).

Though this study does not explicitly test Identity Theory, one could imagine a feedback loop in which a man receives inputs from his social environment that seeking healthcare is feminine, compares that feedback against his identity standard of being masculine, and his resulting output is avoiding those health-related behaviors classified as feminine. The feedback loop in Identity Theory is described as being established in particular social settings, so the input of defining preventative care as feminine might occur when a male coworker talks about his wife getting a flu shot or a brother-in-law describes how much time has elapsed since he last visited the doctor. The input does not need to directly call into question the individual's identity in these specific situations. These conversations could form an individual's understanding of how others in his social network view particular behaviors – as feminine – and thus result in him avoiding preventative health care so as not to disconfirm his masculine identity.

Other studies have shown association between holding a particular ethnic identity and disordered eating behaviors (Abrams et al. 1993; Shuttlesworth and Zotter 2011). Eating disorders such as anorexia nervosa and bulimia nervosa are rare among young Black females in the United States, and African American women report higher levels of satisfaction with their bodies than their Caucasian counterparts (Dolan 1991; DeBraganza and Hausenblas 2010). One

explanation for these trends is differences in beauty ideals held by Caucasian and African American culture. While Caucasian notions of beauty focus on thinness with "few variations and minimal deviations" (Jacob 2001), African American cultural definitions of beauty move beyond physical attractiveness to encompass "attitude, style, personality, and presence" (Rubin et al. 2003) and may have roots in an African culture of embracing fuller-figured females (Lieberman, Probart, and Schoenberg 2003). Abrams, Allen, and Gray (1993) found that Black women who reject their Black identity and idealize the White identity are more likely to participate in dietary behavior associated with eating disorders.

While Abrams and colleagues (1993) are not explicitly testing Identity Theory, their findings are consistent with ideas of seeking self-consistency even in confirming identities that are risky or dangerous to an individual's health. For women who are attempting to verify an identity that aligns with Caucasian beauty ideals, one behavioral response to reflected appraisals that do not match their identity standard based around thinness ideals is to try to lose weight through anorexic or bulimic behaviors. However, a Black woman whose identity is tied to endorsing African American beauty ideals would be unconcerned with reflected appraisals that she is not meeting Caucasian beauty ideals. That feedback would not be disconfirming a centrally held identity and she would be less likely to exhibit anorexic or bulimic behaviors. If a Black woman's identity standard includes Caucasian ideals of beauty and she receives disconfirming feedback about her ability to accomplish those ideals, a feedback loop would be established that would encourage behaviors to alter those reflected appraisals. If that same woman's identity standard instead prioritizes African American ideals of beauty, feedback about her inability to accomplish thinness would not establish a feedback loop and not illicit a behavioral response.

These findings are confirmed in recent research regarding beauty ideals and disordered eating. Shuttlersworth and Zotter (2011) suggested that, by the same proposed mechanism, women who strongly identify with African American beauty ideals were at a greater risk for binge eating to achieve the fuller female figure ideal. However, they found that African American women with high levels of ethnic identities had a lower likelihood of *all forms* of disordered eating, including binge eating, in support of the idea that African American beauty ideals go beyond physical standards. Importantly, African American women with low levels of identification with their Black identity were more likely to report both binge eating and bulimic behavior suggesting that an ethnicity related identity could serve as a protective factor for avoiding these dangerous behaviors. Women who do not strongly identify with their African American ethnic identity are at greater risk of disordered eating in an attempt to live up to competing beauty ideals of thinness.

Taken together, this research shows that in the process of verifying identities related to weight, masculinity, and ethnicity individuals enact particular *health* behaviors consistent with their valued identities.

Adult Identity Guides Behavior

The focus of Study 1 is specifically the *adult* identity – and some research is congruent with a feedback loop of how seeking to confirm an adult identity might lead to particular behaviors. Much of the research investigating how adulthood is associated with the reduction of negative behaviors focuses on adult roles. For example, in their age-graded informal social control theory, Sampson and Laub find support for a "marriage effect" in which marriage – especially a high quality marriage – serves as a turning point for desistence among criminal offenders. For those with the propensity to offend, adult roles such as marriage or stable worker

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lead to a desistence from crime (Sampson and Laub 1990; Sampson, Laub, and Wimer 2006) and

to a limiting of substance use (Laub and Sampson 2003). Adult roles, and especially marriage,

provide positive social support, change routine activities, and alter views of self to provide a

mechanism for patterns evident in the criminology literature of young adults aging out of

delinquent behavior. This suggests that any study examining the relationship between adult

identity and health risk behaviors should include information about the adult roles an individual

holds that might shape both views of self as an adult and participation in health risk behaviors.

Adopting a new role and altering behavior to align with that role transitions can be

conceptualized using an Identity Theory model of the feedback loop. Individuals participating in

delinquent behavior could receive feedback from others (input) that the individual is not

successfully fulfilling the role of husband or worker. If those identities are valued (identity

standard), then the comparison between that feedback and one's views of self (comparator)

would result in negative emotions such as disappointment or anger. In order to minimize those

negative self-views, the individual would adjust his behavior (output) by reducing participation

in criminal behavior to better align with the valued roles of husband or worker. From an Identity

Theory perspective, the marriage or stable employment would lead to desistence in so far as the

individual acquired the identity meanings of "husband" and "worker" to exclude criminal

behavior. If the delinquent behavior contrasts with individuals' understanding of their newly

adopted roles, they would cease those behaviors.

Beyond roles of adulthood, one study focuses on how the adult identity affects behavior

by examining choice of leisure activities among young people on the cusp of adulthood

(Shannon et al. 2017). Shannon and her colleagues (2017) report that young adults reduce their

substance use to better comply with norms of adulthood. While the authors do not draw on

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Identity Theory, we can easily imagine a feedback loop in which an individual gets feedback from, say, her parents or her romantic partner that they do not see her as an adult. If her identity standard includes feeling like she has reached adulthood and valuing the adult identity, the comparison process between those reflected appraisals and her views of self as an adult would result in disappointment, frustration, anger, or sadness. In order to minimize those negative self-feelings, she could alter her behavior to act in ways that confirm the adult identity such as, in this case, reducing substance use. By spending less (or no) time drinking or using drugs, she hopes to generate new feedback from these important significant others that they now see her as an adult, which confirms her self-concept and verifies this valued identity.

This body of research shows that wanting to be seen as an adult can motivate young people to enact behavior associated with the adult identity. Both through taking on roles associated with adulthood such as marriage and full-time worker and through the desire to acquire the adult identity, behavior regarding delinquency and substance use shifts during the transition to adulthood. The normative behavioral expectations of someone who identifies as an adult include a desistance from certain immature behaviors. While extensive research has focused on role transitions as they lead to fewer risk taking behaviors (Sampson and Laub 1990; Sampson, Laub and Wimer 2006), fewer health risk behaviors (Chilcoat and Breslau 1996; Bachman et al. 2002; Duncan, Wilkerson, and England 2006) and better health promoting behaviors during the transition to adulthood (Frech 2014; Umberson, Crosnoe, and Reczek 2010), the focus of this paper goes beyond roles and adds to the literature on perceptions of self as an adult and how those self-views might be associated with health risk behaviors.

Research also examines how the adult identity guides *health risk* behaviors (Rinker et al. 2015; Nelson and Barry 2005). Rinker et al. (2015) ask "Do incoming first-year college students who think of themselves as adults drink more responsibly after starting college?" This study examines how the adult identity predicts participation in one health risk behavior among an early college sample using a single item indicator of self-perception of adulthood (SPOA). The researchers use data from over 8000 college students who are required to complete an online alcohol education program before they begin the first fall term of their first year of college. All participants completed an additional survey one month after the start of classes. Rinker et al. (2015) found that lower SPOA before starting college was associated with riskier drinking behaviors one month into students' first term of college, suggesting that self-views as an adult can affect drinking behavior. These findings demonstrate that first-year college students who enter college with the belief that they have not yet reached adulthood feel less concerned about the potential negative outcomes of risky drinking behaviors once they arrive at college (Rinker et al. 2015:361-362). Considering oneself an adult could be a protective factor from risky drinking behaviors, at least among first year college students.

In another study of college students, Nelson and Barry (2005) found that those 19-25 year olds who self-classified as adults engaged in fewer risk behaviors including getting drunk, illegal drug use, drunk driving, petty crime, and unprotected sex. Over two hundred students in a human development or psychology class completed a one-time questionnaire including questions about identity, feeling like an adult and risk behaviors. The small percentage of students who did report identifying as adults (25%) engaged in fewer risk-taking behaviors. Seeing oneself as an adult was associated with fewer deviant behaviors such as committing petty crimes (e.g.,

vandalism and shoplifting) or using illegal drugs as well as fewer health risk behaviors like becoming drunk and failing to use contraception. Feeling "in between" or not yet like an adult was associated with a higher rate of participating in these risky behaviors. The authors suggest that future work should examine these linkages between adulthood identity and risk behaviors among a population that includes young adults who are not full-time college students.

While not explicitly testing an Identity Theory model, both of these studies of college students could be understood in those terms. Students who see the adult identity as a part of their identity standard act according to the meanings they hold for adults by not participating in these risk behaviors. Similarly, not-yet seeing oneself as an adult could serve as a guiding identity. If individuals receive feedback that they are an adult (input) but they do not see themselves that way (identity standard) they could compare these reflected appraisals to their own views of self (comparator) and behave (output) in ways that contradict those inputs by enacting immature, risky behaviors such getting drunk and using illegal drugs. In an attempt to alter the feedback that they have reached adulthood, which does not align with their own views of self, individuals might select behaviors that violate the normative appropriate behavior expected of adults. Remember that Identity Theory suggests that individuals' primary underlying motives are to achieve self-consistency. Though responsibility and maturity are generally regarded as positive attributes that all people should seek to embody, since responsibility and maturity are central traits associated with the adult identity, if individuals do not see themselves as adult, they might act in the opposite way to confirm their views of self.

In summary, empirical evidence supports the feedback loop model from Identity Theory in which the comparison of feedback from others to an identity standard produces a self-feeling which then guides behavior (Youngreen et al. 2009; Stets and Carter 2011). More specifically,

research shows that certain types of identities or self-views guide *health* behaviors (Abrams et al. 1993; Granberg 2011; Shuttlesworth and Zotter 2011; Springer and Mouzon 2011). Age identities are unique because they are constantly in flux with people entering and exiting categories. Some research shows that as individuals are transitioning from one age identity to the next, they feel motivated to act in ways that confirm their new age identity (Shannon et al. 2017). This study adds to the very limited existing literature, up to this point conducted solely among college students, which examines how the age identity "adult" is linked to health risk behaviors.

Theoretical Prediction: Adult Identity and Health Risk Behaviors

Study 1 is an application of Identity Theory's premise that individuals seek consistency and will align their behavior to confirm their views of self. Using the feedback loop framework, I predict that if individuals identify as an adult, they will avoid immature behaviors because avoiding those behaviors verifies their adult identity. Young people on the cusp of adulthood who identify as adult will use that adult identity as a standard or a reference value to which they will compare feedback from others. This standard can also be thought of as a desired goal. If an individual values the identity of "adult," he or she will act in ways that support that identity, including limiting health risk behaviors such as binge drinking and drug use. If an individual does not yet see himself or herself as an adult, he or she will, similarly, act in ways that do not support an adult identity, including participating in health risk behaviors.

What limits young adults' participation in health risk behavior? In this research, I suggest that viewing oneself as an adult will limit participation in marijuana use, binge drinking, and inebriated sex. Foundational research on age norms (e.g., Neugarten 1965) and empirical studies (Arnett 1994; Massoglia and Uggen 2010; Shannon et al. 2017) suggest that common

cultural beliefs about the age-appropriateness of particular behaviors guide adult socialization and that young adults alter their behavior to comply with adult norms and roles. Thus, one protective factor that might discourage young adults from participation in risk behaviors is identifying themselves as adult.

This research goes beyond a focus on roles of adulthood to focus on an *adult identity*. Role transitions in family, education, and careers have been shown to be linked to a desistence from certain behaviors, and this study will show that, net of those roles, views of self as an adult matter for participation in health risk behaviors. Recent research confirms that self-views as an adult are associated with decreased risk behavior among college students (Rinker et al. 2015; Nelson and Barry 2005). Enacting more behaviors that are consistent with an adult identity and fewer that are associated with *not* being an adult is one way that individuals shift their self-sentiments over the life course.

Demographic findings from the literature describing life course transitions show that people are lingering longer on the cusp of adulthood. By a range of measures, young people are accomplishing milestones of adulthood at older ages than previous generations. The age at which young adults are finishing their education, leaving home, achieving financial independence, getting married, and becoming parents has increased in recent decades. The timing of these milestones is shifting later, leaving a longer period of ambiguity in terms of seeing oneself as an adult. During this period, young people have access to a greater level of independence and autonomy than in adolescence, but many still do not yet identify as adults, leaving them particularly vulnerable to participation in health risk behaviors.

Classic symbolic interactionism suggests that people act according to the meaning objects (including people) have for them. People seek consistency in confirming their views of self,

even if those self-views are not positive. Identity Theory suggests a model of a feedback loop in

which input from others is compared to an individual's identity standard which results in self-

feelings and behaviors to support those views of self. Empirical evidence shows support for that

model. In this study, I test whether self-identifying as an adult is associated with lower levels of

participation in health risk behaviors for 18 to 29 year olds.

Hypothesis 1: Self-identifying as an adult is negatively associated with engaging in health risk
            behaviors.

Viewing oneself as an adult will limit participation in health risk behaviors for people in

this age group where adulthood status is ambiguous. This prediction is limited to the stage in the

life course where some people see themselves (and are seen by others) as adults, but others do

not – a stage that has widened in recent decades. Perception of self as an adult can be a goal that

motivates behavior. Thus individuals may seek out opportunities in which to enact their adult

identity; they may seek out situations that confirm and enhance their perception of self as an

adult. I suggest that one's perception of self as an adult can serve as a motivation for avoiding

health risk behaviors. As a part of enacting an adult identity, minimal involvement in health risk

behaviors might increase the likelihood of receiving feedback that one has achieved an adulthood

status. Health risk behaviors are associated with particular costs and one way of reducing

participation in health risk behaviors might be to encourage young people to think of themselves

as adults.

USING THEORIES OF IDENTITY TO LINK EXPECTATIONS AND MENTAL HEALTH

Individuals feel negative emotions when they cannot confirm valued identities (Cooley

1902; Powers 1973; Heise 1977; Burke 1991; Turner and Stets 2005; Burke and Stets 2009).

The central argument in this study is that young people who perceive that they are falling behind

expectations for adulthood will feel psychological distress. Further, I suggest that perceived

expectations from different sources (i.e., self, parents, peers, or society in general) will be associated with different forms of mental health outcomes. To develop this argument, I first describe the importance of identity during the transition to adulthood. Next, I draw from symbolic interactionist theories including Identity Theory (Burke 1991; Burke and Stets 2009), Self-Discrepancy Theory (Higgins 1987; 1989), and Identity Discrepancy Theory (Large and Marcussen 2000; Marcussen and Large 2003) to predict that falling behind expectations for adulthood will be associated with anxiety and depression. Finally, I draw on mental health literature focused on adolescents to predict that, beyond own expectations for self, perceptions of falling behind peers' expectations will be associated with anxiety while perceptions of falling behind parents' and society's expectations will be associated with depression.

Importance of Identity During the Transition to Adulthood

Identities

Individuals hold a set of identities that can be defined as meanings for themselves in relation to other people. These identities are related to roles within the social structure (e.g., father, teacher) and to membership in social groups (e.g., Democrat, American) and to personality characteristics valued by the individual (e.g., moral, responsible). As people move through the life course, they adopt and discard identities as they gain or lose roles or group memberships and their core values adjust accordingly. A centrally held identity at one stage in the life course, such as Soccer Team Member in high school, may be replaced by a new primary identity, such as Law Student, as that individual grows up. While some views of self remain consistent across the life course, an individual's full set of identities continuously shifts in response to life circumstances.

When scholars conceptualize identity, a central component is tied to people categorizing themselves in certain ways. The classic Twenty Statements Test (Kuhn and McPartland 1954) asks people to list twenty responses to the question, "Who am I?" Respondents answer this question by listing identities related to the roles they hold, their membership in different social groups, and their personality characteristics. Note that identities are partially determined by how individuals classify themselves, but identities are also based on behavior, group membership, and personality characteristics. Identities are understood to be tied to roles, social groups, and individual traits.

Some identities, therefore, are less accessible to particular individuals because they do not meet the basic criteria required to hold that identity. Though based largely on self-views, if individuals do not satisfy certain standards, it is difficult for them to claim a particular identity. For example, holding the identity of "Soccer Team Member" is related to membership on the team and if the individual did not make the cut at tryouts and is not accepted onto the team, that identity is not available. An identity of "Soccer Player" or "Soccer Fan" would be possible, but without group membership, there is no basis for the team-based identity.

Another example of this would be a couple who are struggling with infertility who want to become parents. Though they want to identify themselves as parents, the identity is not available to them because they do not satisfy the requisite criteria to claim that identity. Whether through birth or adoption, access to the parenthood identity is predicated on them becoming the primary caregivers of a child for them to see themselves – and for others to see them – as parents. Identity, therefore, is determined through an individual's views of self, but those views cannot be divorced from critical aspects of that person's life.

Adult Identity

The adult identity is accessible to people who display attributes associated with adulthood. At the very least, individuals must have reached a certain minimum age. Arguably, individuals must also display certain characteristics associated with adulthood such as independence, responsibility, and vision for life direction. The adult identity is most relevant – and most tenuous – during the transition to adulthood as young people are just beginning to demonstrate these new capacities for independence and emotional maturity to both themselves and others. During this period of transition, young people work to establish this new identity by exhibiting behaviors associated with adulthood. Young adults report that the ability to negotiate an equal relationship with their parents, acceptance of responsibility for the consequences of their actions, and the capacity to make independent decisions and care for oneself are critical factors for being considered an adult (Arnett 2001; Mayseless and Scharf 2003; Nelson and Barry 2005). Psychological researchers highlight certain adult qualities and suggest that if an individual is "cognitively self-sufficient, emotionally self-reliant, and behaviorally self-controlled" than they are more likely to think of themselves and be perceived by others as an adult (Berg 2007: 151).

One way to demonstrate these characteristics associated with adulthood – and therefore gain access to the adult identity – is through the accomplishment of certain markers of adulthood. Important markers include leaving home, finishing school, becoming financially independent, and maintaining a serious romantic relationship. Adulthood can be thought of as an identity associated with multiple roles.

Milestones and role transitions contribute to young people adopting the adult identity in several ways (George 1990; Shanahan 2000; 2005; Johnson, Berg, and Sirotzki 2007). First, role

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transitions within institutions of marriage, education, workplace, and family are meaningful signals of adulthood that allow an individual to have a basis through which to claim an adult identity. Second, these markers can be thought of as "conduits of change," and individuals may feel more like an adult when they have transitioned into these roles associated with adulthood (Johnson et al. 2007: 245; Andrew, Eggerling-Boeck, Sandefur, and Smith 2007: 226). Third, when individuals develop personal characteristics associated with the adult identity, they are more likely to select themselves into these adult roles that will then further develop their personal characteristics (Shanahan et al. 2005). These roles – graduate, married person, full-time worker – are associated with adulthood, but there is no direct one-to-one relationship. An individual can identify as an adult without some or all of these roles or an individual can hold some of these roles and not yet feel like an adult (e.g., Benson and Furstenberg 2007). While which specific roles individuals most value for signaling adulthood might vary (Panagakis 2015), role transitions and milestones can serve as markers of adulthood, especially when that identity is ambiguous. For young people on the cusp of adulthood, accomplishing these markers of adulthood and having a "visible badge of adulthood" (Kefalas et al. 2017: 121) makes the adult identity more accessible.

Cultural Age Deadlines

Each society has certain cultural age deadlines that specify the age at which milestones are expected to occur (Neugarten et al. 1965; Settersten and Hagestad 1996a; Settersten and Hagestad 1996b; Nelson et al. 2007). People tend to be aware of both their own expectations for accomplishing markers of adulthood and the expectations of their peers, parents, and society. Research tracking the degree to which various life spheres (e.g., family, education, work) are structured by age shows that more than seventy five percent of respondents believe that there are

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negative consequences for not leaving home, getting married, or becoming a parent by certain ages (Settersten and Hagestad 1996a; Settersten and Hagestad 1996b). Most people perceive a cultural age deadline for markers of adulthood.

The expectations regarding what it means to be an adult are formed through socialization and are therefore overlapping between individuals within a society. However, because age norms do shift over time, cultural age deadlines may differ between generations, with young people holding different expectations than their parents and grandparents (Neugarten and Neugarten 1987; Nelson et al. 2007; Panagakis 2015; Kefalas et al. 2017). Demographic patterns in the average age at which young adults finish their education, get married, and become parents are shifting later than in previous generations. This could result in young adults believing they are "on track" for achieving markers of adulthood while their parents feel they are "falling behind" based on the age at which the parents themselves completed milestones and role transitions related to adulthood.

One study examined the criteria that young adults and their parents hold for achieving adulthood status and found some generational differences in criteria for adulthood today. Nelson et al. (2007) found that parents and children emphasized somewhat different criteria in determining if a young person had reached adulthood. While both generations reported that *relational maturity* (e.g., accepting responsibility for consequences of actions, emotional control, becoming less self-oriented) was the most important criteria for adulthood, they differed on the magnitude of importance of other criteria. Young adults rated measures of *role transitions* (e.g., married, parent, graduate) and *biological/age transitions* (e.g., reaching age 18, having a driver's license, biologically capable of having a child) as more important for determining adulthood status than did their parents (Nelson et al. 2007). Further, parents rated *norm compliance* (e.g.,

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avoiding illegal drugs, avoiding becoming drunk, being sexually monogamous) as being more important for determining adulthood status than did the young adults (Nelson et al. 2007). Both views of self and views of interaction partners about reaching adulthood status determine an individual's perception of self as being on track or falling behind.

Relevant Theoretical Traditions

Symbolic Interactionism

Symbolic interactionism suggests a socialization process through which individuals learn first to take the role of specific significant others in an interaction and later the role of an entire group. This "generalized other" includes the norms, rules, and expectations for various positions and roles within society. Mead (1934) described the process of taking the "self as an object" as having three components: others' actual appraisals (how others actually see an individual), reflected appraisals (how individuals perceive that others see them), and self-appraisals (how individuals see themselves).

Reflected appraisals, or individuals' perception of how others view them, have an impact on self-views and self-feelings (Festinger 1954; Kinch 1963; Felson 1985). While Mead (1934) emphasized the cognitive aspects of interaction and did not focus on emotions resulting from interactions with others, Cooley (1902) suggested that emotions play a critical part in the identity construction process. With the metaphor of the *looking glass self,* Cooley (1902) describes a process in which people imagine how they appear to others, imagine their judgment, and then experience some sort of feeling about themselves. Cooley's analysis focused primarily on the master emotions of pride and shame, though researchers today describe many forms of self-feelings involved in the identity process.

The idea of emotion resulting from individuals' perceptions of how others view them has been formalized in many social psychological theories (Goffman 1959; Felson 1985; Stets 2006). All symbolic interactionist theories suggest that when individuals receive feedback that is inconsistent with their self-perceptions, and they cannot behave in ways to alter the feedback, they feel distressed. Theories of identity suggest that in addition to seeking to confirm their global self-conceptions, individuals also want to confirm their context-dependent identities within each interaction. When they feel that an identity has been verified, individuals experience positive emotions such as pride and satisfaction. When they feel that an identity has *not* been verified, this inconsistency between self-views and views of others generates negative emotions such as distress, anxiety, anger, shame, and guilt (Turner and Stets 2006: 29). Individuals are motivated to employ behavioral and cognitive strategies to reduce those negative emotions and achieve consistency between self-views and others' views in line with cultural standards and norms.

Identity Theory

Drawing on this foundational symbolic interactionism work and the cybernetic control system (Powers 1973), Identity Theory describes a control process model of identity in which emotions emerge out of a confirmation process (Burke 1991; Stets and Burke 2009). In this control process, an identity is activated in a situation and individuals compare feedback from others about the successful enactment of that identity to their own views of self. This "feedback loop" includes an *identity standard* (the way individuals define themselves), an *input* (how the individual perceives others see him, also called reflected appraisals), a *comparator* (the comparison between the input and the standard), and an *output* (the behavioral response based on the result of the comparison) (Burke and Stets 2009: 62-67). According to Identity Theory,

individuals are constantly using this feedback loop to compare the reflected appraisals of others to their own views of self and to act in ways that confirm their valued identities.

An example of the feedback loop process is a woman who holds a feminine gender identity (identity standard) but gets feedback that she is acting too masculine (input), which she registers (comparator) and feels some sort of self-feeling, perhaps shame or sadness. In an effort to reduce those self feelings and reaffirm her feminine identity, she behaves (output) in overtly feminine ways. This behavior may be enough to receive confirming feedback about her feminine identity and restore her self-feelings to positive ones. However, if she continues to receive feedback that does not confirm her identity, that disconfirmation results in a negative emotional response.

There has been considerable work on how emotion fits into the Identity Theory feedback loop (Stets and Tsushima 2001; Stets 2006; Burke 2008; Stets and Osborn 2008; Burke and Stets 2009: 155-174; Stets and Burke 2014) and more broadly into control process theories of identity (Robinson, Smith-Lovin, and Tsoudis 1994; Robinson and Smith-Lovin 1999; MacKinnon and Heise 2010). In general, these theories suggest that people have a drive for self-consistency and feel emotions as a result of a discrepancy between the input from others and their own identity standard. People are thought to feel good if the discrepancy is small or decreasing and bad if the discrepancy is large or increasing (Burke 2008: 80). Theories of self-consistency predict, and empirical work on these topics support, that when people receive feedback that is more negative than their views of self ("negative discrepancies") they experience negative emotions. In Identity Theory, emotion in the identity process should be classified not just as a byproduct from the identity process, but also as a *motivator* that guides the verification process of keeping self-views in line with reflected appraisals (Burke and Stets 1999). Identity Theory differs from other

theories of self consistency in its prediction about emotional responses when people receive

feedback that is more positive than their views of self ("positive discrepancies") and the

empirical findings in this literature are contradictory, leaving this question unresolved. [2] In the

current study, I focus only on negative discrepancies in which the predictions of self-consistency

theoretical traditions are consistent in predicting negative emotional responses.

Self-Discrepancy Theory

Unlike Identity Theory, Self-Discrepancy Theory (Higgins 1987; 1989) makes specific

predictions about the *form* of negative emotions that occur as a result of mismatches between

different versions of self. Self-Discrepancy Theory (SDT) suggests that if individuals perceive

they are not enacting the identities they want to or feel they ought to be enacting then they will

feel different types of negative emotions. In order to make predictions about the disparate forms

of the emotional responses, SDT proposes that individuals have three identity domains: actual,

ideal, and ought. Individuals compare what they view as their current *actual* attributes to an

ideal or aspirational self (how they wish or hope to be seen) and a mismatch results in

"dejection-related emotions" such as disappointment, dissatisfaction, and sadness. A mismatch

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[2] Identity Theory states that if individuals receive feedback that is more negative *or* more positive than their own evaluation of self, the drive for self-consistency means that they will feel negative emotions. Those negative emotions then motivate them to act in ways that might minimize the inconsistency between reflected appraisals and their identity standard. When individuals are able to validate their valued identities, they feel positive emotions, but when they get feedback that is different than their identity standard, they feel negative emotions and those bad feelings motivate them to try to reduce the discrepancy. However, there is considerable controversy in the literature as most empirical literature fails to find support for this process (including articles that claim to support it). Another theory of self-consistency, Affect Control Theory (ACT) (Heise 1979; MacKinnon and Heise 2010), suggests that emotion is a byproduct of the identity process, but does not motivate behavior which makes it an even more rigorous proponent for self-consistency. According to ACT, if individuals receive feedback that is more negative than their evaluation of self, they will feel negative emotions and strive for self-consistency. If individuals receive feedback that is more *positive* than their evaluation of self, ACT suggests individuals will feel positive emotions and, despite those good feelings, still strive for self-consistency.

between their *actual* self and their *ought* or obligational self (or what attributes they feel they *should* have) results in "agitation-related emotions" such as fear, threat and restlessness. As in Identity Theory, the larger the discrepancy between perceived feedback and views of self, the greater the distress.

Higgins (1987) explains the distinction between types of emotional consequences by suggesting that an actual/ideal discrepancy represents the absence of positive outcomes while the actual/ought discrepancy represents the presence of negative outcomes. Self-Discrepancy Theory differentiates between how an individual would like to be (own beliefs) and how an individual believes a significant other person (e.g., mother, father, sibling, spouse, closest friend) would like that individual to be (Higgins 1987). This theory distinguishes between the views of own and other, suggesting a negative emotional response for any discrepancy. Relevant for the predictions in Study 2, SDT does not make separate predictions for the *type of other* relating to type of negative emotional response. In other words, feedback from parents or peers is classified simply as "feedback from others" and, in contrast to the predictions in Study 2, this theory does not indicate the source of the feedback as potentially affecting the type of emotional response. Self-discrepancy theory highlights the distinction between own views of self and perceived views of others, which is important for the current study. However, the current study moves beyond the own/other distinction by tying different types of emotional responses to feedback from different sources.

Identity Discrepancy Theory

Identity Discrepancy Theory (IDT) extends the sociological Identity Theory and psychological Self-Discrepancy Theory to create a theory that can delineate between depression and anxiety (Large and Marcussen 2000; Marcussen and Large 2003; Marcussen 2006;

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Marcussen and Gallagher 2017). IDT draws from the Identity Theory (Burke 1991; Burke and Stets 2009) model of an individual comparing their feedback from others to an identity standard which, based on the comparison of the feedback to their salient identities, results in behavioral and emotional responses. IDT incorporates from Self-Discrepancy Theory (Higgins 1987; 1989) the idea that individuals have three identity domains and a mismatch between an actual identity and the obligated or the ideal identity can result in emotions related to either dejection or agitation. A major contribution of IDT is the suggestion that different underlying processes of identity discrepancy result in unique forms of psychological distress.

In creating and testing IDT, Large and Marcussen (2000) are able to predict how identity mismatches are associated with specific forms of psychological distress. Moving beyond SDT's general representation of self, IDT suggests that individuals can and do possess different identities for the various roles they enact throughout their lives. This means that, based on the meaning an identity holds for the individual, a discrepancy between how individuals see themselves and how they want or feel they ought to be seen by others can results in either depression, anxiety, or both. A mismatch between how individuals see themselves and how others see them results in different forms of distress based on the meaning the individuals have for that role. If we apply this IDT process to the adult identity, individuals who get feedback that they are not yet adults might feel depression if they *want* to be seen as adult or anxiety because they feel they *ought* to be an adult or both. In IDT, forms of psychological distress are tied to the type of identity mismatch based on the meanings individuals hold for their identities.

Theoretical Prediction: Identity Expectations and Psychological Distress

Drawing on these theories of self-consistency in identity, we would expect that a discrepancy between how people think they should be seen (obligatory identity) and how they

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feel they are seen (reflected appraisals of actual identity) will be associated with psychological distress. In this study, I suggest that a discrepancy between having not yet accomplished a significant milestone in four life domains of adulthood (i.e., leaving home, finishing education, financial independence, long term relationship) and being past the age at which significant others (i.e., parents, peers, society) expect a young adult to have accomplished those markers will be associated with negative mental health outcomes. This is based on the assertion that accomplishing these markers of adulthood gives an individual legitimate access to the adult identity. I suggest that falling behind perceived expectations about accomplishing that adulthood identity will be associated with psychological distress. Indeed, previous research has used the life course perspective to show that unfulfilled expectations about markers of adulthood are associated with depression (Mossakowski 2011).

Some empirical work examines how failing to meet expectations is linked to psychological distress. In a longitudinal study of an individuals' own expectations during the transition to adulthood, Mossakowski (2011) showed that unfulfilled expectations about education, employment, marriage, and parenthood are associated with depressive symptoms. If individuals achieved a lower level of education than they expected, became a parent unexpectedly, or were unexpectedly not in the labor force in early adulthood (ages 19-27), these factors predicted higher levels of depressive symptoms at ages 29-37. In other words, mismatched expectations about the timing of markers of adulthood had consequences for mental health.

In line with this limited research on expectations, and contributing to the extensive literature of self-consistency in identity, I predict that falling behind the perceived expectations

about adulthood of parents, peers, and society in general will be correlated with psychological distress.

Hypothesis 2: Falling behind the expectations of others regarding achieving markers of an adult identity will be associated with psychological distress.

Source of Feedback Predicting Form of Psychological Distress

Drawing on these theories of identity, I suggest that falling behind expectations, or failing to satisfy the basic criteria required to access a valued identity, will be associated with anxiety and depression. Identity Theory offers a model that suggests that when an individual receives disconfirming feedback about a valued identity, that individual will feel a negative emotional response and work to behave in ways that confirm the identity. Self-Discrepancy Theory suggests that different types of negative emotions can be predicted by mismatches between the actual self and the obligational self (what respondents think they *should* be doing by a particular age) or the actual self and the aspirational self (how they *want* to be seen). Identity Discrepancy Theory offers the key insight that anxiety and depression are driven by different underlying processes of identity mismatch based on the meanings individuals hold for their identities. However, none of these theories suggest that the *source* of the feedback would be tied to particular psychological distress outcomes.

I draw from and extend these theories of identity to suggest that some sources of feedback (parents, society) are linked to depression while other sources of feedback (peers) are linked to anxiety when comparing the actual/ought discrepancy in the adulthood identity. There is support in the literature on adolescent mental health that links peer feedback to anxiety and parental feedback to depression. In a thorough meta-analysis of studies on mental health in childhood and adolescence, Epkins and Heckler (2011) find that peer-related variables are more

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strongly linked to social anxiety than to depression and that family-related variables are more strongly linked to depression than to social anxiety.

In this section I will first introduce literature on mental health focused on adolescents, which suggests that peers play an important role in individuals' anxiety. Next, I will introduce literature on mental health focused on adolescents, which suggests that deficiencies in the parent-child relationship are tied to depression. Finally, I suggest that new patterns in delayed transitions to established adulthood mean these arguments from the adolescent literature can be applied to individuals in the 18-29 year-old age range.

Peer Relationships and Anxiety

Peers have enormous influence on adolescent and early adult behavior (Schwartz 2016). Deficiencies in peer relationships are associated with higher levels of social anxiety for adolescents (Epkins and Heckler 2011). A review of the literature on adolescent mental health suggests that social anxiety is higher among adolescents with low peer acceptance (Inderbitzen et al. 1997; La Greca and Stone 1993) and high peer rejection (Bell-Dolan, Foster, and Christopher 1995; Crick and Ladd 1993; Greco and Morris 2005; La Greca and Stone 1993; Borelli and Prinstein 2006) in sociometric peer nomination assessments. These studies indicate that in adolescence, peer rejection is more likely to be associated with anxiety than depression. I suggest that as the transition to adulthood has become extended, the same relationship between peer rejection and anxiety may be found in early adulthood. Some researchers have focused on age as an "interactional accomplishment" (Laz 1998) or a social construction in which people perform their age in ongoing interactions. Many of these age-defining interactions occur with one's peer group (Panagakis 2015).

Beginning in early adolescence, parents' influence is reduced while simultaneously peers begin to exert a greater influence on children that continues into adulthood (Hill, Bromell, Tyson, and Flint 2007; Prinstein and Dodge 2008). Peer relationships in adolescence allow individuals to build a foundational set of social skills that they will use throughout their lives including behavioral abilities such as assertiveness and conversation skills, emotional abilities such as emotional regulation, and cognitive abilities such as perspective taking (Kingery, Erdley, Marshall, Whitaker, and Reuter 2010: 94). Research shows that peer interaction, as compared to parent interaction, is more likely to be linked to child and adolescent social anxiety.

Peer influence shapes what individuals think it means to be an adult and whether they perceive they are on track in their progress. In interviews with sixty 30 year-olds, Panagakis (2015) found that feelings of adulthood were contingent on the timing of individuals' role transitions compared to others within their peer group. This comparison process between self and peers suggests that the milestones themselves are not as critical as individuals' status relative to the perceived timing of their peers' statuses. In fact, Panagakis (2015: 7) describes some respondents who had not completed designated role transitions but, due to what they perceived to be normative timing within their peer group, did not experience a reduction in their self-identification as an adult. What Panagakis (2015) describes as "peer context" can also be conceptualized as "expectations of peers." Based on this link between own status and peers' status for feeling like an adult, I go one step further to suggest that feeling like one is falling behind peers' expectations might be associated with anxiety.

Parental Relationships and Depression

A long and full literature shows a relationship between parental rejection, lowered self-esteem, and depression in adolescence (Robertson and Simons 1989; Simons and Miller 1987;

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Hale, VanDerValk, and Engels 2005; MacPhee and Andrews 2006; Branje, Hale, Frijns, and Meeus 2010; Epkins and Heckler 2011). The authors in these studies highlight adolescence as a time of identity development in which individuals begin to explore and examine the self as a means to discover who they are and how they fit into their social world (Moore and Bowman 2006; Steinberg and Morris 2001). I suggest that as identity development has continued into early adulthood, these processes of relying on reflected appraisals in identity formation would be expected to continue to occur then too. Scholars who viewed adolescence as a key time in identity development in the 1970s and 1980s might apply those same models to early adulthood today, as we have some indications that continued identity development occurs well into the twenties (Arnett 2014; Meeus, Iedema, Helsen, and Vollebergh 1999).

The researchers in these studies find that deficiencies in the parent-child relationship are often associated with depression. Various forms of negative parental feedback, called parental rejection (Robertson and Simons 1989) or described as "unaffectionate, belittling, and sometimes abusive" (Kaslow, Rehm, and Siegel 1984) or labeled as negative parent-child relationship quality (Branje et al. 2010), are associated with depressed young adolescents. This relationship between negative parental feedback and depression in adolescence is mediated by negative perceptions of the self.

Across many studies, researchers have found that lack of parental support and acceptance is more strongly linked to the development of depression rather than social anxiety for adolescents (Epkins and Heckler 2011: 343-345). Indeed, low parental warmth or support is a risk factor for depression, but not for social anxiety (La Greca and Lopez 1998; Lieb et al. 2000; Rork and Morris 2009). Other research shows that parental rejection is associated with depression, but not with social anxiety (Bogels et al. 2001; Greco and Morris 2002; Festa and

Ginsburg 2011) and not with social anxiety after controlling for depression (Johnson

Inderbitzen-Nolan and Schapman 2005; Starr and Davila 2008; Hutcherson and Epkins 2009).

Using this framework as a foundation, I suggest that failing to meet perceived parental

expectations can be interpreted as a form of negative feedback from parents. Therefore, we

would expect falling behind parental expectations to be associated with low self-esteem or

negative self-views, which would then lead to depression.

Theoretical Prediction: Source and Anxiety/Depression

I suggest that different sources of feedback will be associated with different

psychological distress outcomes. In particular, I propose that perceived negative feedback from

peers will be more closely associated with anxiety and that perceived negative feedback from

parents and society will be more strongly linked to depression. These predictions are based on

research focused on childhood and adolescent mental health outcomes, which show that peer-

related variables are more closely related to anxiety, while family-related variables are more

closely connected to depression (Epkins and Heckler 2011). I propose that with the recent

demographic trend of an extended transition to adulthood and a prolonged period of identity

development (Arnett 2000; Shanahan 2000), these same relationships could be expected in an

early adulthood sample.

Hypothesis 3A. Falling behind the perceived expectations of peers regarding markers of
adulthood will be associated with anxiety.

Hypothesis 3B. Falling behind the perceived expectations of parents and society regarding
markers of adulthood will be associated with depressive symptoms.

CHAPTER 4

METHODS

The purpose of this chapter is to present my approach to data collection, methods,

measures, and the analytic framework that I will use to answer the two research questions in this

dissertation. First, I discuss why and how I gathered the data used in these analyses. Then, I

include a description of the sample. Next, I detail the measures I used to operationalize these

concepts. Finally, I outline the analytic strategy.

APPROACH TO DATA COLLECTION

I gathered original survey data from over five hundred 18-29 year-old young adults in the

United States. The survey included questions about respondents' self-views, participation in

health risk behaviors, mental health, and views about age norms, in addition to extensive

demographic information. While there are several excellent national longitudinal data sets that

target young people in this age range, such as The National Longitudinal Study of Adolescent to

Adult Health (Add Health), Youth Development Study, and The National Survey of Child and

Adolescent Well-Being (NSCAW), these surveys do not contain detailed questions about

respondents' self-views or about age norms. The focus of this dissertation is on identity

processes and the perceived expectations for at what age certain markers of adulthood are

expected to be accomplished, so the variables in existing datasets are insufficient to answer these

research questions.

My goal is to understand the views and beliefs of people during the transition to

adulthood. The majority of research exploring issues of young people transitioning to adulthood

is gathered in classrooms and laboratories on college campuses. In order to gather a sample of respondents beyond undergraduate college students, I used an online labor market called Mechanical Turk (MTurk). The MTurk workforce is composed of over 500,000 participants, which provides for a more broad and varied sample than undergraduate college students, especially in terms of education, class, and age (Paolacci and Chandler 2014). MTurk was introduced by Amazon in 2005 and has since become a widely used resource for social science researchers to survey a large and diverse sample of research participants (Goodman, Cryder, and Cheema 2013; Paolacci and Chandler 2014; Rand 2012; Rouse 2015). MTurk allows researchers to access a sample of individuals who will complete surveys, answer questions, and perform short online tasks for reimbursement through Amazon. In order to understand young adults' views of themselves on the cusp of adulthood, I limited my sample to those in the 18-29 year-old age range and gathered data such that I have responses from individuals across every year of this age range.

I sampled respondents in such a way as to reach a varied group of young adults. Due to the heterogeneity in work and family structures during this age range, respondents are available to complete a survey at different times of day. In addition, since I was gathering data from respondents across the United States, I needed to take into account time zones. To be sure that people in different time zones and on different schedules were able to take this survey, I posted surveys around the clock using a process called "microbatching." This means instead of posting all 500+ surveys online at once, I instead released the survey in smaller "microbatches" of nine surveys at a time, every three hours. I intentionally increased sample representativeness by limiting the survey to only a few participants in each batch (N=9) and spacing out the timing of when each microbatch was released. My goal was to avoid a bias in the sample towards people

who would be available to be online to take the survey on a particular weekday morning (i.e., unemployed, stay-at-home parents, service industry workers) or a particular weekend night (i.e., employed during regular 8-5 business hours), for example. This required using two programs (Amazon Web Services and TurkPrime) to link the survey to the Mechanical Turk workforce.

Participants were compensated in line with MTurk standards for a survey of this length. The average time it took for participants to complete the survey was 25 minutes with a range of 12 to 67 minutes. Respondents' identities are protected since they were asked about potentially illegal behavior – only their MTurk Worker ID is connected to the response and that was exchanged for a participant number after compensation was complete.

SAMPLE DESCRIPTIVES

There were 524 participants who completed the survey, all of whom were registered with IP addresses in the United States. While 778 potential participants accessed the survey by opening the survey link, 254 respondents did not meet the inclusion criteria for the survey for one of several reasons. I excluded 186 participants who did not consent on the initial screen, indicated that they were not between the ages of 18 and 29, or failed one of several "attention check" questions placed throughout the survey. There were 68 respondents who began, but did not complete the survey. These partial respondents only supplied responses to the first few screens and remained classified as "responses in progress" until the survey period closed. Respondents who did not complete the survey for one of these reasons (N=254) were not paid.

Some responses (N=22) were not included in the final analyses because they were missing data on the key variables of as mother's education, which was used as a proxy for socioeconomic status, (N=10), binge drinking (N=7), or anxiety (N=5). Analysis of the missing data indicates that those missing were not significantly different on measures of gender, race, or

age. After listwise deletion, 507 respondents remain for analysis in Study 1 and 502 respondents remain for analysis in Study 2.

My sample is diverse in terms of gender, race, socioeconomic status, and age. Half of the respondents are women (N=253; 50%), and half are men (N= 249; 50%). The sample is 75% Caucasian (N=375), 11% African American (N=53); 9% Asian/Pacific Islander (N=45) and 7% Latino/Hispanic (N=35). Six respondents (1%) classify themselves as Native American. There may be class differences in these identity processes and adulthood expectations, so I include a variable to estimate socioeconomic status, using the proxy of respondents' mother's level of education. Thirty seven percent of the sample reported that their mother has a high school degree or less (N=188) and the remaining 63% reported that their mother took at least some college courses or higher (N=314).

This sample includes respondents from every age between 18 and 29. By age category, 44% of the sample is between the ages of 18-22 (N=223); 24% of the sample is between the ages of 23-25 (N=118) and 32% of the sample is between ages of 26-29 (N=161). This adds to the literature on the transition to adulthood which largely focuses on undergraduate college students completing surveys for course credit.

MEASURES

In this dissertation I seek to answer two separate but related questions about health during the transition to adulthood. The first research question is "How are views of self as an adult associated with participation in health risk behaviors?" The second research question is "How is falling behind own expectations and the reflected appraisals of parents, peers, and society in general regarding markers of adulthood associated with mental health outcomes?" I will outline the measures for both research questions in this section beginning with Study 1 including the

dependent variable, primary independent variables, and control variables and then describing the same variables for Study 2.

Study 1

Dependent Variable: Health Risk Behaviors

The primary outcome measure is an index of participation in three health risk behaviors ranging from no reported participation in these health risk behaviors to recent participation in all three health risk behaviors. Researchers tend to examine multiple health risk behaviors together, choosing behaviors that threaten health through impaired judgment, direct negative effects on health, and an increased risk of negative social, psychological, and economic consequences. The questions in this survey were adapted from the Youth Risk Behavior survey (CDC: 2017) and are in line with measures used by other scholars who study health risk behaviors for young adults (e.g., Van Hoof, Bekkers, and van Vuuren 2014; Schwartz et al. 2015) to assess health risk behaviors in terms of marijuana use, binge drinking and inebriated sex.

Respondents in this study reported about marijuana use and binge drinking in the past 30 days and alcohol or drug use before most recent sexual intercourse. Marijuana use was measured dichotomously (0 = zero times; 1= one or more times in past 30 days). Binge drinking indicates the number of days a male respondent had 5 or more or a female respondent had 4 or more drinks of alcohol in a row within a couple of hours (0 = never; 1 = 1 or more days). This survey question was designed to measure high risk drinking according to National Institute on Alcohol Abuse and Alcoholism standards (2018) which defines more than four drinks for men (three for women) within a four-hour period to constitute "binge drinking." Inebriated sex measured how many respondents who had ever had sex used drugs or drank alcohol before their most recent sexual intercourse encounter (0 = no; 1 = yes).

Recent marijuana use was reported by 23% (N=115) of the sample, recent binge drinking was reported by 35% (N=177) of the sample, and 21% (N=107) of the sample reported using drugs or alcohol before last sexual intercourse. From these measures, I created a 3-item count variable of an index of participation in any of these health risk behaviors. Fifty two percent (N=260) did not report any health risk behaviors, 24% (N=122) reported participation in one, 17% (N=83) in two, and 7% (N=37) reported recent participation in all three health risk behaviors.

Primary Independent Variable: Views of Self as an Adult

Participants' responses to three separate questions allowed for the creation of a 3-item continuous scale of self-views as an adult ranging from 1 to 7 (α =0.88; M=5.47; SD=1.17). Respondents evaluated themselves (1 = I do not identify with this role at all; 7 = I completely identify with this role) as identifying with a list of identities including "adult" (M=5.52; SD=1.30) and "grown up" (M=5.26; SD=1.46). Agreement with the statement "I identify as an adult" (1 = strongly disagree; 7 = strongly agree) (M=5.61; SD=1.14) taken from another part of the survey completed the index which serves as the primary independent variable for Study 1.

Control Variables

Several factors are related to the adult identity and health risk behaviors. Those considered as controls in this study include three roles associated with adulthood (full-time worker, spouse, parent), three measures of markers of adulthood (being financially independent, not living at home, not being a full-time-student), and five demographic control variables (gender, race, SES, age, sexuality).

Financial independence indicates the amount of financial support from parents or family members for living expenses (0= regular, frequent or occasional support; 1= little or no support).

Having *left home* includes living alone, with friends or roommates, with a romantic partner, with children, with other family members, but not with family of origin (0 = living at home with parents 1= all other living arrangements). *Not a full-time student* is based on respondents indicating if they were currently attending college classes either part-time or full-time (0 = full-time student; 1 = part time or not a student). In this sample, 42% (N=209) of respondents are financially independent, 68% (N=341) of respondents have left home and 65% (N=326) of respondents are not full-time students. Respondents were also asked about their roles as worker, spouse, and parent. Forty nine percent of respondents reported *working full-time for pay* (N=244), 19% of respondents reported being *married* (N=93) and 19% (N=96) of respondents reported being a *parent*.

I also include measure of gender (1 = man), race (1=White), socioeconomic status (1 = higher), age (measured in years), and sexuality (1= Straight). This sample is half women (N=253) and 75% (N=375) Caucasian. Socioeconomic status is measured using the proxy of respondents' mother's level of education as this is a frequently used measure for adolescent and young adult socioeconomic status (Cowan et al. 2012). Parental education is a strong indicator of parents' income and is considered to be one of the most stable ways to measure socioeconomic status because it is typically established at an early age and tends to remain the same over time (for a discussion and overview see: Sirin 2005). Thirty seven percent of the sample reported that their mother has a high school degree or less (N=188) and the remaining 63% reported that their mother took at least some college courses or higher (N=314). In terms of age, there is relatively even distribution across age categories. Forty four percent (N=223) of respondents are between ages 18 to 22; 24% (N=118) of respondents are between ages 23 to 15, and 32% (N=161) of respondents are between ages 26 to 29.

Eighty five percent (N=427) of respondents reported their sexual orientation as heterosexual. This control variable is included in the analysis based on research showing that GLB teens holding negative self-views report higher rates of substance use and sexual risk behaviors than their heterosexual counterparts (Garofalo, Wolf, Kessel, and Palfrey 1998). While I am not making these predictions here, I am controlling for sexuality in the model predicting health risk behaviors. The control variables for Study 1 are the respondent's status on: full-time work, marriage, parenthood, financial independence, living arrangement, and full-time student. The models also include measures for gender, sexuality, race, socioeconomic status, and age. See Appendix A for a correlation matrix and descriptives for all variables involved in Study 1.

Study 2

Dependent Variable: Psychological Distress

I examine two separate validated scales of psychological distress in this dissertation: *anxiety* and *depression*. The Beck Anxiety Inventory (Beck, Epstein, Brown, and Steer 1988) was chosen to measure anxiety based on its high internal consistency and test-retest reliability. This twenty-one-item standardized scale measures how often during the past month respondents experienced symptoms such as "heart pounding/racing," "fear of losing control," or being "unable to relax." Responses include Not At All (1); Mildly but it didn't bother me much (2); Moderately – it wasn't pleasant at times (3); and Severely – it bothered me a lot (4). Responses were weighted by their factor loadings and were combined to create a mean index of anxiety ($\alpha = .9442$; Range: 1-3.9; M: 1.40; SD: .4982).

The Center for Epidemiological Studies Depression Scale - Revised (CESD-R) is the most up-to-date accurate and valid measure of depression in the general population (Van Dam and Earleywine 2011). Using the twenty item CESD-R, I asked respondents to indicate how

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often "during the past week or so" they exhibited symptoms such as "I lost interest in my usual activities" and "Nothing made me happy" and "I wanted to hurt myself." Responses included Not at all or less than 1 day last week (1); 1 or 2 days last week (2); 3 to 4 days last week (3); 5 to 7 days last week (4); or Nearly every day for two weeks (5). I combined these indicators, weighting items by their factor loadings to create a mean index of depression ($\alpha = .9577$; Range: 1-4.8; M: 1.68; SD: .7611).

Primary Independent Variables: Falling Behind Expectations

The primary independent variable in Study 2 is a composite measure of falling behind on up to four milestones of adulthood based on a respondent's own expectations and the expectations of their parents, peers, and society in general. This independent variable catalogues the number of life domains of adulthood on which an individual is falling behind own and others' expectations for accomplishing adulthood milestones. In order to create this measure, I considered two key aspects of falling behind expectations (source of feedback and life domain) and compared those perceived expectations to an individual's actual status on that adulthood milestone. This allows me to create a mismatch variable with a focus on those individuals who are falling behind expectations as compared to those who are meeting or exceeding expectations. The resulting variables of "Falling Behind Expectations" are each an index of falling behind expectations on milestones of adulthood based on the respondent's own views, the perceived expectations of their parents, their peers, and of society in general. To create these falling behind expectations variables required four steps, which I will outline below.

The first step in creating the *Falling Behind Expectations Index* was to identify the source of those expectations. In Study 2, a respondent can be understood as "falling behind expectations" from four perspectives: Own, Parents, Peers, and Society in General.

Respondents were shown a series questions regarding behaviors associated with the transition to adulthood. They were asked to rate their agreement with a behavior being appropriate at ages 18, 22, 25, and 29 using a Likert scale (1 = Strongly Disagree; 7 = Strongly Agree). For *own expectations*, respondents were prompted with the following message:

"The next few screens will include statements about ways of behaving with age options of 18 years old, 22 years old, 25 years old, and 29 years old. For each of the following statements, think about how appropriate you think it is to behave that way at each age. Please rate your agreement with the appropriateness of the behavior at each age. In other words how appropriate do YOU think it is for a ___ year old to do each of the following behaviors?"

These questions are aimed at understanding the respondents' own cultural age deadlines and beliefs about appropriate behavior at certain ages, known as "age norms" (Neugarten et al. 1965). Behaviors include being financially independent, being in a serious relationship, living independently from family of origin, and finishing one's education. The items are conceptualized as agreement with age norm statements for each age deadline. For example, one statement is agreement using a Likert scale (1 = strongly disagree; 7 = strongly agree) with "A(n) ____ year-old should be financially independent from his or her parents." and another is "By the time people are _____ years old, they should be in a relationship with someone they want to marry." Participants who strongly agree (7) or agree (6) that a young person should have completed that behavior by that age are seen as endorsing that age deadline.

For the expectations of others, respondents were shown a similar series of questions regarding behaviors associated with the transition to adulthood and asked to imagine what they think their parents, peers, and society in general would see as normative appropriate behavior. Respondents were prompted with the following message:

"Now that you've thought about the normative behavior that you consider appropriate for this age range, I want to ask you about your perception of the normative behavior you think your PARENTS, your PEERS, and SOCIETY IN GENERAL would deem as appropriate. Their views on the normative behavior for 18-29 year olds may be very similar to your own – or very different from your own. For the next few questions, try to think about how your parents, your peers, and society in general would view the appropriateness of certain behaviors at certain ages."

Again, participants who strongly Agree (7) or agree (6) that significant others think that a young person should have completed that behavior by that age are seen as endorsing that age deadline.

The second step in creating the *Falling Behind Expectations Index* was to identify various life domains of adulthood on which a respondent could be falling behind. The four domains of adulthood in this study are financial independence, serious relationship, leaving home, and finishing education. While much of the literature exploring falling behind expectations for adulthood focuses on a single domain such as marriage (Carlson 2012; Sharp and Ganong 2007; Eck 2013) or leaving home (Kins et al. 2009), I contribute to the literature that conceptualizes adulthood expectations on multiple domains (Mossakwoski 2011). The current study conceptualizes the degree to which an individual is falling behind the expectations of self and others across four life domains of adulthood: money, love, home, and education.

For each milestone associated with adulthood, respondents indicated agreement (1 = strongly disagree to 7 = strongly agree) that each behavior was appropriate at each age (18, 22, 25, 29). Respondents report both own expectations and the perceived expectations of peers, parents, and society in general. Respondents designated agreement with statements related to leaving home ("When someone is ____ years old s/he should be living with his or her parents.") and finishing college ("By the time people are ____ years old, they should be finished with college.") in addition to the statements introduced above related to financial independence and being in a serious relationship. In each case, respondents are reporting expected behavior on each of these life domains according to themselves and to their perceptions of others' expectations for someone at each age cutoff.

The third step in creating the *Falling Behind Expectations Index* was to determine respondents' status on each of these adulthood milestones. The status questions were designed

to be parallel to the expectation about adulthood questions and focused on the four domains of financial independence, relationship status, living arrangements, and college graduate status.

   Financial independence represents the amount of financial support from parents or family members for living expenses (0= regular, frequent or occasional support; 1= little or no support). To conceptualize *relationship status*, respondents indicated being Single, Dating Several People Casually, Dating One Person Casually (0 = not in a serious relationship) or that they were Dating One Person Seriously, Engaged, Married (1= in a serious relationship). Note the parallel to the expectation of adulthood statement which does not ask about marriage, but instead asks about the appropriate age for "being in a relationship with someone they want to marry."

   Left home includes living alone, with friends or roommates, with a romantic partner, with children, with other family members, but not with family of origin (0 = living at home with parents; 1= all other living arrangements). Finally, a measure was included for *college graduate status* (0= an associate degree, some college courses, high school degree, or less than a high school degree; 1= Bachelor's degree or Graduate degree). Note again the parallel to the expectation question about "finishing education" which specifically asks about "finishing college." Similarly, the status measure represents college graduates, even though a young adult may finish their education after high school with no intention of attending college. In this sample, 42% (N=209) of young adults are financially independent, 52% (N=259) are in a serious relationship, 68% (N=341) have left home, and 30% (N=152) have graduated college.

   The fourth and final step in creating the *Falling Behind Expectations Index* was to create a mismatch score for each participant on each domain of adulthood from each source of expectations. To operationalize falling behind expectation, I determined respondents' status on each of these adulthood milestones and compared that status to their expectations for a particular

age. All models include a measure of falling behind an individual's own expectations in an index of falling behind on zero life domains up to three or more life domains. Each model also includes an additional index of falling behind perceptions of others' expectations, again ranging from zero life domains to three or more life domains. The domain of adulthood milestones are combined into an index of zero to three, while the source of expectations is a separate variable in each model. These indices were designed to parse out respondents' own expectations from their perceived expectations of others regarding adulthood milestones.

The primary independent variable in each model is an index of falling behind expectations. For each life domain, I used the information on an individual's status and compared that to their expectations at status for a particular age. For example, I have information for each respondent as to if he or she thinks someone should be financially independent by 18, 22, 25, or 29 and information for if the respondent is financially independent from their parents. The mismatch score is thus a comparison of the respondent's expectation for if they think someone *should be* financially independent by their current age with whether that respondent actually *is* financially independent. So, for example, if a 20 year-old respondent is still receiving regular support for living expenses from her family and agrees that by age 18 someone should be financially independent, she would be considered falling behind expectations. Another example is if a 27 year-old respondent is not in a relationship but strongly agrees that someone should be in a relationship with the person s/he wants to marry by age 25, he would be considered falling behind expectations. A final example is if a 19 year-old respondent reports not having graduated college and agrees that someone should be finished with college by age 22, that participant is not classified as falling behind expectations, regardless of her educational status and plans.

In order to create these mismatches, I selected the nearest age deadline to the respondent's actual age, which may be their current age or up to three years younger, described in Table 3. This means that I compared the 18-21 year-olds in my sample (N=176; 35%) to the age deadlines reported for age 18. I compared the 22-24 year-olds in the sample (N=116; 23%) to the age deadlines related to age 22 and I compared the 25-28 year-olds in the sample (N=169; N=34%) to the age deadlines for age 25. Finally, the 29-year olds in my sample (N=41; 8%) were compared to the age deadlines determined for 29 year-olds. This process yields conservative mismatch estimates as some people may have accomplished the milestone after their perceived appropriate age deadline, but before their current age at the time of the survey. For example, a 21 year old who believes an individual should leave home at 18 years old and left home himself at age 20 (thus falling behind his own expectations) would not be considered to be falling behind expectations in this study since he meets those expectations at this point in time.

Table 3: Comparing Respondents' Actual Age to Cultural Age Deadline

Actual Age	N	%	To Compare to Age
18-21	176	35%	18
22-24	116	23%	22
25-28	169	34%	25
29	41	8%	29
Total:	502	100%	

The primary independent variables in these analyses are indices of falling behind expectations which includes the people who are falling behind own or others expectations on any of the four life domains. These indices show on how many life domains an individual is falling behind the normative age expectations for accomplishing markers of adulthood (0 = none; 1 =1; 2 = 2; 3 = 3+). The final model also contains a composite score of "Falling Behind Total Others' Expectations" which ranges from falling behind on no one's expectations (N=278; 55%) and allows for falling behind on expectations in up to 9 ways (Range: 0-9; M: 1.37; SD: 2.02).

Control Variables

Several factors are related to falling behind expectations and mental health. Those considered as controls in Study 2 include measures of four markers of adulthood (financial independence, being in a serious relationship, having left home, and being a college graduate) and four demographic control variables (gender, race, SES, and age). Previous research (Epstein and Ward 2011) suggests that parents may hold and communicate different expectations for daughters and sons regarding the importance of markers of adulthood and this might also extend to the appropriate age at which one should achieve them. It is also particularly important to include measures of accomplishing the milestones themselves as they are generally positive life events in and of themselves and could be associated with anxiety and depression.

For the markers of adulthood, I used the four status variables described in step 3 above. Financial independence (0 = no; 1= yes), being in a serious relationship (0= no; 1 = yes), having left home (0=no; 1=yes), and being a college graduate (0=no; 1 = yes) are included in each model. I also include measure of gender (1 = man), race (1=White), socioeconomic status (1 = higher), and age (measured in years) in each model. Fifty percent (N=253) of the respondents in this sample are women, 75% (N=375) Caucasian, and 63% (N=314) of higher socioeconomic status. There is relatively even distribution across age categories with 44% (N=223) of respondents ages 18-22; 24% (N=118) of respondents ages 23-15 and 32% (N=161) of respondents ages 26-29. See Appendix B for a correlation matrix and descriptives for all variables involved in Study 2.

OVERVIEW OF ANALYTIC STRATEGY

There are two results chapters in this dissertation. In Chapter 5, I ask the research question "How are views of self as an adult associated with participation in health risk behaviors?" and my dependent variable is a count of health risk behaviors so I use a negative binomial regression model. In Chapter 6, I ask the research question "How is falling behind own expectations and the reflected appraisals of others regarding markers of adulthood associated with psychological distress?" and my dependent variables are the scales of anxiety and depression. For this analysis I will use multivariate regression models. In the following two chapters, I will present the details of the key variables for each study, describe the methodological approach for each study, outline the relationship between the focal variables and present the results of the hypotheses.

CHAPTER 5

RESULTS: HEALTH RISK BEHAVIORS

The purpose of this chapter is to examine how views of self as an adult are associated with health risk behaviors. To do so, I use negative binomial regression analysis to test whether viewing oneself as an adult is negatively associated with an index of health risk behaviors while controlling for a range of important covariates. I predict that, beyond other factors such as sociodemographic personal characteristics and roles and markers associated with adulthood, self-identifying as an adult will be negatively associated with engaging in health risk behaviors.

First, I provide descriptive statistics about the demographics of the sample, views of self as an adult, and rates of health risk behaviors. Next, I discuss my methodological approach including why I chose a negative binomial regression analysis for Study 1, and how to interpret coefficients and pseudo R-squared indicators. Then, I describe of the relationship between personal characteristics, adulthood roles, markers of adulthood, and health risk behaviors. Finally, I present the results from the hypothesis related to identifying as an adult and health risk behaviors.

DESCRIPTIVE STATISTICS

Sample Characteristics

Characteristics of participants in this study reflect the demographics for this age group in the United States (U.S. Census Bureau 2016). My sample is diverse in terms of gender, sexuality, race, socioeconomic status, and age. About half of the respondents are women (N=257; 51%). A majority of the sample is heterosexual (86%; N =435) and Caucasian (74%; N

=377). Socioeconomic status may affect views of self as an adult and participation in these risk

behaviors. Thus, I control for socioeconomic status by using the proxy of respondents' mother's

level of education. Thirty eight percent (N=191) of the sample reported that their mother had a

high school degree or less and the remaining 62% (N=316) reported that their mother took at

least some college courses or higher. This sample includes respondents of every age between 18

and 29. By age category, 45% of the sample is between the ages of 18 to 22 (N=226), 24% of

the sample is between the ages of 23 to 25 (N=120), and 32% of the sample is between ages of

26 to 29 (N=161). Although 524 respondents completed the survey, 10 were missing data for the

risk behavior scale and 7 were missing data for the question about SES, resulting in a total

sample size for Study 1 of just over five hundred respondents (N = 507).

Dependent Variable: Health Risk Behaviors

The dependent variable is an index of participation in three health risk behaviors ranging

from no reported participation in these health risk behaviors to recent participation in all three

health risk behaviors. Marijuana use in the past 30 days was reported by 23% (N=116) of the

sample, binge drinking in the past 30 days was reported by 35% (N=178) of the sample, and 21%

(N=107) of the sample reported using drugs or alcohol before last sexual intercourse. The final

dependent variable is a 3-item count variable indicating the number of these behaviors the

respondent had recently engaged in, ranging from none to all three. Fifty two percent (N=263)

did not report any health risk behaviors, 24% (N=124) reported participation in one, 16% (N=83)

in two, and 7% (N=37) reported recent participation in all three health risk behaviors.

Primary Independent Variable: Self-Identification as an Adult

The central independent variable in Study 1 is viewing oneself as an adult. This 3-item

additive scale (α = 0.88) included respondents' self-identification with the identities of "adult"

and "grown-up" using a 7-point Likert scale of agreement (1 = I do not identify with this role at all; 7 = I completely identify with this role). Participants in this sample of 18 to 29 year-olds largely identified themselves as an adult (M=5.48; SD = 1.17).

Control Variables

Also included in the models are three adulthood roles (i.e., being a full-time worker, being married, being a parent) and three markers of adulthood (i.e., being financially independent, no longer living with parents, no longer being a full-time student). Consistent with the demographic statistics of increased age at first marriage and first birth, most participants in this sample do not report holding those roles. Less than one fifth of respondents (19%; N=95) are married and less than one fifth (19%; N=97) are parents. Half of the sample reports being full-time workers (49%; N=247). Participants are quite heterogeneous in whether they have achieved these markers of adulthood. Less than half of respondents report being financially independent from their families (42%; N=211), but more than two thirds have left home (68%; N=345), and more than two thirds are not currently full-time students (N=329; 65%). We would expect that holding these adulthood roles and achieving these markers of adulthood would both increase likelihood of self-view as an adult and potentially decrease likelihood of participation in health risk behaviors. Thus, these measures are included in the final models.

METHODOLOGICAL APPROACH

I used the variables described above to ascertain the relationship between views of self as an adult and participation in health risk behaviors. Since the dependent variable is a count variable and positively skewed with many observations in the data having a value of zero, a Poisson or negative binomial regression model is more appropriate than an OLS regression (Long 1997). Negative binomial regression analysis is preferred over Poisson regression when

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the conditional variance of the count variable exceeds the conditional mean, as it does in these models (Gardner, Mulvey, and Shaw 1995). The dependent variable ranges from zero to three. Half of the sample did not report any health risk behaviors, resulting in a zero score on that variable. Due to this overdispersion, I used a mean dispersion negative binomial regression model to estimate the likelihood of a respondent participating in health risk behaviors.

The results presented below are from a negative binomial regression analysis of the count of health risk behaviors. The reported coefficients indicate the predicted change in the number of health risk behaviors for a one-unit change in each predictor variable. When exponentiated, the slope equals the predicted factor change in number of health risk behaviors in the past 30 days for a one-unit change in the predictor. The negative binomial regression analysis measures the association between views of self as an adult and participation in health risk behaviors, while controlling for gender, sexuality, race, SES, three adult roles (full-time worker, spouse, parent), and three markers of adulthood (financial independence, having left home, and not being a full-time student).

Note that in negative binomial regression, there is not a measure equivalent to the R-squared measure used in OLS regression to determine the proportion of variance for the dependent variable. Instead, negative binomial regression models often include McFadden's pseudo R-squared (McFadden 1974; Veall and Zimmermann 1992). These pseudo R-squared values are best used to compare different specifications of the same model and are similar in many ways to an R-squared measure in OLS with one notable difference – the expected size of the value. The interpretation of McFadden's pseudo R-squared is, as with an R-squared found in OLS, generally that larger values are preferred to smaller ones. However, McFadden (1979: 306) warns that the pseudo R-squared measure tends to be "considerably lower than those of the

R-squared index." This means that the reader should interpret the pseudo R-square similar to the R-square found in OLS regression models, but expect lower values.

DESCRIPTION OF THE RELATIONSHIP BETWEEN PERSONAL CHARACTERISTICS, ROLES AND MARKERS OF ADULTHOOD, AND HEALTH RISK BEHAVIORS

Table 4 presents four negative binomial regression models predicting a count of health risk behaviors. Model 1 includes the effect of personal characteristics of gender, sexuality, race, and SES on participation in health risk behaviors. Model 2 steps in age, as some research suggests these are age graded behaviors that young people curtail as they grow up. Model 3 accounts for adult roles and markers of adulthood, another potential explanation for a reduction in health risk behaviors. Finally, Model 4 tests the central hypothesis that viewing oneself as an adult is associated with a reduction in health risk behaviors. Table 4 presents significance values based on the more conservative two tailed test but, as my hypothesis is directional, I will interpret the results of the final model based on a one-tailed interpretation of significance.

In Model 1, being male, identifying as a sexual-minority, and having a higher socioeconomic status are each associated with a higher count of health risk behaviors. For example, the exponentiated slope for "male" ($e^{0.33} = 1.39$; p<.01) suggests that being a man is associated with a 39 percent increase in the log count of health risk behaviors in the past 30 days, as compared to women. This is consistent with previous research that suggests that men have higher rates of substance use than women. Respondents who are heterosexual have a 42 percent ($e^{-0.38} = 0.68$; p<.01) decrease in the log count of health risk behaviors as compared to their sexual minority counterparts. Finally, having a higher socioeconomic background is associated with a 36 percent ($e^{0.31} = 1.36$; p<.01) increase in the log count of health risk behaviors compared to those in the lower SES category. I did not suggest directional hypotheses about these

relationships, though these findings are consistent with research that indicates that GLB teens who hold negative views of themselves report higher rates of substance use and other risk behaviors (Garofalo, Wolf, Kessel, Palfrey 1998). There was no association between race and health risk behaviors.

Table 4: Negative Binomial Regression Models Predicting Count of Health Risk Behaviors

Predictors	1	2	3	4
Personal Characteristics				
Gender [1 = Male]	0.33**	0.34**	0.26*	0.26*
	(.112)	(.112)	(.111)	(.110)
Sexuality [1 = Straight]	-0.38**	-0.39**	-0.32*	-0.33*
	(.147)	(.146)	(.144)	(.143)
Race [1 = White]	0.07	0.07	0.09	0.09
	(.126)	(.125)	(.124)	(.123)
SES [1 = High]	0.31**	0.31**	0.27*	0.27*
	(.117)	(.116)	(.115)	(.114)
Age		-0.12	-0.06	-0.05
		(.064)	(.074)	(.074)
Adult Roles				
Full-Time Worker			0.22	0.25*
			(.119)	(.119)
Married			-0.60**	-0.60**
			(.196)	(.195)
Parent			-0.08	-0.14
			(.173)	(.174)
Markers of Adulthood				
Financially Independent			-0.12	-0.12
			(.124)	(.123)
Doesn't Live at Home			0.21	0.23
			(.130)	(.129)
Not a Full-Time Student			-0.20	-0.18
			(.124)	(.124)
Adult Identity				
Views Self as an Adult				-0.10*
				(.046)
Pseudo R^2	.016	.019	.035	.039

N= 507; *p<.05, **p<.01, ***p<.001
Unstandardized coefficients presented, standard errors in parentheses below each variable, two-tailed tests

As presented in Model 2, I find marginal support for the idea that an age-graded informal social control process occurs over time in which, as individuals grow up, they participate in less

deviant and risky behavior. The exponentiated slope for age ($e^{-0.12} = 0.89$; p=.063) indicates that every one year increase in age is associated with an 11 percent decrease in the log count of health risk behaviors. This data provides marginally significant support for the idea that as people transition more fully into chronological adulthood, they are less likely to binge drink, use illegal drugs, and have risky sex.

However, empirical evidence of age alone predicting participation in health risk behaviors dissipates in Model 3 after accounting for roles and markers associated with adulthood. In Model 3, one role of adulthood in particular is significantly associated with a reduction in health risk behavior participation. Being married is significantly negatively associated with involvement in these health risk behaviors. As compared to their unmarried counterparts, married respondents have a 45 percent ($e^{-0.60} = .55$; p<.01) decrease in the log count of health risk behaviors. Being a full-time worker is also marginally significantly associated with an increase health risk behaviors ($e^{0.22} = 1.24$; p<.068). Perhaps full-time work provides the money or a social network that encourages binge drinking, marijuana use, and substance use before sex. Parenthood was not significantly associated with health risk behaviors.

The markers of adulthood are not significantly related to health risk behaviors. Neither being financially independent nor not being a full-time student has any association with these health outcomes, though living at home with parents is marginally significantly protective against these behaviors, but in an unexpected direction. Respondents who have left home show an increase in health risk behaviors ($e^{0.21} = 1.24$; p=.092) which approaches statistical significance.

TEST OF HYPOTHESIS: VIEWS OF SELF AND HEALTH RISK BEHAVIORS

Are views of self as an adult associated with less participation in health risk behaviors? Hypothesis 1 predicted that self-identifying as an adult would be negatively associated with engaging in health risk behaviors while controlling for other factors such as personal characteristics, adult roles, and markers associated with adulthood. Model 4 controls for all previously mentioned variables and adds the main variable of interest, identifying as an adult.

Consistent with theoretical predictions, viewing oneself as an adult is associated with lower levels of participation in health risk behaviors. Using a one-tailed interpretation of significance to test this directional hypothesis, I find that for every one unit increase in the adult identity, there is a ten percent ($e^{-0.10} = 0.90$; p<.013) decrease in the log count of health risk behaviors over the past thirty days. This means that in a full model controlling for factors associated with health risk behaviors (such as gender and sexuality) and factors associated with adulthood (age, roles associated with adulthood, traditional markers of adulthood) there remains evidence of a significant protective effect of identifying as an adult. By controlling for these additional variables in these analyses, I am able to specify that the inverse association between adult identity and health risk behaviors is not due to simply aging out of these behaviors, or to young people holding specific roles associated with adulthood, or to achieving certain adulthood markers. Instead, these results suggest that for young people on the cusp of adulthood, self-identifying as an adult serves as a protective factor against participation in health risk behaviors.

In Chapter 5, I presented results addressing the first research question of this dissertation, "how are views of self as an adult associated with participation in health risk behaviors?" I used negative binomial regression analysis to test whether viewing oneself as an adult is negatively associated with an index of health risk behaviors while controlling for a range of important

covariates. I found support for Hypothesis 1 that self-identifying as an adult is negatively associated with engaging in health risk behaviors, even while taking into account the effects of personal characteristics, adult roles, and markers associated with adulthood on health risk behavior.

These results suggest that viewing oneself as an adult is a protective factor against participation in health risk behaviors. Another question to explore is how do the perceived views of others regarding an individual's adulthood status affect that individual's health outcomes? In the next chapter, I turn my attention to the second research question exploring how perceptions of others' expectations for achieving markers of adulthood are associated with psychological distress.

CHAPTER 6

RESULTS: PSYCHOLOGICAL DISTRESS

The purpose of this chapter is to examine how reflected appraisals regarding markers of adulthood are associated with mental health outcomes. To do so, I use OLS regression models to test how falling behind perceived expectations of others related to financial independence, being in a serious relationship, having left home, and being a college graduate are associated with anxiety and depression (Hypothesis 2). I then test the predictions that perceived expectations of peers are associated with anxiety (Hypothesis 3A) and perceived expectations of parents/society are associated with depression (Hypothesis 3B).

First, I provide descriptive statistics for the demographics of the sample, rates of anxiety and depression (dependent variables), and percentages of falling behind expectations of self, peers, parents, and society (primary independent variables). Next, I provide a description of the relationship between personal characteristics, markers of adulthood, and mental health outcomes. Then, I describe models that test Hypothesis 2 that, beyond own expectations for markers of adulthood, falling behind expectations of parents, peers, and society will be associated with psychological distress. Finally, I present models that test Hypothesis 3A related to the association between falling behind expectations of peers and anxiety and Hypothesis 3B regarding the association between falling behind expectations of parents/society and symptoms of depression.

DESCRIPTIVE STATISTICS

Sample Characteristics

My sample is diverse in terms of gender, race, socioeconomic status, and age. Half of the respondents are women (N=253; 50%). The sample is 75% Caucasian (N=375). There may be class differences in these identity processes and adulthood expectations, so I include a variable to estimate socioeconomic status, using the proxy of respondents' mother's level of education. Thirty seven percent of the sample reported that their mother has a high school degree or less (N=188) and the remaining 63% reported that their mother took at least some college courses or higher (N=314). This sample includes respondents of every age between 18 and 29. By age category, 44% of the sample is between the ages of 18-22 (N=223); 24% of the sample is between the ages of 23-25 (N=118) and 32% of the sample is between ages of 26-29 (N=161). Although 524 respondents completed the survey, 13 were missing data for the scale of anxiety, and 9 were missing data for the question about SES which means that the total sample size for Study 2 is just over five hundred respondents (N = 502).

Dependent Variables: Depression and Anxiety

The dependent variables are psychological distress measured through the Beck Anxiety Inventory (Beck, Epstein, Brown, and Steer 1988) and the Center for Epidemiological Studies Depression Scale - Revised (CESD-R) (Van Dam and Earleywine 2011). To measure *anxiety*, I drew from a list of twenty-one symptoms associated with anxiety to create a continuous standardized scale (α = .9442; Range: 1-3.9; M: 1.40; SD: .4982). Respondents reported if symptoms of anxiety bothered them during the past 30 days on a four point scale ranging from "not at all" up to "severely- it bothered me a lot." To measure *depression*, I drew from a list of twenty items associated with depression to create a continuous standardized scale (α = .9577;

Range: 1-4.8; M: 1.68; SD: .7611). Respondents reported the number of days they experienced symptoms of depression over the past two weeks on a five point scale ranging from "not at all or less than 1 day last week" up to "nearly every day for two weeks." These scales of psychological distress are presented as the dependent variables in separate models because the feedback from specific others is predicted to have different effects on depression and anxiety. Because these are continuous scale variables, OLS regression is used when conducting analyses.

Primary Independent Variables: Falling Behind Expectations

The primary independent variables are four separate indices of falling behind expectations on markers of adulthood based on the respondent's own views, and the perceived expectations of their parents, their peers, and of society in general. As a reminder, the comparison of a respondent's actual status on markers of adulthood is compared to two key aspects of expectations: source of feedback and life domain. In the final analyses, the sources of the expectations (i.e., own, parents, peers, society) are represented as four separate variables. In each model of expectations of others, own expectations are also included. The domain of the expectations (i.e., financial independence, serious relationship, left home, graduated college) are combined into an index in the final analyses. Each expectation variable ranges from falling behind on zero markers of adulthood to falling behind on three or more makers of adulthood.

Table 5 displays the percentage of respondents falling behind, matching, or exceeding their own, parents', peers', and society's expectations of at what age an individual should accomplish each marker of adulthood. While this final analysis focuses on people who are falling behind expectations using combined indices of all four markers, the information in this table provides background information on percentages of respondents who are falling behind, matching, or exceeding expectations for each marker of adulthood.

Table 5: Percentage of People Falling Behind, Matching, or Exceeding Their Own, Parents', Peers', and Society's Expectations of at What Age They Should Accomplish Four Markers of Adulthood

	Financial Independence	Serious Relationship	Left Home	College Graduate
Own Expectations				
Falling Behind	**71 (14%)**	**12 (2%)**	**10 (2%)**	**38 (8%)**
Matching	332 (66%)	266 (52%)	251 (50%)	378 (75%)
Exceeding	99 (20%)	224 (45%)	241 (48%)	86 (17%)
Parents Expectations				
Falling Behind	**95 (19%)**	**27 (6%)**	**20 (4%)**	**67 (13%)**
Matching	318 (64%)	273 (54%)	266 (53%)	375 (75%)
Exceeding	89 (18%)	202 (40%)	216 (43%)	60 (12%)
Peers Expectations				
Falling Behind	**87 (17%)**	**10 (4%)**	**36 (7%)**	**60 (12%)**
Matching	306 (61%)	138 (61%)	239 (48%)	366 (73%)
Exceeding	109 (22%)	80 (35%)	227 (45%)	76 (15%)
Society's Expectations				
Falling Behind	**117 (23%)**	**50 (10%)**	**42 (8%)**	**86 (17%)**
Matching	308 (62%)	270 (54%)	264 (52%)	368 (74%)
Exceeding	77 (15%)	182 (36%)	196 (39%)	48 (9%)

N=502

To use the example of financial independence, 66% of the sample (N=332) matches their own expectations and 20% (N=99) exceeds their own expectations for the age at which someone should be financially independent. Thus, more than three quarters of the sample feels that, based on their own expectations, they are "on track" for or "ahead" of the level of financial independence they think someone their age should have. Fourteen percent (N=71) of the sample reports that they expect people should be financially independent by their age, but they are not financially independent themselves. This indicates that they have fallen behind their own expectations for when someone should accomplish this marker of adulthood. Remember that this is a conservative test as I compared the individuals who were between age deadlines to the younger age deadline – sometimes resulting in a three year difference. For example, the 18-21 year-olds in the sample are compared to the age deadlines reported for age 18 and may have been falling behind expectations at one point, but have caught back up to meeting expectations.

Table 6 shows the distribution of people falling behind normative age expectations based on their own beliefs and their understandings of their parents', peers', and society's beliefs. As a reminder, each index represents a count of the number of adulthood markers individuals perceive they are falling behind for that source of expectations. In other words, these variables represent on how many life domains individuals perceive they are falling behind based on their own expectations and their perceptions of the expectations of their parents, their peers, and society.

Table 6: Descriptives of Falling Behind on Adulthood Markers Based on the Expectations of Self, and Perceptions of Parents, Peers, Society's Expectations N=502

# of Life Domains Falling Behind	Own	Parents	Peers	Society
0	399 (79%)	338 (67%)	360 (72%)	315 (63%)
1	81 (16%)	128 (25%)	102 (20%)	120 (24%)
2	17 (3%)	28 (6%)	29 (6%)	33 (7%)
3+	5 (1%)	8 (1.5%)	11 (2%)	34 (7%)

For each source of expectations, the majority of respondents were not falling behind on any expectations of adulthood (Own: 79%, N=399; Parents: 67%, N =388; Peers: 72%, N=360; Society: 63% N=315). Up to a quarter of respondents were falling behind expectations on one marker of adulthood (Own: 16%, N=81; Parents: 25%, N =128; Peers: 20%, N=102; Society: 24% N=120). Between 3% and 7% of respondents reported that they were falling behind on two expectations of adulthood (Own: 3%, N=17; Parents: 6%, N =28; Peers: 6%, N=29; Society: 7% N=33). Finally, between 1% and 7% of respondents reported that they were falling behind three or more expectations for adulthood (Own: 1%, N=5; Parents: 1.5%, N =8; Peers: 2%, N=11; Society: 7% N=34). At each level, the smallest percent of respondents were falling behind their own expectations and the largest percent perceived that they were falling behind either their parents' or society's expectations. Past research indicates that people adjust their views to align with feedback from others, so, combined with the conservative measure of expectations, it is not surprising that these percentages of mismatches are so low.

Control Variables

Additional control variables include four markers of adulthood: being financially independent, being in a serious relationship, having left home, and being a college graduate. Because these are generally considered positive life events, including each of these markers in the models allows us to uncover the effects of falling behind expectations separate from the effects of the milestones themselves. As presented in Table 7, over half of the respondents are in a serious relationship (52%; N = 259), over two thirds no longer live at home with their parents (68%; N=341), less than half of respondents are financially independent (42%; N =209), and less than one third have graduated from college (30% N=152).

Table 7: Adulthood Status

Adulthood Milestone	% of Sample Yes (N)
Financially Independent	42% (209)
Serious Relationship	52% (259)
Left Home	68% (341)
College Graduate	30% (152)

TEST OF HYPOTHESIS: FALLING BEHIND EXPECTATIONS AND PSYCHOLOGICAL DISTRESS

In the following sections, I present the results of analyses estimating the relationship between falling behind expectations and psychological distress. I predicted that falling behind expectations will be associated with higher levels of depression and anxiety. As I am testing a directional hypothesis, I use one-tailed tests of significance to evaluate these findings. Table 8 focuses on the outcome variable of anxiety, and Table 8 focuses on the outcome variable of depression. In each of these tables, Models 1 and 2 show the relationship between demographic characteristics/adulthood milestones and the psychological distress outcome variable.

Most of these variables are not associated with psychological distress, with two notable exceptions. Higher socioeconomic status is positively related to anxiety (b=0.091, p<.05). This may speak to the critique that emerging adulthood is a phenomenon most applicable to middle-to-upper class young people who are more aware of and able to use this time period for identity-exploration which can be anxiety producing. Having left home is associated with lower levels of depression (b=-0.228, p<.01).

As a preview of the results presented below, as expected, there is an overall positive relationship between falling behind others' expectations and psychological distress (Models 4-7 in Tables 8 and 9). Hypothesis 2 states that falling behind the expectations of others regarding markers of adulthood will be associated with psychological distress. In general, I find support for Hypothesis 2. In the following sections, I detail the relationships observed between falling behind expectations and anxiety and then I describe the association between falling behind expectations and depression.

Anxiety

In Table 8, I focus on the outcome variable of anxiety to understand the relationship between anxiety and demographic characteristics, adulthood markers, and falling behind the expectations of self and others. Hypothesis 2 states that falling behind the expectations of others regarding markers of an adulthood identity will be associated with psychological distress and, with anxiety as the dependent variable, I find support for this hypothesis. Falling behind the total expectations of others (Table 8; Model 7) is significantly associated with anxiety (b=0.034; p<.05). Note that this relationship holds even while including other variables such as demographics, adulthood markers, and own expectations for at what age adulthood markers should be accomplished in the model.

Hypothesis 3A predicted a link between peers' expectations and anxiety and I find support for this hypothesis (Table 8; Model 5). For every one unit increase individuals report in feeling like they are falling behind their peers' expectations for achieving markers of adulthood, there is a .094 unit increase on the scale of anxiety (p<.05). Again, this model includes a range of control variables in the model. I find support for both hypotheses related to anxiety.

Although I did not make specific predictions about the association between own, parents' or society's expectations and anxiety, there are some significant associations. The relationships between falling behind own (Table 8, Model 3) and perceiving falling behind society's (Table 8, Model 6) expectations and anxiety are significant. For each additional marker of adulthood an individual feels as if he or she is falling behind own expectations, there is a .076 increase on the scale of anxiety (p<.05). For the perceived expectations of society, a one unit increase in feeling like an individual is falling behind society's expectations is associated with a .064 increase on a scale of anxiety (p<.05). Individuals who report feeling like they are falling behind their own and their perceptions of society's expectations for achieving markers of adulthood report significantly higher levels on a scale of anxiety. I also examined the relationship between perceiving one is falling behind parents' expectations and anxiety (Table 8; Model 4). Controlling for own expectations, falling behind the expectations of parents is not a significant predictor of anxiety (p=.137).

Table 8: OLS Regression Models Predicting Anxiety

Predictors	1	2	3	4	5	6	7
Demographics							
Gender (1 = Male)	-0.056	-0.067	-0.064	-0.061	-0.054	-0.058	-0.055
	(.044)	(.045)	(.045)	(.045)	(.045)	(.045)	(.045)
Race (1 = White)	-0.042	-0.023	-0.016	-0.012	-0.006	-0.009	-0.006
	(.051)	(.052)	(.052)	(.052)	(.052)	(.052)	(.052)
SES (1 = High)	0.098*	0.091*	0.095*	0.095*	0.095*	0.096*	0.096*
	(.046)	(.046)	(.046)	(.046)	(.046)	(.046)	(.046)
Age	-0.005	-0.03	-0.010	-0.013	-0.016	-0.016	-0.018
	(.006)	(.007)	(.009)	(.009)	(.009)	(.009)	(.009)
Adulthood Markers							
Financial Independence		-0.347	-0.005	0.003	0.008	0.009	0.014
		(.051)	(.054)	(.054)	(.054)	(.054)	(.054)
Serious Relationship		-0.039	-0.389	-0.033	-0.034	-0.022	-0.024
		(.050)	(.050)	(.050)	(.050)	(.050)	(.050)
Left Home		-0.054	-0.049	-0.043	-0.020	-0.025	-0.021
		(.054)	(.054)	(.054)	(.055)	(.055)	(.055)
College Graduate		0.052	0.070	0.080	0.091	0.087	0.094
		(.055)	(.056)	(.057)	(.057)	(.057)	(.057)
Index of Falling Behind Expectations for Achieving Markers of Adulthood							
(3) Own			0.076*	0.050	0.029	0.041	.021
			(.046)	(.051)	(.050)	(.049)	(.052)
(4) Parents				0.048			
				(.043)			
(5) Peers					0.094*		
					(.041)		
(6) Society						0.063*	
						(.033)	
(7) Total Others							0.034*
							(.016)
R^2	0.02	0.02	0.03	0.03	0.04	0.04	0.03

N=502; *p<.05; **p<.01; ***p<.001; Unstandardized coefficients presented, standard error below each coefficient in parentheses, one-tailed interpretation of significance

Depression

I predicted that falling behind expectations of others regarding adulthood markers would be associated with psychological distress (Hypothesis 2). In models focused on depressive symptoms, I find support for this prediction. Falling behind the total expectations of others is positively associated with depressive symptoms (b=0.072; p<.001). I also find support for Hypothesis 3B that falling behind the perceived expectations of parents and society regarding

markers of adulthood will be associated with depressive symptoms (Table 9; Models 4 and 6).

For every one unit increase in individuals feeling like they are falling behind parents'

expectations, there is a 0.157 increase in the scale of depressive symptoms (p<.01). For falling

behind the perceived expectations of society, a one unit increase is associated with a 0.137

increase in the scale of depressive symptoms (p<.01). I also found that falling behind the

perceived expectations of peers is associated with depressive symptoms (*b*=0.139; p<.05).

In Chapter 6, I presented results addressing the second research question of this dissertation,

"how is falling behind own and others' expectations regarding achieving markers of adulthood

associated with psychological distress?" I used OLS regression analysis to explore the

relationship between falling behind perceived expectations of parents, peers, and society in

general regarding achievement of four adulthood markers and mental health outcomes. I found

overall support for Hypothesis 2 that falling behind expectations of others was associated with

psychological distress, even while controlling for own expectations and the markers of adulthood

themselves. I also found support for the idea that the type of psychological distress outcome is

linked to the source of the feedback. In particular, I found that perceived expectations of peers

are associated with anxiety (Hypothesis 3A) and perceived expectations of parents/society are

associated with depression (Hypothesis 3B). These results suggest that viewing oneself as an

adult is a protective factor against participation in health risk behaviors. In the next chapter, I

will discuss the substantive, theoretical, and policy implications from these findings.

Table 9: OLS Regression Models Predicting Depression

Predictors	1	2	3	4	5	6	7
Demographics							
Gender (1 = Male)	-0.094	-0.124	-0.125	-0.115	-0.111	-0.113	-0.107
	(.068)	(.069)	(.069)	(.069)	(.069)	(.069)	(.069)
Race (1 = White)	-0.120	-0.071	-0.073	-0.060	-0.059	-0.058	-0.051
	(.078)	(.079)	(.079)	(.079)	(.079)	(.079)	(.079)
SES (1 = High)	0.097	0.093	0.092	0.094	0.092	0.095	0.095
	(.070)	(.070)	(.070)	(.070)	(.070)	(.070)	(.070)
Age	0.001	0.015	0.017	0.008	0.009	0.003	0.001
	(.010)	(.012)	(.013)	(.014)	(.014)	(.014)	(.014)
Adulthood Markers							
Financial Independence		-0.030	-0.041	-0.013	-0.021	-0.010	-0.001
		(.078)	(.082)	(.082)	(.082)	(.082)	(.082)
Serious Relationship		-0.100	-0.099	-0.081	-0.092	-0.063	-0.068
		(.075)	(.075)	(.076)	(.075)	(.076)	(.076)
Left Home		-0.228**	-0.230**	-0.210*	-0.188*	-0.178*	-0.172*
		(.082)	(.082)	(.082)	(.084)	(.083)	(.083)
College Graduate		0.002	0.005	0.028	0.026	0.033	0.046
		(.083)	(.085)	(.086)	(.086)	(.086)	(.086)
Index of Falling Behind Expectations for Achieving Markers of Adulthood							
Own			0.030	-0.115	-0.100	-0.107	-0.145
			(.069)	(.077)	(.076)	(.074)	(.078)
Parents				0.157**			
				(.066)			
Peers					0.139*		
					(.062)		
Society						0.137**	
						(.050)	
Total Others							0.072***
							(.024)
R^2	0.01	0.04	0.04	0.05	0.03	0.04	0.06

N=502; *p<.05; **p<.01; ***p<.001; Unstandardized coefficients presented, standard error below each coefficient in parentheses, one-tailed interpretation of significance

CHAPTER 7

DISCUSSION AND CONCLUSION

This dissertation has explored how identity and health are related during the transition to adulthood. In particular, I focused on how an individual's view of self as an adult is associated with health risk behaviors and how falling behind perceived expectations for adulthood is associated with psychological distress. To examine these relationships, I used concepts and ideas from symbolic interactionist theories, especially Identity Theory (Burke 1991), to make theoretical predictions.

In Study 1, I suggested that because individuals are driven to seek consistency by aligning their behavior with their views of self, young people who view themselves as adults will behave in ways that are congruent with their understanding of the adult identity. In an effort to verify the adult identity, an individual will avoid immature behaviors, which may include binge drinking, drug use, and risky sexual behavior. Thus, one protective factor that might discourage young adults from participation in these health risk behaviors is identifying oneself as an adult.

In Study 2, I proposed that falling behind expectations of self and others for accomplishing adulthood markers will be associated with particular forms of psychological distress. Using Identity Theory (Burke 1991) and the life course perspective (Neugarten et al. 1965; Elder 1998), I argued that failing to verify an adult identity by a perceived cultural age deadline would be associated with negative mental health outcomes. This argument hinges on the idea that a marker such as financial independence, being in a long term relationship, leaving home, or finishing education can serve as a "visible badge of adulthood" (Kefalas et al. 2017) through which the adult identity is accessible for young people on the cusp of adulthood. I

predicted that failing to verify the adult identity by falling behind perceived expectations for adulthood milestones would be associated with psychological distress.

I also used Identity Discrepancy Theory (Large & Marcussen 2000) in Study 2 to guide predictions that the source of feedback is associated with particular types of mental health outcomes. The Identity Discrepancy Theory framework suggests that different underlying processes of identity discrepancy result in unique forms of psychological distress. In particular, based on literature about mental health in adolescence (Epkins and Heckler 2011), I suggested that feedback about adulthood markers from parents and society would be related to depression, while feedback from peers would be related to anxiety.

This chapter provides a discussion of the findings of this dissertation. First, I will summarize the findings and the substantive, theoretical, and policy implications from each study. Next, I will describe the limitations associated with this project. Then, I will suggest ways for future researchers in the study of identity and health during the transition to adulthood to address these limitations as well as connected future areas of research.

SUMMARY AND DISCUSSION

Summary of Findings

The results of Study 1 demonstrate a small but reliable relationship between self-views as an adult and health risk behaviors, net of other important variables. Young people who more closely identified as adults reported less participation in marijuana use, binge drinking, and risky sexual behavior. Beyond roles of adulthood such as being a full-time worker, being married, and being a parent, and beyond markers of adulthood such as being financially independent, no longer living at home, and no longer being a full-time student, viewing oneself as an adult was significantly associated with fewer health risk behaviors. By controlling for these additional

variables in the analyses, I support the hypothesis that the inverse association between adult identity and health risk behaviors is not purely driven by aging out of these behaviors, or to the roles or markers associated with adulthood which might curtail those behaviors. Instead, these findings support the assertion that self-identifying as an adult serves as a protective factor against participation in health risk behaviors for young people during the transition to adulthood.

For Study 2, I provide support for the prediction that falling behind the expectations of others in accomplishing markers of an adult identity is associated with psychological distress. While controlling for own expectations, an increase in falling behind the expectations of total others is associated with an increase on scales of both anxiety and depression. As predicted, falling behind peers' expectations was positively associated with anxiety. As also predicted, an increase in perceptions of falling behind both parents' and society's expectations were each associated with an increase in reported symptoms of depression. Consistent with the prediction that falling behind expectations of others would be associated with psychological distress, perceptions of falling behind society's expectations were associated with a scale of anxiety and perceptions of falling behind peers' expectations were significantly associated with a scale of depressive symptoms.

Substantive Implications

Research from the life course and epidemiological literatures suggest that health risk behaviors and psychological distress occur at a lifetime high during this point in the life course (Stone et al. 2012; Twenge 2015; SAMHSA 2017; Schulenberg et al. 2017). The present research describes some potential mechanisms for why these health outcomes may be so prevalent during early adulthood. During the extended transition to adulthood that has become more common in recent decades, many young adults do not self-identify as adults until well into

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their twenties. One factor associated with limited participation in health risk behaviors is self-identifying as an adult. As expectations for accomplishing adulthood milestones have become more ambiguous, and as economic and educational shifts have pushed back the average age of those role transitions, some early adults may feel as if they are falling behind the expectations of their parents, peers, and society in general. This perceived off-track timing is associated with psychological distress. These findings have substantive implications for young people.

Health risk behaviors are associated with negative economic, academic, and social outcomes. These behaviors are both particularly common and particularly important in early adulthood, a pivotal time for setting life trajectories for family formation and career development. Classic sociological literature on desistence suggests that deviant behavior is an age-graded process in which most people grow out of crime, binge drinking, and illegal substance use (Hirschi and Gottfredson 1983; Schulenberg et al. 1996; Bachman et al. 2002; Massoglia and Uggen 2010). Of central concern for early adults and their parents today is the trend in which the transition to adulthood is extended, which means that the opportunity for young people to participate in, and potentially face consequences from, health risk behaviors has also been extended. Indeed, alcohol use and abuse, marijuana use, and risky sexual behaviors all peak in early adulthood (Schulenberg et al. 2017; National Survey on Drug Use and Health 2017; Ellickson et al. 2005; Johnston et al. 2016).

Because these health risk behaviors have such a high prevalence at this stage in the life course, a time period that is foundational for family and career goals, researchers are interested in determining what factors may serve to limit involvement in health risk behaviors (Frech 2012; Daw et al. 2017). Previous research has identified certain factors that decrease these behaviors such as the role transition into marriage (Sampson and Laub 2006; Duncan, Wilkerson, and

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England 2006) and social support (Umberson, Crosnoe, and Reczek 2010). In this study, I suggest that this research would benefit from social psychological theories that provide a model for how self-views guide behavior. The current study suggests that for those on the cusp of adulthood, identifying as an adult could limit involvement in health risk behaviors. Programs encouraging young people to embrace and internalize the adult identity might have the desired effect of limiting participation in health risk behaviors, which can potentially have negative consequences for young adults.

Mental health issues during the transition to adulthood can also negatively affect life course trajectories including lower educational achievement, substance abuse, violence, and poor reproductive and sexual health (Patel, Flisher, Hetrick, and McGorry 2007). One substantive implication of this study is the finding that it is not the *timing* of the role transitions or the accomplishment of markers of adulthood alone that affect mental health outcomes. In my sample, none of the milestones themselves – being financially independent, being in a serious relationship, having left home, or being a college graduate – were significantly associated with anxiety and only having left home was inversely associated with depression. Despite these milestones being largely positive in and of themselves, they were generally not directly related to mental health outcomes. However, feeling like one was falling behind others' expectations about the age at which young adults should accomplish those markers was associated with psychological distress. This indicates that the perceived expectations of one's social network matter for understanding a normative progression to adulthood and the resulting mental health outcomes associated with feeling like one is beginning to become off-track.

Theoretical Implications

Conceptualizing Adult as a Person Identity

Social psychological theories based in a long tradition of symbolic interactionism, including self-verification and Identity Theory, provide a theoretical explanation for why identifying as an adult would decrease involvement in risk behaviors. In this dissertation, I first discussed symbolic interactionism in which views of self are developed and created in interactions with others (Blumer 1969; Mead 1934). Second, I described the central tenant of self-verification in which people behave in ways that are consistent with their views of self (Swann 1983; Swann, Rentfrow, and Guinn 2003). Then, I presented sociological theory describing identity processes in which individuals seek opportunities to enact behavior and receive feedback from significant others confirming their most valued identities (Stryker 1968, Stets and Burke 2009). Finally, I presented empirical literature that frames identity as a resource, goal, or "internal asset" that guides individuals to minimize their participation in health risk behaviors (Nelson and Barry 2005; Rinker et al. 2015).

I suggest that "adult" should be classified as a person identity based around a recent cultural shift in the meaning and timing of adulthood. While most of the research in Identity Theory focuses on role-identities (e.g., parent, spouse, teacher) and scholars have called for more attention to person identities (e.g., moral, mature) (Deaux and Burke 2010). The feedback loop in Identity Theory is proposed to work with each classification of identity, but the least attention has been given to how and if these processes operate with a person identity.

The adult identity fits as a person identity because it is one that operates across various roles and situations and is not limited by interaction partners or social context. *Role-based identities* are tied to positions within social structure, *social identities* are based around group

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membership, and *person identities* are meanings attached to the self that define the individual as distinct from others, based around one's unique values and goals such as mastery or morality. The adult identity is unique in that it can be thought of, to some extent, in each of these categories. This age-based identity is difficult to classify in this schema. While the adult identity might be heavily associated with certain roles (e.g., Worker, Mother), it is not usually thought of as a role itself, and individuals can be adults without holding specific associated roles. The adult identity also allows for certain social identities based on the responsibilities and rights granted to adults (e.g., Republican, Club Member, Driver), but I argue it is not a social identity in and of itself. I suggest that the "adult" identity fits best as a person identity – a goal that an individual values more or less based on characteristics associated with adulthood (being mature, responsible, or independent). An individual can perform a role-identity or a social identity poorly, but still claim the identity. I suggest that the adult identity is particularly tied to behavior, especially in recent decades as chronological age alone is no longer a guarantee of self-identifying as an adult for young people.

This idea of needing to enact behaviors associated with adulthood to hold the identity can be characterized as somewhat new – and different than role-based identities or social identities in which role performance is not directly tied to identity. For role-based identities, an individual could be a bad father by forgetting his daughter's dance recital or a bad student by earning a low grade on a test, but he still holds the roles of father or student. For social identities, the focus is on group membership (e.g., woman, American) – behavior is not absolutely required to hold that identity. But for person identities, behavior is a key component in accessing an identity. People are less likely to define themselves as responsible or moral if they behave in ways that do not align with those identities.

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This argument is supported by a linguistic shift in recent years of using the term "adult' as a verb. "To adult" means to do things (often mundane) that an adult is expected to do such as having a job, living independently, or to enact responsible behaviors like making and keeping dental appointments and doing yard work (Merriam Webster 2018). The gerund "adulting" has recently begun to be used as a noun such as in sentences "Adulting is hard" or "I'm not very good at adulting" (Merriam Webster 2018). While this is a new linguistic usage, I put forward that it signifies a widespread cultural shift in our understanding of adulthood and what it means to be an adult. The number of newspaper or magazine articles published using the term "adulting" jumped from 350 in 2015 to 7,550 in 2016 to 8,950 in 2017 according to a search on Lexis-Nexis. The most popular and widespread usage of this term was in a 2013 book by Kelley Williams Brown called "Adulting: How to Become a Grown-Up in 468 Easy(ish) Steps." In her book, Brown (2013: 3) outlines advice to those on the cusp of adulthood when she writes "…adult isn't a noun, it's a verb. It's the act of making correctly those small decisions that fill our day. … Adult isn't something you are, it's something you do."

I suggest that in this study I have applied Identity Theory's feedback loop to a person identity, which has occurred only rarely in the literature (Stets and Burke 1994; Stets and Carter 2011). The adult identity fits into the classification of being linked to behavior – especially for 18-29 year olds who are legally classified as adults, but often not perceived that way by their significant others or themselves. In order to be seen as an adult at this age, an individual must behave in ways that are consistent with that identity. If a person values that adult identity, he or she will seek to demonstrate behaviors consistent with the adult identity. This argument is in line with Identity Theory, self-verification, and symbolic interaction theories that suggest that how we identify ourselves shapes our actions.

Extending Identity Discrepancy Theory to Include Source of Feedback

Identity Discrepancy Theory (Large and Marcussen 2000) extends both Identity Theory (Burke 1991) and Self-Discrepancy Theory (Higgins 1987) to suggest that the disconfirmation of identities is associated with particular forms of psychological distress. Using these theories and empirical literature on peer versus parental support and mental health outcomes to guide my predictions, I move beyond existing theories to propose that the *source* of feedback matters for anxiety and depression. Specifically, I predicted that peers' feedback will be associated with anxiety and parents'/society's feedback will be associated with depression. This study extends Identity Discrepancy Theory by exploring whether the source of the feedback matters and results in disparate mental health outcomes.

Identity Discrepancy Theory draws on Self-Discrepancy Theory to suggest that specific mismatches between types of selves (i.e., actual, ideal, or obligational) will be associated with either anxiety or depression. My comparisons in this study are all between the actual self and the obligational self and, consistent with Identity Discrepancy Theory, I find that all identity mismatches are associated with depression. However, these theories makes no prediction about the *source* of the feedback for those comparisons.[3] Identity Discrepancy Theory does not differentiate between the relationships of the "other" to the focal person. While own versus other appraisals are differentiated, the feedback from, say, a parent versus a friend is taken to be identical.

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[3] Burke and Stets (2009: 89-99) do suggest that emotional outcomes depend on the source of the meaning and the source of the discrepancy (self versus other). Empirical studies suggest that there are differences in the meanings that social roles hold for an individual, with discrepancies on more salient or valued roles mattering more for emotional outcomes (Burke 1991; Large and Marcussen 2000; Simon 1997; Thoits 1991). But I am unaware of any studies that make a distinction about the feedback from different sources of others (e.g., parents, peers).

In contrast, I make predictions based on the source of that feedback from others. This study is consistent with the research in adolescent mental health on these topics (for a review, see: Epkins and Heckler 2011). My results show that falling behind perceptions of peers' expectations is associated with anxiety and falling behind perceptions of parents' and society's expectations is associated with depression. Research suggests that an extended transition to adulthood allows more opportunity for identity exploration in which young adults try out different ways of living, explore different possible choices for love and work (Arnett 2014). In line with this research, the expectations of peers and parents remain influential into early adulthood. In addition to these implications for theories of identity, this study has important implications for policy related to health.

Policy Implications

Implications for Health Care Providers

These findings may have implications for health care providers and for health insurance policy. The results of Study 1, which show that young people who do not identify as adults are more likely to engage in health risk behaviors, are relevant for health professionals who work with this age group. Physicians, psychologists, counselors, and social workers should be primed to look for signs of these behaviors during this high risk time for young people who do not identify as adults. Medical facilities designed to meet the needs of young adults, such as on-campus health centers or other offices dedicated to serving young adults, should provide training to their staff and information to their patients about steps these young people can take to protect themselves from increased risk. When appropriate, health care professionals serving these populations should probe their patients about their behaviors related to substance use and risky sex, and work with their patients to develop strategies to help avoid dangers. Health care

providers seeking to address the particular needs of their young adult patients should be aware that among young people who do not see themselves as adults, there is an increased risk of particular health risk behaviors, which can have negative outcomes.

The results of Study 2 illustrate that the perceived expectations of others have consequential effects on the mental health of young adults. Studies of generational differences in psychological distress report that levels of anxiety and depression are higher today than in previous generations for 18-29 year olds (Twenge 2000; Twenge et al. 2010; Hidaka 2012; Twenge 2015; Booth and Anderson 2016). Psychologists, psychiatrists, counselors, therapists, and social workers who are focused on mental health issues in this age group should know that one source of the high rates of anxiety and depression is young adults' perceptions of the expectations of peers, parents, and society in general for accomplishing markers of adulthood. For those young adults who feel overwhelmed by the unattainable expectations of others, information about the demographic shifts in age at accomplishing markers could ease some of this distress. For example, emphasizing to distressed young adults that the increasing need for higher education coupled with crippling student loan debt affects the ability of many young people to leave home, achieve financial independence, and begin to form their own families. This re-centering of a "normal" progression to adulthood could lessen some anxiety or depression related to feelings of falling behind expectations.

In Australia, where there has been a similar influx of adolescents and young adults experiencing mental health disorders (i.e., affective, anxiety, and/or substance use disorders), the government established enhanced primary care services aimed specifically at reaching young people with mental health problems (McCann and Lubman 2012). The well-documented personal and logistical barriers for young people to access mental health services (Samargia,

Saewyc, and Elliott 2006; Patel et al. 2007), prompted healthcare professionals in Australia to

create youth-friendly models of care called *headspace* in 2006. The goal of these centers is to

provide holistic services for 12-25 year-olds experiencing mild-to-moderate mental health and

substance use issues and to increase the community's capacity to identify young people with

mental help problems early while providing support through evidence-based interventions for

young people and their caregivers (McCann and Lubman 2012). The four areas of focus these

centers support – mental health, physical health, work/study support, and alcohol/other drug

services – cover the critical areas highlighted in this dissertation.

Though there is some debate in the Australian literature regarding the effectiveness of the

youth mental health service centers for the cost incurred to taxpayers (see: Jorm 2015; McGorry,

Hamilton, Goldstone, and Rickwood 2016; Jorm 2016), I believe that similar enhanced primary

care facilities targeting American youth experiencing anxiety and depression would be

beneficial. In addition, health insurance policies should recognize the prevalence of

psychological distress in this population and include coverage for mental health services. The

government option for health care currently includes access to some mental health and substance

abuse services. Both access to mental health services and general health insurance coverage are

essential for young people during the transition to adulthood.

Implications for Health Insurance Policy

Access to health care is critical for young adults as rates of injury and accidents due to

substance use are especially high during early adulthood (Park et al. 2006; Li et al. 2012). The

consequences of injuries and accidents are even greater for people who do not have health

insurance. In 2008, among 19 to 26 year olds, one in three – that is, 10.3 million young adults –

lacked health insurance coverage (Holahan and Kenney 2008). In 2009, young adults were twice

as likely as older adults to be uninsured (DeNavas-Walt, Proctor, and Smith 2011). The Obama administration responded to these astounding statistics by changing health insurance policy in September of 2010 to allow young adults to remain on their parents' health insurance plans until age 26, which greatly reduced the number of uninsured young adults (Kirzinger, Cohen, and Gindi 2013). This shift was a clear acknowledgement of the changing patterns of the contemporary transition to adulthood.

In an employer-sponsored insurance coverage market, young adults are the least likely age category to have health insurance due to their work and family patterns. Young adults, as compared to older adults, are less likely to be employed full-time or to hold full-time jobs that offer benefits and they are less likely to be married and thus eligible to receive health insurance through their spouse. Full-time college students are the most likely young adults to be insured as full-time students are likely to be eligible for health insurance through their schools (Rhoades 2015). However, according to records from the National Center for Education Statistics, an estimated 30% of 18-19 year-olds, 48% of 21-22 year-olds, 70% of 22-24 year-olds and 87% of 25-29 year-olds are *not* full-time students (U.S. Census Bureau 2012). College attendance is increasing over time, but these records indicate that a majority of this early adult population is ineligible for health insurance through their school.

Some young adults take advantage of the public health insurance available from the federal government known as the Affordable Care Act or "Obamacare." The basic "silver plan" coverage under this policy includes access to contraception, STI screenings, and some mental health services and addiction treatment care (ObamaCareFacts.com, accessed March 15, 2018). The primary policy implication of this dissertation for health insurance policy is that access to those services at this point in the life course is crucial.

Despite the obvious benefits of having health insurance, young adults are much less likely than older adults to say that they need health insurance. While over 70% of adults ages 27 to 64 strongly agree that health insurance is a necessity, only 48% of adults ages 19-26 strongly agree with the necessity of health insurance (Holahan and Kenney 2008). Young adults seem to rationalize that they can place a lower value on health insurance coverage at this point in the life course compared to later in their lives. This is partially due to the general trend that young adults are healthier than older adults and so may not have needed to rely as heavily on health services. This attitude towards health insurance coverage, coupled with research that shows that young adults are less risk averse than their older counterparts regarding health (Bonem, Ellsowrth and Gonzalez 2015), may affect young adults' (lack of) demand for health insurance. Recent proposed changes to our health care policy and requirements in the United States could leave some young people once again searching – or failing to search – for coverage at this vital point in the life course for having health care insurance.

LIMITATIONS

There are, of course, limitations to this research. The most significant limitation is the use of cross-sectional data, which prevents the establishment of causal ordering among the variables. My premise is that views of self as an adult affect health risk behavior and that expectations of others regarding adulthood affect psychological distress. Instead, it may be that refraining from participation in health risk behaviors causes an individual to self-identify as an adult and that experiencing depression and anxiety results in individuals feeling like they have fallen behind their own and others' expectations for adulthood. In this research, I cannot dispute this interpretation, as I am simply establishing cross-sectional associations that are consistent with symbolic interactionist theories. Indeed, Identity Theory would predict a mutual process

between reflected appraisals and behavior. Consistent with the theory, reflected appraisals affect

emotion which drives behavior. These inputs and outputs reinforce one another in a cyclical

manner. The focus of this cross-sectional research is on associations congruent with theories of

identity. Future research using longitudinal data or experimental methods should aim to

determine causality in the relationship between identity and behavior.

A second limitation is that this sample was drawn from a Mechanical Turk population

that has been shown to be younger, more female, more liberal, and more educated than the

general United States population[4] (Paolacci, Chandler, and Ipeirotis 2010; Shank 2016). To

partially address this limitation, I ensured that an equal number of men and women were sampled

in my data, and I also balanced the number of respondents in the 18-22, 23-25, and 26-29 age

categories. Only 30% (N=152) of my sample are college graduates and, since I was interested in

recruiting non-student young people, 65% (N=329) of my sample are not full-time students

In order to minimize differences in cultural expectations, this study focuses on identity

processes in the transition to adulthood for young people in the United States. Previous research

has shown that other cultures have different understandings of appropriate behavior regarding

health risk behaviors (Cook and Caetano 2014; Cook, Bond, Karriker-Jaffe and Zemore 2013)

and different views of expectations for adulthood (Arnett 2003). Within the United States,

Arnett (2003) has shown that members of ethnic minority groups such as African Americans,

Latinos, and Asian Americans hold somewhat different beliefs about what it means to be an adult

than their White counterparts. In particular, White young adults tend to emphasize

individualistic criteria for adulthood while minority ethnic groups were more likely to favor

"other-oriented" criteria. For Latino young adults, role transitions and family capacities were

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[4] However, some research shows that respondents recruited through MTurk are often more representative
of the U.S. population than in-person convenience samples (Berinsky, Huber, and Lenz 2012).

especially important markers of adulthood, and for young Asian Americans interdependence, role transitions, and norm compliance were more important factors than they were for White young adults (Arnett 2003).

While I controlled for race in all models, first and second generation immigrants might face more cultural pressures from their culturally embedded parents. Notably, these expectations might diverge in opposite directions. For example, in Korea, drinking heavily is condoned and sometimes even seen as a sign of reaching adulthood (Hendershot, Dillworth, Neighbors, and George 2008; Kane, Damian, Fairman, Bass, Iwamoto and Johnson 2017) while the loss of control that accompanies drug and alcohol use is severely frowned upon and discouraged in China (Nelson, Badger, and Wu 2004). These cultural differences in health behaviors and expectations are not specifically addressed in this general sample of American young adults.

Obtaining a valid measures of socioeconomic status for people in this age range is also difficult. Class may play a role in perceived expectations from parents and peers as well as potentially affecting participation in health risk behaviors. Research accounting for class differences often focuses on household income, but the residential instability that marks this age range means respondents are equally likely to be living alone, with roommates, with their parents or other family members, with a significant other, or all of the above during a short window of time. This makes the definition of "household" unclear. Using personal income for this age group is not particularly helpful either since people who may eventually have high-paying jobs are likely to be currently training for those careers and thus making less money than their counterparts who went directly into the workforce following high school or an associate's degree. Capturing a clear indicator of socioeconomic status was difficult and imperfect in this research.

Regarding Study 1, future research should incorporate other types of health risk behaviors including risky driving behaviors, other types of drug use, and other forms of risky sexual behaviors. Regarding Study 2, I did not allow respondents an open-ended response for at what age they would expect someone to accomplish each marker of adulthood. Instead, I asked for agreement with the age deadlines of 18, 22, 25, and 29. This meant that my comparisons of, for example, 21 year-olds, were to the age deadline of 18. This biased my results against finding significant associations as it is likely that some respondents *were* falling behind expectations but had "caught up" by the time they responded to my survey. Future research should consider asking the respondents directly for their understanding of an age deadline which would allow for more fine-grained comparisons.

FUTURE DIRECTIONS

Health Effects on Parents of Emerging Adults

This dissertation has focused on the health effects for the young people going through the transition to adulthood, but what consequences does the lengthening of that process have for the family members of those young adults? The life course theory concept of "linked lives" suggests that the circumstances of people's lives affect others in their network of shared relationships (Elder, Johnson, and Crosnoe 2003). This means that events and transitions in young adults' lives may reverberate through their parents' lives.

Young people who feel as if they are falling behind the expectations of others report depression and anxiety, but these negative mental health outcomes are not limited to the almost-adult children. Parents who are not aware of the economic and educational factors that underlie the extended transition to adulthood may unwillingly and unknowingly put pressure on their grown children to accomplish milestones of adulthood that is unreasonable in the current climate.

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Further, they may feel disappointment and as if they have failed in their role as parents if their young adult children are not able to keep up with their expected time table. When parents are able to align their expectations for their children with the economic and social reality of the contemporary transition to adulthood, there may actually be benefits to an extended transition to adulthood for both parents and children.

Research shows that parents who rate their adult children as "less successful than their peers" on the domains of career and relationships experience negative discrete emotions including guilt, anger, disappointment, and worry (Cichy, Lefkowitz, Davis, and Fingerman 2013). Both positive and negative demographic life course transitions of adult children have been shown to affect parents' well-being (Kalmijn and de Graaf 2012). Transitions into marriage and parenthood increase parents' overall well-being while adult children's divorce is associated with depression for mothers (Kalmijn and de Graaf 2012). Unfulfilled expectations for adulthood transitions have negative psychological effects for both early adulthood children *and* their parents.

Another related area of research shows that an extended transition to adulthood can be positive for both the parents and their not-quite-adult children. Among a representative sample of Americans in the Clark University Poll of Parents of Emerging Adults (Arnett 2013), two thirds of parents with grown children still living at home reported that they enjoyed and valued the arrangement. The majority of parents in this study with adult children living at home indicated that they feel closer to their child emotionally, experience heightened companionship with their co-residential adult child, and that the adult child helps them with household responsibilities.

Other research has highlighted that extended living at home provides psychological and financial support for both parents and children (Scabini and Cigoli 1997; Leopold 2012). One study focused on changing norms for adulthood due to the Great Recession. Davis, Kim, and Fingerman (2015) found that marital quality of parents whose adult children were living with them was lower than parents whose adult children lived independently in 2008, but not in 2013 when it was considered more normative to have adult children living at home. Intergenerational coresidence can have negative effects on parental marital quality when it is seen as nonnormative, but these disadvantages are tied to societal trends.

These studies, coupled with my research, suggest that *expectations* about adulthood matter more for mental health outcomes than the timing of accomplishing the milestones themselves. Perhaps the benefits described in this literature occur within families whose expectations for age at which their adult children will accomplish markers of adulthood are being met because they are more consistent with the realities of the transition to adulthood for young people today. One answer to the issue of psychological distress resulting from unmet expectations may lie in a loosening of parental expectations to more closely match the realities of the contemporary transition to adulthood. An extension of this dissertation would be to examine the health effects of expectations about adulthood for the parents of early adults.

Contemporary Cultural Age Deadlines

Another future direction that arises from research on falling behind expectations for accomplishing adulthood milestones is establishing current views on when people believe those milestones should occur in contemporary society. When Neugarten and her colleagues (1965) introduced the term "cultural age deadlines" she asked people the "appropriate or expected" ages for milestones such as marriage and finishing school and going to work. The hundred adults

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ages 40 to 70 in her sample provided answers that ranged between 19 and 24 years-old for women to marry, between 20 and 25 years-old for men to marry, and between 20 and 22 years-old for the best age for most people to finish school and go to work (Neugarten et al. 1965: 712). In the 1990s, Settersten and Hagestad (1996a; 1996b: 602) investigated the enduring relevance of cultural age deadlines and "whether or how these schedules operate in contemporary American society." In their complementary articles on the expectations for age regarding family transitions (1996a) and educational and work transitions (1996b) the authors find that the majority of respondents in their sample did perceive age deadlines. Eighty five percent of their 319 adults in 1989 perceived cultural age deadlines related to marriage, 78% perceived deadlines related to leaving home, and 75% perceived deadlines related to parenthood. Importantly, these age deadlines seem to have shifted later with the modal age deadline for marriage for being 25 and exiting full-time schooling being 26. Almost thirty years has passed since this check-in with the normatively prescribed age timetables and much has changed in our society. One future direction of research would be to answer the question, at what age do people believe young adults should accomplish markers of adulthood today?

In the current study, overall, a relatively small percentages of the respondents in my sample reported agreeing or strongly agreeing that 18 and 22 year-olds *should* have accomplished milestones such as financial independence, being in a serious relationship, finishing their education, and leaving home. Does this indicate a loosening of strict cultural age deadlines found by earlier scholars?

On each life domain, young adults report that they perceive others' expectations to be more stringent than their own. In my sample, for each marker of adulthood, the percentage of young adults who believed a marker should be accomplished by a certain cultural age deadline

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was always less than their perception of their parents' expectations. This is in line with earlier work on this topic (Neugarten et al. 1965; Settersten and Hagestad 1996a; 1996b). For the age deadlines of 18 and of 22, the percentage of young adults who perceived that their parents' expectations for accomplishing each milestone of adulthood was 1.5 to 3 times that of the percentage of respondents' own expectations. For example, while only 6% of respondents expected an 18-year-old to be financially independent, 13% perceived their parents and 16% perceived that society would expect an 18-year-old to be financially independent. Continuing with the example of financial independence, only 19% of respondents expected a 22-year-old to meet that cultural age deadline while 28% thought their parents and 41% thought society expects a 22-year-old to be financially independent.

The first aspect of these perceptions of cultural age deadlines to note is that the percentage of people who believe that young adults should have accomplished these milestones by 18 and by 22 remains extremely low across the categories. In fact, less than half of young adults report their own or others' expectations for these milestones to be accomplished by age 22. This may speak to the acknowledgement of the lengthening transition to adulthood and the increasing uncertainty of the appropriate age at which adult role transitions are expected to occur.

The second aspect of these findings that I want to highlight is the repeating pattern that young adults report that they perceive others' expectations to be more stringent than their own. In every case, young adults perceive that especially their parents and society would expect a young adult to have accomplished a certain role transition at earlier ages than they themselves expect. Does this indicate a shift in understandings of cultural age deadlines regarding adulthood

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with expectations different for young people as compared to their perception of their parents and society as a whole?

This issue can be described as a "generational mismatch" in the concept of adulthood in which parents of young adults have more stringent expectations for the age at which adulthood milestones will be accomplished than do the young adults themselves. In our society today, a cultural lag exists where there is a disconnect between the expectations placed on young adults and their ability to meet them (Fingerman 2017). Fewer and fewer people are achieving all five traditional markers of adulthood by their early twenties and yet there is the continued influence of a socially constructed ideology regarding financial and emotional independence from family of origin.

Relationship between Identity and Health

Longitudinal Methodology

In this dissertation, I suggest that self-views and perceived expectations during the transition to adulthood is associated with health outcomes. While I explored the *association* between identity and health, to make predictions about how identity *guides* health, future research should use longitudinal data to determine causation. One method for understanding the relationship between identity and health risk behaviors would be conduct multiple rounds of surveys focused on views of self as an adult and participation in drinking, drug use, and risky sexual behaviors. Alternately, because this is such a closely related process – self-views and behavior aligning with those views – a better way to establish causation would be in a laboratory. A participant could be given feedback that they are seen by a peer as an adult (or as not-yet-an-adult) and asked to make decisions related to responsibility, maturity, and independence. Researchers could then track how reflected appraisals affect health behaviors such as alcohol

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use, cigarette smoking, illicit drug use, unhealthy nutrition, physical activity, and risky sexual behaviors.

Another method through which researchers are beginning to investigate identity during the transition to adulthood is through social media profiles. With the creation and maintenance of online profiles, individuals are highlighting aspects of their identity that they want to emphasize – and are doing so in ways that leave a record. While young people grow and change the aspects of themselves that they wish to accentuate, research shows that they do not necessarily discard or obscure their former online identities. Schoenebeck and colleagues (2018) describe the impression management processes that occur as young adults reflect on their past identities on Facebook and experience tension between their current goals for self-presentation and maintaining the authenticity of historical content catalogued on the social media site. Despite perceiving preserved online histories of identity change as embarrassing, young adults in their study described the "playful backstalking" of their own and others' Facebook histories recording the transition to adulthood in intimate detail (Schoenebeck et al. 2018). Research on the "presentation of self in the Internet age" (Agger 2015) is particularly interesting for people during the transition to adulthood because this is a pivotal stage in the life course for identity development.

Exploring how identity development in adolescence and early adulthood occurring online is related to health outcomes is an important and exciting area of research. How are decisions about sexual behavior, alcohol and drug use, and even norms about what it means to be an adult shaped through online interactions with peers? Some research has begun to explore the relationship between online content depicting risky behavior and viewers' own risky behavior offline. For example, Branley and Covey (2017) demonstrate a relationship between exposure to

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online content depicting drug use, excessive alcohol use, disordered eating, self-harm, violence to others, and dangerous pranks and those same behaviors offline in an international sample of 18 to 25 year olds. While this highlights that young people can be influenced to participate in risky behaviors through social media exposure, other research has shown the positive influence of social media as a source of sexual health information. Stevens, Gilliard-Matthews, and Dunaev et al. (2017) find that minority youth age 13-24 who are exposed to sexual health messages on social media are over two and half times more likely to have used contraception or a condom during last sexual intercourse. The information sources of parents, schools, and traditional media were not significantly associated with condom use at last sexual intercourse. The increasingly integrated presence of social media in our lives creates new opportunities for understanding how views of self as an adult are associated with health outcomes. Future research should combine the availability of tracking identity changes through public social media profiles with a focus on health outcomes including health risk behaviors and mental health.

Encore Adulthood

Future research should also examine how other age-related identities, especially those in which the norms and expectations are ambiguous, are related to health outcomes through the lens of symbolic interactionist theories of identity. Just as expectations during the transition to adulthood are sometimes vague or even contradictory, as life expectancies have increased, the norms for later adulthood are also unclear. This dissertation has focused on the "blurred boundaries" (Mortimer and Moen 2016) of a new life stage during an extended early adulthood in which young people feel in-between adolescence and established adulthood. Another transitional stage in the life course is after retirement, but before the frailty of old age. Research that focuses on "encore adulthood" (Mortimer and Moen 2016) or what used to be known as the

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"third age" (Laslett 1989) that occurs after childhood and conventional adulthood, but before the frailty of old age, would gain value from a more social psychological approach.

An emergent literature on "encore careers" (Freedman 2008; 2011; Moen 2016) in which older adults seek out "purpose driven jobs" where they can make a difference and find meaning in work that matters would benefit from an application of an Identity Theory framework. If older adults take on purposeful work, this could lead to them identifying in new ways and those self-views are likely tied to health outcomes. Indeed, a growing literature on subjective aging, health, and longevity (Westerhof and Wurm 2015) suggests older adults who feel younger have better health outcomes. Perhaps then, Identity Theory could supply the connection between the benefits of this meaningful work in later adulthood leading to positive health through the mechanism of altered self-views. Just as identifying as an adult reduces health risk behaviors for young people, identifying as being young, being healthy, and mattering to others may be tied to positive health outcomes. This argument would lead to policy suggestions for promoting youthful identities for older adults and more positive attitudes towards their own aging.

IN CONCLUSION

The transition to adulthood in the contemporary United States is a clear example of a cultural lag in which the expectations for young people for role transitions in early adulthood are not congruent with the demographic trends. Many young adults understand their early twenties as a time of exploration and self-focus in order to determine and work towards their goals for career and family formation. Those young adults who are eager and ready to adopt adult roles struggle with a difficult economic climate in which increased expectations for education make achieving independence challenging. The parents of these young adults, remembering their own more streamlined transitions to adulthood, largely think that young adults should become self-

sufficient and demonstrate the expected residential and financial independence. Thus it is not surprising that young adults are both engaging in high levels of health risk behaviors and feeling as if they are falling behind their parents' expectations. My findings suggest that young peoples' identification as an adult is associated with lower levels of health risk behaviors and that perceptions of others' expectations for adulthood are associated with mental health outcomes. Taken together, the results of these studies highlight the importance of the adult identity for health outcomes for young adults.

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APPENDIX A: CORRELATION MATRIX AND DESCRIPTIVES FOR STUDY 1

	1	2	3	4	5	6	7	8	9	10	11	12	13
1) Health Risk Behaviors	—												
2) Male	.116**	—											
3) Straight	-.088*	.175***	—										
4) White	.018	-.008	.007	—									
5) High SES	.114*	.002	.034	-.046	—								
6) Age	-.080†	.005	-.008	.007	-.026	—							
7) Full Time Worker	.039	.112**	.001	-.024	-.024	.359***	—						
8) Married	-.168***	-.160***	.036	.051	-.044	.311***	.139**	—					
9) Parent	-.097*	-.149***	.069	.022	-.088*	.269***	.088*	.550***	—				
10) Fin. Independent	-.087†	-.008	.057	.111*	-.136**	.283***	.234***	.312***	.281***	—			
11) Left Home	.049	-.043	-.073	.150***	-.000	.246***	.211***	.297***	.204***	.381***	—		
12) Not Full Time Student	-.117**	-.018	-.015	.032	-.069	.398***	.287***	.184***	.137**	.244***	-.026	—	
13) Views of Self as Adult	-.118**	-.023	.013	.069	-.056	.226***	.212***	.216***	.256***	.187***	.187***	.165***	—
Mean	.791	.493	.858	.744	.623	1.87	.487	.187	.191	.416	.680	.649	5.48
Std. Dev.	.966	.500	.349	.437	.485	.865	.500	.391	.394	.493	.467	.478	1.17
Min	0	0	0	0	0	1	0	0	0	0	0	0	1
Max	3	1	1	1	1	3	1	1	1	1	1	1	7

N = 507; †<.1; *p < .05; **p < .01; ***p < .001 (two-tailed tests)

APPENDIX B: CORRELATION MATRIX AND DESCRIPTIVES FOR STUDY 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1) Anxiety	—														
2) Depress.	.683***	—													
3) Male	-.055	-.061	—												
4) White	-.040	-.070	-.018	—											
5) HighSES	.098†	.065	.002	-.043	—										
6) Age	-.039	.001	.002	.005	-.032	—									
7) Fin. Indp.	-.078†	-.081†	-.014	.101*	-.131**	.310***	—								
8) Srs. Rlsp.	-.054	-.086†	-.203***	.087†	-.041	.298***	.268***	—							
9) LeftHome	-.077†	-.153***	-.044	.150***	-.003	.269***	.381***	.325***	—						
10) Graduate	.021	.000	.023	-.055	.026	.474***	.121**	.187***	.137**	—					
11) Own	.071	.025	-.039	-.098*	-.017	.332***	-.215***	.021	-.078†	.020	—				
12) Parents	.080†	.130**	-.043	-.126**	-.007	.298***	-.215***	-.073	-.148***	-.032	.595***	—			
13) Peers	.125**	.139**	-.073	-.140**	-.004	.265***	-.211***	-.055	-.234***	-.046	.553***	.701***	—		
14) Society	.109*	.162***	-.022	-.135**	-.010	.305***	-.219***	-.147***	-.244***	-.021	.532***	.677***	.723***	—	
15) Total	.118**	.162***	-.049	-.149***	-.008	.324***	-.240***	-.108*	-.237***	-.036	.622***	.872***	.896***	.914***	—
Mean	1.40	1.68	.496	.747	.625	23.5	.416	.516	.679	.303	.259	.414	.384	.574	1.37
Std. Dev.	.498	.761	.500	.435	.484	3.44	.493	.500	.467	.460	.566	.671	.696	.885	2.02
Min	1	1	0	0	0	18	0	0	0	0	0	0	0	0	0
Max	3.9	4.8	1	1	1	29	1	1	1	1	3	3	3	3	9

N = 502; †$p \leq .1$; *$p \leq .05$; **$p \leq .01$; ***$p \leq .001$; Items 10-14 indicate an index of falling behind expectations. (two-tailed tests)