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More to Love: Obesity Histories and Romantic Relationships in the Transition to Adulthood

by

Hilary Morgan Dotson

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy Department of Sociology College of Arts and Sciences University of South Florida

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> Date of Approval: June 30, 2014

Keywords: marriage, satisfaction, commitment, life course, health

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## Dedication

This dissertation is dedicated in loving memory my father, Mark Stephen Dotson (August

19, 1960 – August 24, 2011).

#### Acknowledgments

Without the exceptional mentoring and social support of my colleagues, friends, family, and mentors, this dissertation would not have come to fruition. There are numerous individuals and organizations to which I owe significant credit. First, I wish to acknowledge the scientists who designed and contributed to the *National Longitudinal Study of Adolescent Health* at the Carolina Population Research Center, housed at the University of Carolina at Chapel Hill.<sup>a</sup> Moreover, I wish to thank each of the participants in the Add Health study.

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#### Abstract

Previous research suggests that obesity can be stigmatizing in interpersonal relationships, including romantic relationships. Timing of obesity and weight stability are also especially important. The negative effects of obesity on interpersonal relationships appear most salient in women and Whites, while men and racial/ethnic minorities appear to experience fewer negative consequences from obesity in their relationships, suggesting that an intersectional lens is necessary in studies on the long-term effects of obesity on interpersonal relationships. In this dissertation, I employ an intersectional lens to understand how histories of obesity, gender, and racial/ethnic identity work together to influence three aspects of romantic relationships during the third decade of life: formation of romantic relationships, satisfaction with romantic relationships, and commitment to romantic relationships. Data were drawn from Waves I, III, and IV of the National Longitudinal Study of Adolescent Health (n = 9,588). Obesity was measured using a dynamic measure indicating whether respondents were obese in adolescence (Wave I) and/or early adulthood (Wave III). Participants were coded as non-obese (not obese at neither point), chronically obese (obese at both points), recently obese (obese in early adulthood only) and formerly obese (obese in adolescence only). Findings suggest that the effects of obesity histories on romantic relationships in early adulthood are contingent upon timing of obesity, gender, and racial/ethnic background. Whether obesity manifested in stigma or compensated for negative main effects of gender and/or race/ethnicity on romantic relationship was considerably variable throughout. The empirical findings suggest that experiencing obesity is a multidimensional process which, for some groups, is associated with qualitatively better

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relationship outcomes, while for others, the effects or null or negative. This dissertation adds necessary nuance to discussions on the complexity of obesity processes on romantic relationships and indicates that future research on obesity and interpersonal relationships necessitates an intersectional lens and framing that considers that obesity may not be uniformly stigmatizing.

#### **Chapter 1: Introduction**

I feel sorry... for people who've had skinny privilege and then have it taken away from them... I have had a lifetime to adjust to seeing how people treat women who aren't their idea of beautiful and therefore aren't their idea of useful, and I had to find ways to become useful to myself. – Beth Ditto (as quoted in Anderson-Minshall 2012).

A wealth of research in the sociology of health and illness has focused on how various health statuses can be stigmatizing. Goffman (1963:3), in his influential book Stigma, described stigma as a "an attribute that is deeply discrediting." Throughout the book, Goffman (1963:4) detailed how "abominations of the body" experienced by individuals with visual physical impairments (e.g., wheelchair users) immediately mars individuals as not "normal." Link and Phelan (2001) extended Goffman's (1963) understanding of stigma through their development of a cohesive and more modern model of stigma. For Link and Phelan (2001:367), stigma occurs "when elements of labeling, stereotyping, separation, status loss, and discrimination co-occur in a power situation that allows the components of stigma to unfold." Perceptions of being too short, too tall, too skinny, or too fat, can manifest in social stigma; not because of inherent differences in the qualities of individuals by their body size, but rather, because negative social attributes are inferred when individuals' body sizes deviate from sanctioned definitions of normality. Obesity, which is the focus of this dissertation, is often presumed based on physical appearance. Moreover, the social meanings of obesity extend beyond understandings of physical body size. That is, being obese means more than carrying excess body weight. In this

dissertation, I focus on the ways in which obesity can be stigmatizing within romantic relationships.

Overweight and obesity from childhood through old age are not only associated with poorer physical health and increased risk for chronic illness (e.g., Hansen et al. 2013; Khaodhiar, McCowen, and Blackburn 1999; Wyatt, Winters, and Dubbert 2006), but are also loaded with symbolic meanings which shape (and are shaped) by relationships with others. These symbolic meanings can carry social stigma, in part because overweight and obese individuals are often personally blamed for holding excess weight by peers, family members, and medical professionals (Puhl and Heuer 2010). Several scholars have argued that overweight and obese individuals are *stigmatized* by beliefs that overweight and obese individuals are lazy, unintelligent, and unattractive (among other undesirable social attributes) (e.g., Carr and Friedman 2005; Crosnoe 2007; Puhl and Brownell 2001; Puhl and Heuer 2009; Tang-Péronard and Heitmann 2008). Holding excess weight can be stigmatizing (e.g., Carr and Friedman 2006; Puhl and Brownell 2001), and this stigma holds far greater social consequences than those simply related to health outcomes. Individuals who are perceived as obese are often understood as being less socially worthy than individuals with smaller body sizes.

By itself, clinical obesity means that, for an adult, the ratio of her/his weight (in kilograms) to one's height (in meters) squared exceeds 30.0 (Centers for Disease Control 2012), though there is continuing debate as to the efficacy of this definition and alternative conceptualizations have been posed (American Association of Clinical Endocrinologists and American College of Endocrinology 2014). For most adults, clinical obesity is associated with holding excess body weight. The stigma from obesity corresponds to poorer social and socioeconomic outcomes throughout the life course (Cheng and Landale 2011; Crosnoe 2007;

Cunningham, Vaquera, and Long 2012; Han, Norton, and Powell 2011; Härkönen, Räsänen, and Näsi 2011; Puhl et al. 2008). Moreover, evidence suggests that experiencing obesity can relate to fewer and poorer quality interpersonal relationships (e.g., Cawley, Joyner, and Sobal 2006; Cunningham et al. 2012; Valente et al. 2009; Williams and Merten 2013). That is, even though obesity is an indication of excess body weight, the social meaning of obesity extends to other parts of life outside of physical health. However, and as demonstrated in some of the previous literature on the role of obesity on relationships, some groups experience considerable interpersonal stigma from obesity, while others experience few social consequences from obesity in their relationships with others (e.g., Carr and Friedman 2006; Cunningham et al. 2012).

#### **Intersectionality and Body Size**

What is often lost in the literature on stigma and obesity is the recognition that excess body weight holds different meanings and consequences for individuals depending on their social positions (e.g., Scharoun-Lee et al. 2009). Social positions, including criteria such as gender, race/ethnicity, sexuality, disability status, socioeconomic status, and others, intersect with one another to create different opportunities and culminate in varying experiences. The idea that social positions intersect in complex ways is a central tenet of intersectionality. As defined by Hill Collins (2000:18), "intersectionality refers to particular forms of intersecting oppressions, for example, intersections of race and gender, or of sexuality and nation." The idea of *intersectional oppression* suggests that not only do individual factors, such as race/ethnicity, gender or class manifest in advantages for some groups and disadvantages for others, but that they work together one another in complex and often messy ways. As demonstrated in

Figure 1, the intersections between race/ethnicity, gender, and innumerable other social positions (e.g., nationality, immigration status, marital status, sexuality, health statuses) result in

unique experiences. For example, Black women's experiences in a specific social situation and context will likely differ not only from White men's, but also from Black men or White women - even though some aspects of these identities are shared. As argued by Moya (2001:471–472), "as long as our world is hierarchically organized along enduring relations of domination, people occupying different social locations will... experience the world in systematically different ways; and not everyone who has the same kind of experience will react in the same way." Theoretical contributions to intersectional thought become both more complex and more meaningful once statuses beyond gender and race/ethnicity are considered, such as nationality, sexuality, and health statuses. Importantly, although each of these categories is socially constructed, some social positions tend to be stable throughout the life course (e.g., racial/ethnic identity, gender), while others are more fluid (e.g., age, relationship statuses, health statuses).

Body size, along with gender and race/ethnicity, is but one category by which intersectional inequalities can be reproduced (van Amsterdam 2013; Chrisler 2012; Saguy 2012). Indeed, in order to understand the sheer complexity of the social consequences of obesity, an intersectional lens is necessary to further contextualize and interrogate how obesity affects the lives of different categories of people. This dissertation examines how the stigma of obesity manifests in divergent relationship experiences for women and men, and individuals of different racial/ethnic groups by utilizing an intersectional framework.

#### Changes in Body Size throughout the Life Course

Body size, unlike other social positions, is subject to change throughout the life course. Most of the literature on obesity suggests that when body size changes, it is usually the result of net weight gains (Botoseneanu and Liang 2011; Cunningham, Kramer, and Narayan 2014; Gordon-Larsen, The, and Adair 2010; Li et al. 2007; Malhotra et al. 2013). Indeed, someone may

be normal weight most of her/his life, and then become overweight or obese in adulthood – thus, losing "skinny privilege," meaning, the privileges experienced by individuals with slimmer bodies have. Prior research has sought to grapple with how intersectional inequalities work to amplify risk of weight gain (Ailshire and House 2011), and several studies have found that women and girls are more likely than men and boys to become obese, while Blacks and Latinas/os are more likely to become obese than Whites over time (e.g., Gordon-Larsen et al. 2010; Ogden et al. 2014). Moreover, the social consequences of obesity vary between each of these groups.

It is probable that in addition body weight at any given time, the experience of moving between weight categories would influence young people's self-concepts, self-esteem, and ultimately their relationships with others, in ways that vary considerably by gender and race/ethnicity. In line with life course theory, individual histories cannot be discounted when attempting to make inferences about individuals' lives (e.g., Elder 1998). Recent studies have demonstrated that individuals who experienced overweight and obesity at one point in time and then lost excess weight continued to experience negative psychological consequences, such as depressive symptoms and anxiety, as a manifestation of "residual obesity stigma" (Anderson et al. 2007; Levy and Pilver 2012). Moreover, others have argued that the longitudinal effects of obesity on interpersonal relationships in middle-adulthood are predicated on weight statuses during the transition to adulthood (e.g., Carr et al. 2013; Kark and Karnehed 2012). That is, weight (in)stability is another concern central to understanding associations between obesity and romantic relationships.

#### **Romantic Relationships, Obesity, and Intersectionality**

Romantic and sexual relationships have received some consideration in the literature on the social consequences of obesity. However, concerns about body size and potential influences on romantic relationships and marriages abound in popular media. Tabloid articles with titles like, "I lost 10 stone [140 pounds] and my husband got his wife back" (Horton 2014) astutely note lay attitudes toward excess weight and romantic relationships: one cannot be a "good spouse" unless s/he looks the part. Hence, "looking the part" entails having and maintaining a certain physical appearance in terms of body weight. The ramifications of attitudes such as these have received limited attention in the academic literature. It is quite likely though, that the influence of obesity on romantic relationships in young adulthood would be further complicated by how groups of people are experience obesity differently. Meaning, although obesity stigma likely influences romantic relationship experiences, its influence is likely moderated or amplified by social positions. The main objective of this dissertation is to explore how histories of obesity are associated with romantic relationship formation and relationship qualities among diverse populations of young adults.

Young adults with histories of obesity first occurring in either adolescence or early adulthood may experience considerable difficulties achieving and maintaining close relationships. With this in mind, what does it mean to be a young adult with a history of obesity? Can obesity history, alone, be indicative of variations in young people's experiences in romantic relationships? How does experiencing obesity in adolescence or early adulthood come to shape romantic relationship experiences in one's late-twenties or early-thirties? Moreover, how do the consequences of experiencing obesity in early life affect women and men in different ways? How does obesity stigma affect different racial/ethnic groups in complex ways? How do

histories of obesity, gender, and race/ethnicity work alongside one another to produce different relationship experiences? As posed in

Figure 2, I argue that the intersections between gender, race/ethnicity, and body weight (and body weight changes) culminate in different experiences within romantic relationships among young adults. The original research in this dissertation seeks to disentangle the complexity of understanding the social consequences of obesity by employing an intersectional lens and teasing apart how its consequences are predicated by multidimensional social strata.

#### **Justification for the Current Study**

The United States is the second most obese nation in the world, behind Mexico (Food and Agriculture Organization of the United Nations 2013). Given the high prevalence of obesity in the U.S., where 35.1% of U.S. adults and 16.9% of U.S. children were obese in 2012 (Ogden et al. 2014), examinations into the social consequences of obesity are especially timely. The social consequences of obesity can manifest in different and often negative outcomes in interpersonal relationships for those who are currently obese and those who have ever experienced obesity (Carr and Friedman 2006; Carr et al. 2013; Cheng and Landale 2011; Cunningham et al. 2012; Fee and Nusbaumer 2012; Latner, Ebneter, and O'Brien 2012; Levy and Pilver 2012). Though seldom considered in the social research on obesity, romantic relationships may be one arena where obesity can be stigmatizing.

The question of whether histories of obesity are stigmatizing in young people's romantic relationship experiences is tested in this dissertation by examining histories of obesity occurring during the early portion of the life course. Obesity is increasingly common among young people (Cunningham et al. 2014; Gordon-Larsen et al. 2010; Ogden et al. 2006, 2014), and although young people are unlikely to have yet experienced detrimental health consequences from obesity

(e.g., diabetes, heart disease), they can experience considerable social stigma from obesity. For instance, obese young people may be less likely than those without histories of obesity to be involved in marital relationships, as a result of difficulties finding a marriageable mate – or difficulties in others finding *them* to be marriageable. Furthermore, they may be concentrated in non-marital and non-cohabiting relationships.

Of the utmost importance is the recognition that the social consequences of obesity are predicated on *whose* body is obese. A number of studies have suggested that women, in particular, face additional adversity when they have experienced obesity, but this disadvantage does not neatly correspond to obese men's experiences (e.g., Cheng and Landale 2011; Crosnoe 2007). Moreover, additional research has also suggested that even though researchers speak a great deal about obesity stigma, the stigma itself seems concentrated among Whites, rather than racial/ethnic minorities (e.g., Ali et al. 2014; Ali, Rizzo, and Heiland 2013; Cheng and Landale 2011; Cunningham et al. 2012). Indeed, even though African Americans and Latinas/os in the U.S. face considerable discrimination in education, employment, and personal relationships on the basis of race/ethnicity (e.g., Browne and Misra 2003; Cawley 2003; Goldsmith 2009; Hardaway and McLoyd 2009; Yancey 2009) there seem to be few additional consequences from obesity in interpersonal relationships. This is especially interesting, as Latinos and African Americans are also more likely than Whites and Asian Americans to become obese (e.g., Cunningham et al. 2014; Gordon-Larsen et al. 2010; Ogden et al. 2014).

A key question this dissertation seeks to answer is how do gender, race/ethnicity and obesity histories work together to produce varying romantic relationship? In particular, do female racial/ethnic minorities experience additional disadvantage when they have histories of obesity? Or does race/ethnicity nullify the otherwise negative effects of gender and obesity for

women? Furthermore, are histories of obesity associated with poorer outcomes for Whites, even when they are male? These questions are addressed throughout the dissertation by articulating how obesity histories produce different romantic relationship outcomes when considering the interaction of demographic characteristics and identities.

What we still know very little about is whether movement in and out of obesity during early life can influence romantic relationship formation and qualities of romantic relationships in young adulthood. Even fewer studies have sought to directly address how gender and race/ethnicity amplify or mitigate some of the presumably negative effects of obesity on romantic relationships. It is important to consider how histories of obesity in early life can relate to romantic relationships later on because those with histories of obesity may not share normative experiences in terms of relationship development and progression and furthermore, these may culminate in less satisfactory relationships to which individuals may feel less commitment. The potential negative effects of obesity, however, are likely concentrated among women and Whites, while men and racial/ethnic minorities' romantic relationships may be relatively protected from the negative effects of obesity. The research questions and hypotheses in this dissertation (which are stated in Chapters 4 through 6) are tested using data from Waves I, III, and IV of the *National Longitudinal Study of Adolescent Health* (henceforth, Add Health).

#### Overview

The format of the dissertation is as follows. Chapter 2 is the literature review, first detailing recent research on the transition to adulthood and corresponding romantic relationships and family formation patterns, and how these vary by gender and race/ethnicity. Then, public health and sociological literatures on the demography of obesity, obesity stigma, and studies addressing the association between obesity and romantic relationships are introduced. This

chapter concludes with a discussion on the current gaps in the literature and how this dissertation seeks to address some of these gaps, in particular by focusing how the consequences of obesity are shaped by gender and race/ethnicity. Chapter 3 details the data, measures and descriptive statistics of all measures utilized in this dissertation. Chapters 4 through 6 present original research on the role of obesity in romantic relationships, while giving special attention to the variability of the consequences of obesity by gender and racial/ethnic identification. Chapter 4 is an examination of how histories of obesity associate with variations in romantic relationship patterns between the ages of 24 and 32. Chapter 5 builds on the previous chapter to examine the link between romantic relationship satisfaction and histories of obesity. Chapter 6 investigates how histories of obesity come to influence perceptions of relationship commitment among currently partnered individuals. Finally, Chapter 7 includes the discussions, conclusions, and directions for future research.

The research carried out for this dissertation examines a critically understudied area with considerable social implications. Acknowledging that obesity shapes different populations' romantic relationship experiences is critical to developing both nuanced and useful scholarship and understandings of the complex ways that body weight influences people's lives overall. The evidence in this dissertation suggests that histories of obesity affect women, men, and racial/ethnic groups' romantic relationship patterns and experiences in different and often inconsistent ways. As such, social policies and public health outreaches should take these into consideration when developing policies and procedures to address population obesity in the United States.

Figures



Figure 1: Intersectional Oppressions



Figure 2: Intersectional Oppressions and Body Weight

#### **Chapter 2: Literature Review**

Understanding how obesity influences romantic relationships at a specific period in the life course requires a thorough assessment of the interdisciplinary literatures on the transition to adulthood, family formation, and the social consequences of obesity. This review seeks to provide necessary context to the debates on the social consequences of obesity in early adulthood by utilizing an intersectional lens. In particular, I aim to address how gender and race/ethnicity modify and amplify effects of obesity on relationships. The review is structured into five sections. The first examines the theoretical and demographic literatures on the *transition to adulthood* period. The second focuses on one key marker of 'transitioning' the adulthood: the formation of romantic partnerships and families. In order to link these two literatures, specific studies on the health and social research on obesity are critically evaluated. Finally, literature gaps and a brief discussion of the current study follow.

#### The Contemporary Transition to Adulthood

Scholarship on the experiences and circumstances of young people age 18 through 30 years, often refers to the first several years after adolescence as the *transition to adulthood* period. The transition to adulthood literature is grounded in life course theory and is generally employed by sociologists and demographers to describe the various pathways and experiences of young people (e.g., Côté and Bynner 2008; Hogan and Astone 1986; Shanahan 2000). Two of the central objectives in the transition to adulthood literature are to pinpoint when specific demographic events (e.g., going to college, having children, getting married) occur and to understand the social processes underlying these events and their timing. As noted in several

studies, social factors shape which "pathways" to adulthood young people experience, culminating in disparate outcomes in education, employment and family formation (e.g., Amato et al. 2008; Shanahan 2000; Skogbrott Birkeland et al. 2014). A brief review of the literature on life course theory, the transition to adulthood, and intersectional approaches to understanding the transition to adulthood follows.

#### Life Course Theory

An understanding of life course theory is central to theorizing on the transition to adulthood. Elder and colleagues (2004:4) offer a simple definition of "the life course as consisting of age-graded patterns that are embedded in social institutions and history." Life course theory differentiates itself from life cycle, life history, and life span frameworks, each of which have more specific and insular foci, rather than the more inclusive framing posed within life course theory (Elder et al. 2004; Elder 1998). Life course theory seeks to address much of the complexity in understanding individuals' lives as they age.

According to life course theory, everything that has ever occurred up until the period of inquiry, including individual events, cultural events, and institutional experiences, shapes individuals. Elder (1998) articulates four key principles of life course theory. The first is the "historical time and place" of individuals, which effectively contextualizes and shapes the collective experiences of cohorts (Elder 1998:3). Specific historical and cultural events are key here. Elder's (1998) foray into life course research was propelled by an interest in two cohorts: those born in the early portion of the 1920s and those born toward the end of the 1920s. It was thought that age at the onset of the Great Depression would affect individuals in divergent ways, which would result in a lifetime of social and economic differences. Similarly, scholars in the coming years could examine an event like the Great Recession of 2008 in much the same way.

The second principle examines how timing of life events and transitions, in terms of individuals' biological age, shapes the effect of said event or transition on individuals' life trajectories. For example, the age at which one completes their education can influence future socioeconomic outcomes. Someone who goes directly to college after high school would likely have higher lifetime earnings than an individual who goes to college in their forties. Moreover, the influence of age extends to cohort effects as well. For example, someone who was 15 at the start of the Great Recession is likely to have a very different experience than someone who was 22 years of age or 28 years of age at its onset.

The third tenet argues that "lives are lived interdependently, and social and historical influences are expressed through this network of shared relationships" (Elder 1998:4). That is, interpersonal relationships, such as friendships, romantic relationships, familial relationships, and others, further contextualize individuals' experiences and their own understandings of these experiences. The fourth principle, is arguably the most important: "individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstances," meaning, social structural and historical constraints contextualize individuals' agency and manifest in different opportunities and choices, and thus, divergent outcomes (Elder 1998:4). The transition to adulthood is but one period scholars using life course theory study.

#### The Transition to Adulthood

The transition to adulthood is a critical period within life course theory, albeit one wrought with considerable ambiguity (e.g., Shanahan 2000; Uhlenberg and Mueller 2004; Valentine 2003). When does adolescence end and adulthood begin? This question is too expansive to answer within this dissertation, though there are some commonly agreed upon

points, which can suggest that 'adulthood' has been achieved. Early adulthood is the culmination of childhood, adolescence, and historical context during these periods. Additionally, early adulthood is the time when young people's decisions (which can be considerably constrained depending on their social positions) about how they plan to live the rest of their lives come to the fore. The transition to adulthood period is unique in that young people typically experience several important and transformative events in a relatively short period of time, including but not limited to leaving their homes of origin, forming their own families, and entering the workforce (Rindfuss 1991).

The events which occur between the ages of 18 and 30, including normative experiences in developed societies, such as the completion of education and family formation, or extraordinary circumstances such as homelessness, have significant social and psychological consequences that can shape future life experiences and opportunities (e.g., Elder 1998; Osgood, Foster, et al. 2005; Osgood, Foster, and Courtney 2010; Shanahan 2000; Uhlenberg and Mueller 2004). Moreover, the specific timing of these events in terms of both age and historical context is also central (Elder 1998). Some of sociological research on the transition to adulthood focuses on the constraints and opportunities afforded to specific class, race/ethnicity, and gender categories and how these culminate in divergent pathways toward adulthood (e.g., Cherlin 2010; Elder 1998; Furstenberg 2010; Shanahan 2000), but even then, an explicitly intersectional approach is seldom included.

In the earliest studies on the transition to adulthood, researchers emphasized the achievement of new statuses and roles, such as marriage, having children, finishing education, and gaining stable employment, as signs of moving away from adolescence and into adulthood (e.g., Hogan and Astone 1986; Hogan 1980; Modell, Furstenberg, and Strong 1978). Once

adulthood statuses, such as being married or employed full-time, have been accomplished, individuals have achieved some of the steps toward normative adulthood. One key problem with this framework is the rather strict dividing lines of what is (and in contrast, is not) adulthood. Indeed, the traditional markers of "adulthood" have the ability to omit many young people who chronologically and legally speaking, would be considered "adults" in that they are over 18 years of age, but may be over 30 years of age before many of these events indicating "adulthood" first occur.

More recently, the transition to adulthood framework has been expanded to consider transitions as having importance beyond individual events themselves, by shaping other outcomes and experiences (Furstenberg 2010; Shanahan 2000). Researchers have accomplished this feat by instead of looking at single markers, by focusing on specific pathways to adulthood (e.g., Amato et al. 2008; Mouw 2005; Oesterle et al. 2010; Osgood, Ruth, et al. 2005; Shanahan 2000; Skogbrott Birkeland et al. 2014). Transitions to adulthood vary based on social position (e.g., social class, race/ethnicity, gender) and life experiences. Shanahan (2000) argues that in the transition to adulthood, young adults experience a convergence of social structural factors and agency that shapes the rest of their lives. As such, studies on the transition to adulthood require analyses that are more sophisticated rather than simply checking off certain characteristics as markers of adulthood. It seems a logical extension, then, to specifically examine how these social structural factors (including gender and race/ethnicity) come to produce divergent outcomes, though this specific issue is given minimal discussion in many studies on the transition to adulthood. The transition to adulthood described in many studies is that of White and otherwise socially advantaged young people, even though scholars are astutely aware of the complexity and non-uniformity of these issues. An additional focus on how

combinations of disadvantages as the result of myriad structural inequalities during the transition to adulthood is necessary.

#### Constrained Agency: Intersectional Approaches toward the Transition to Adulthood

There are clear and justifiable reasons why studies on the transition to adulthood and emerging adulthood necessitate an intersectional lens. The period itself abounds in *potential* opportunities for young people. However, the ability to take advantage of said opportunities are contingent upon access to resources, and thus can be severely limited for lower income young people, racial/ethnic minorities, and women (e.g., Côté and Bynner 2008; Dwyer, Hodson, and McCloud 2013; McDaniel et al. 2011). Importantly, observations of opportunities are likely to prove increasingly complex when identities are conceptualized affecting one another. Although there have been recent calls for further research using an intersectional lens to understand the transition to adulthood (Hardaway and McLoyd 2009; Syed and Mitchell 2013), few studies have employed such an approach, especially in quantitative research on the period (Grollman 2012). While feminist scholars have called for more intersectional scholarship using quantitative methods (e.g., Harnois 2005), relatively few studies using quantitative methods seek to explicitly employ an intersectional lens.

Many studies using quantitative methods to examine the transition to adulthood, which feasibly could work to advance scholarship on intersectional inequalities and corresponding tangible differences in opportunities and structures at a population level, include gender and race/ethnicity as mere variables in models, rather than pulling apart why they are salient and how they work together to produce different opportunities and experiences. This is not to say that scholars using quantitative methods completely ignore how gender, race/ethnicity, class, and

other hierarchical statuses relate to outcomes in the transition to adulthood. However, what has been missing is attention to how social positions intersect with one another during this period.

The relative lack of attention scholars have given to intersectional research on the transition to adulthood has left life course theory nearly void of these discussions. Indeed, the literature on the transition to adulthood tends to describe early adulthood through a homogeneous lens, inadvertently favoring the transitions of socioeconomically advantaged young people, many of whom are presumed to be White and men, simply by the relative omission of evidence to suggest the contrary. While an increasing number of studies have sought to address these gaps by concentrating specifically on disadvantaged youth's transitions to adulthood (Côté and Bynner 2008; Erickson, McDonald, and Elder 2009; Furstenberg 2008; Maslow et al. 2011; Roy and Jones 2014), there is still considerable work to be done to develop sound understandings of how intersectional inequalities shape young adult outcomes' in complex and nuanced ways. Grollman (2012) addresses this critique in scholarship on young adulthood and mental health by arguing that adolescents and young adults who experience multiple forms of discrimination and more frequent acts of discrimination overall are more likely to experience depressive symptoms and report significantly worse health than those experiencing fewer and less frequent acts of discrimination. Additional quantitative intersectional scholarship is necessary in order to explicate the procedures and mechanisms by which intersectional inequalities create differential outcomes and opportunities for young people.

In particular, and of central importance to this dissertation, is how intersectional inequalities manifest in differential opportunities to form and sustain romantic relationships during the transition to adulthood. A detailed discussion on the formation and qualities of romantic relationships in the transition adulthood follows, with special consideration as to how

opportunities and experiences in romantic relationships vary by the intersections of gender and race/ethnicity.

#### **Romantic Relationship Patterns in the Transition to Adulthood**

During the transition to adulthood, young people complete their education, start their careers, and many begin forming their own families through cohabitation, marriage, and childrearing. For many young people, an important precursor to starting families is the establishment and sustenance of romantic relationships, which are often predicated on economic security (Furstenberg 2010). Even though the median age of first marriages has increased over the last fifty years "from 23 for men and 20 for women in 1950" (Kreider and Ellis 2011:5) to 28.7 among men and 26.5 for women in 2011 (U.S. Census Bureau 2013), young adults are not delaying dating or cohabitation. Indeed, among young adults between 18 and 26, half are dating, cohabiting, or married (Austin and Bozick 2012; Carver, Joyner, and Udry 2003; Stanley, Rhoades, and Whitton 2010). Between 2006 and 2010, two-thirds of women between 25 and 34 years of age had ever cohabited with a non-marital romantic partner (Kennedy and Bumpass 2012). Whether considering casual dating, cohabiting, or marriage, it is clear that romantic relationships are integral and normative experiences for young adults.

Several notable patterns emerge when considering gender and race/ethnicity in romantic relationship timing. For example, men, on average, tend to enter cohabitation and marital relationships at older ages than women first do. For example, median age at first cohabitation was 23.7 years for men, while only 22.2 years among women. This pattern holds into marriage as well, as men first marry, on average, when they are about 27.6 years of age, while women do at 25.9 years (Manning, Brown, and Payne 2014). Further complexity emerges when considering the role of race/ethnicity along with gender on timing of first cohabitations and marriages, as

well. On average, Black women and men first cohabit and marry at older ages than Whites and Latinas/os. Between 2006 and 2010, Black women's median age at first cohabitation was 22.6 years, compared to 21.8 years for White women and 20.9 among Latinas (Manning et al. 2014). There is less variability among men of different racial/ethnic backgrounds, however, the pattern still holds where Black men first cohabit at older ages (23.7 years) than White men (23.6 years) or Latinos (23.1 years) (Manning et al. 2014).

With regard to marriage, White women (25.6 years) and Latinas (25.7 years), first marry when they are about a year and a half younger than Black women (27.0 years) (Manning et al. 2014). While there are few racial/ethnic differences in age at men's first cohabitation, considerable variability emerges when considering the age when men first marry. White men (27.1 years), similar to White women, marry at younger ages than Black men and Latinos. Black men first marry when they are about one year older than White men (28.4 years), and Latinos, on average, marry about a year and a half later than Black men (29.9 years) (Manning et al. 2014). These important intersectional differences in timing of first marriage and cohabitation are critical when examining romantic relationship formation patterns between groups.

Although literature on the timing of Latinas/os marriage by country of identification is sparse, in the adult population of Latinas/os in the U.S., there are some differences in likelihoods of being married by country of identification.<sup>1</sup> For example, while 43% of Latinas/os in the U.S. were married in 2011, only 35% of Puerto Ricans were (Brown and Patten 2013b). Cubans and Mexican Americans living in the U.S. were more likely than other Latinas/os to be married (Brown and Patten 2013a; Gonzalez-Barrera and Lopez 2013). In 2011, 45% of both Cubans and

<sup>&</sup>lt;sup>1</sup> The phrase "country of identification," rather than "country of origin" is used here, as "country of origin" is too specific within this context. For example, about two-thirds of Puerto Ricans and Mexican Americans living in the U.S. were born in the U.S. (Brown and Patten 2013b; Gonzalez-Barrera and Lopez 2013) . In stark contrast, however, more than one-half of Cubans living in the U.S. were not born in the U.S. (Brown and Patten 2013a).
U.S. born Mexican Americans were married (Brown and Patten 2013a; Gonzalez-Barrera and Lopez 2013). Mexican immigrants to the U.S., however, are much more likely than both the general U.S. population and the U.S.-born Mexican American population to be married (Gonzalez-Barrera and Lopez 2013).

Research indicates that adolescents form multiple romantic relationships, increasing in intimacy and sexual activity as they age into early adulthood (Meier and Allen 2009). Adolescents' romantic relationship experiences go on to influence their romantic relationships in young adulthood in a number of ways. For example, social class is pertinent in determining relationship direction and outcomes, as lower-income young adults are more likely to marry young or cohabitate (Meier and Allen 2008). As detailed above though, the time between high school graduation and union formation has increased considerably over the last 50 years. Moreover, in depth discussions on how race/ethnicity and gender come to shape romantic relationship formation during the transition to adulthood are largely omitted, and instead, simple descriptions of these differences are considered, without theorizing on why specific differences emerge.

Most research on romantic relationships in adolescence and the transition to adulthood focuses on the age and social circumstances surrounding sexual debut (e.g., Rostosky, Regnerus, and Wright 2003) and sexual risk taking behavior (e.g., Kelley et al. 2003). There is scarce work on romantic relationship dynamics, quality or satisfaction. Although some work has been done on relationship satisfaction in marriage and long-term relationships (e.g., Butzer and Campbell 2008; Byers 2005; Gonzaga, Campos, and Bradbury 2007), young adults' relationships are often grouped with all adults, omitted from this type of research entirely, or are only considered when the relationships in which they are involved are marriages. When marriages are exclusively

considered, not only are normative experiences in other non-marital relationships excluded, but many same sex relationships are also ignored due to prohibitions against marriage in many states. Answering questions on young adults' romantic relationships is quite difficult, given few studies have specifically focused on young adults' romantic relationships.

What is known about romantic relationship qualities among young adults suggests that young adults overwhelmingly feel satisfied and committed to their romantic relationships, regardless of whether young people are married, cohabiting, or dating their partners (Wildsmith, Manlove, and Steward-Streng 2013). Indeed, three-quarters of cohabiting women, 72% of women dating their partners, 70% of cohabiting men and 71% of men in dating relationships report they are "very satisfied" with their relationship (Wildsmith et al. 2013). Likewise, over 80% of married young men and women also reported they are "very satisfied" with their marriage (Wildsmith et al. 2013). As one might expect, there are some differences in reported levels of romantic relationship commitment by the type of relationship in which women and men are involved (Wildsmith et al. 2013). For example, 94% of married women, 88% of married men, 83% of cohabiting women, 70% of cohabiting men, 70% of women involved in dating relationships and 63% of men who are dating their partners report feeling "very committed" to their relationship (Wildsmith et al. 2013). Despite this variation, young people report feeling very satisfied and committed to their romantic relationships.

Even more curious is the omission of race/ethnicity in understanding young people's relationship satisfaction and commitment. One study, specifically examining intersectional understandings of marital satisfaction among dual-earning couples suggests that while both Black women and Black men report significantly less marital satisfaction than White women and White men (respectively), Black women report about one half a point less satisfaction with their

marriages than Black men (Dillaway and Broman 2001). As such, understandings of relationship satisfaction overall necessitate an intersectional lens because opportunities to find one's relationship as "satisfying" appear graded along both gender and racial/ethnic lines. It does seem that women view their relationships less favorably than men do overall, but few studies have examined racial/ethnic variation in romantic relationship satisfaction or commitment as the outcome of interest.

#### **Pathways to Obesity**

Before specific figures on obesity in the U.S. are introduced, it is important to note how obesity is operationalized in adulthood and childhood. In adulthood, obesity is defined as having a metric weight-to-height<sup>2</sup> ratio (that is, body mass index (BMI)) exceeding 30.0, regardless of age or gender (Centers for Disease Control 2012), though as noted earlier, researchers are working to sharpen the definition of obesity (American Association of Clinical Endocrinologists and American College of Endocrinology 2014). Although some have argued that BMI is an inferior measure of adiposity compared to physical measures (Nevill et al. 2006), recent research suggests that BMI is a valid indicator of adiposity and the association between body fat and illness (Freedman et al. 2007, 2013).

The definition of obesity in childhood is less clear, but generally, in the U.S. either percentiles from the CDC Growth Charts 2000 or BMI *z*-scores are used to determine children's adiposity and potential obesity. The CDC Growth Charts 2000 defines children as obese if their BMI exceeds the 95<sup>th</sup> percentile of references matched for age, height, and sex (Centers for Disease Control 2000). In contrast, *z*BMI scores are standardized measures of obesity comparing children against references matched for age, height, and sex (Cole et al. 2000). As one would expect, BMI, BMI percentiles, and *z*BMI are highly correlated (Cole et al. 2005), though they

can produce conflicting estimates for weight categorization (e.g., underweight, normal weight, overweight, obese). Alternatives to BMI are preferable when measuring obesity in children because children's bodies are rapidly changing and growing, and alternatives to BMI, such as *z*BMI scores or BMI percentiles, are more reliable indicators of excess body fat among children because reasonable adjustments for developmental growth, with respect to age and gender, are included (American Dietetic Association 2006; Inokuchi et al. 2011; Johnson-Taylor and Everhart 2006).

Between 1960 and 2012, the prevalence of obesity among U.S. adults increased from 13.4% of adults to 35.1% of adults (Flegal et al. 2002; Ogden et al. 2014). Similar trends have been found among children in the U.S., where only 4.2% of six to 11 year olds and 4.6% of adolescents were considered obese in the 1960s (Ogden et al. 2002), compared to 17.7% of children aged six to 11 and 20.5% of 12 to 19 year olds in 2012 (Ogden et al. 2014). Despite these dramatic increases, the prevalence of obesity among adults in the U.S. has remained relatively stable since the early 2000s (Flegal et al. 2010, 2012; Hedley et al. 2004; Ogden et al. 2010, 2012, 2014). Recent estimates suggest that 30.3% of adults aged 20 to 39 were obese in 2012 (Ogden et al. 2014).

Importantly, there are notable intersectional disparities in obesity, whereby women and racial/ethnic minorities are at a greater risk of obesity than men and Whites, respectively (Ailshire and House 2011; Ogden et al. 2014). In particular, current population estimates using data from the 2011 – 2012 wave of the *National Health and Nutrition Examination Survey* (NHANES) suggest that girls and women are slightly, but still significantly, more likely than boys and men to be obese (Ogden et al. 2014). About one-third of men and 36.5% of women were obese (Ogden et al. 2014). Among children, 16.7% of boys and 17.2% of girls between the

ages of 2 and 19 years were considered obese (Ogden et al. 2014). A recent longitudinal study on obesity from kindergarten to middle school published in the *New England Journal of Medicine* suggests that obesity among middle school aged children is more common in boys than girls, however (Cunningham et al. 2014).

Race and ethnicity are perhaps even more important than gender differences in understanding variations in obesity. Throughout the life course, Whites and Asians are less likely than Blacks and Latinas/os to be obese (Ogden et al. 2014). Among children, nearly one-quarter of Latinos were obese in 2012, while 20.6% of Latinas were (Ogden et al. 2014). Similarly, about one-in-five Black girls (20.5%) and boys (19.9%) were obese (Ogden et al. 2014). Considerably fewer White (girls: 15.6%; boys: 12.6%) and Asian (girls: 5.6%; boys: 11.5%) children were obese in 2012 (Ogden et al. 2014).

Differences in adults' obesity by gender and race/ethnicity are mostly consistent with patterns among children, though there are a couple notable exceptions. For example, while childhood obesity was most prevalent among Latina/o children, Black women were most likely to be obese in 2012, as over one-half of Black women were obese in 2012 (56.7%) (Ogden et al. 2014). More than 40% of Latinos (40.7%) and Latinas (43.3%) were obese in 2012 (Ogden et al. 2014). One-third of White women (33.7%) and men (33.1%) were obese (Ogden et al. 2014). Consistent with the patterns in childhood obesity among Asians, adult obesity was much less common among Asian women (11.5%) and men (10.4%) than among any other racial/ethnic group (Ogden et al. 2014).

Some scholars attribute racial/ethnic differences in childhood and adulthood obesity to socioeconomic status differences between racial/ethnic groups, whereby racial/ethnic minorities experience greater risk of obesity due to limited access to healthful foods (both through

economic constraints and finding supermarkets nearby) and little time to exercise for leisure (Braveman et al. 2010; Hajat et al. 2010). Racial/ethnic differences in obesity are especially salient when considering the health consequences of obesity, which include higher risks of heart disease (Wilson et al. 2002), diabetes (Abdullah et al. 2010) and sleep apnea (Li et al. 2010).

Other studies also suggest that relationship status is an important predictor of weight gain. For example, married persons are more likely than non-married persons to become obese over time (Jeffery and Rick 2002; Sobal, Hanson, and Frongillo 2009; Sobal and Hanson 2011; The and Gordon-Larsen 2009). Importantly, entry in to marriages (The and Gordon-Larsen 2009) and current marital involvement (Sobal, Hanson, et al. 2009) are both associated with increased likelihoods of obesity. Romantic ties are salient in understanding risks of obesity among adults, though it appears that most individuals become obese after relationship onset.

#### Weight Trajectories

Body weight, BMI, and weight categories (e.g., normal, overweight, obese) tend to be measured at one point in time in public health and social research. However, body weight is not entirely stable throughout the life course (e.g., Botoseneanu and Liang 2011; Cunningham et al. 2014; Gordon-Larsen et al. 2010; Li et al. 2007; Malhotra et al. 2013), and in line with life course theory, changes in weight also may be important in shaping long-term social outcomes. Risk and incidence of weight gain, in particular, is of major concern because weight changes are often the result of net gains (rather than loss) throughout the life course. Among children aged two to 12 years, for example, researchers identified three overweight trajectory pathways: 1) early onset obesity, including children who became obese in early childhood and remained overweight, 2) late onset obesity, referring to children who experienced overweight after the age of 8 years, and 3) children who did not experience overweight (Li et al. 2007). Similarly, the risk

of obesity in 8<sup>th</sup> grade is four times higher for children who were overweight in kindergarten, compared to normal weight kindergarteners (Cunningham et al. 2014).

Timing of obesity onset also varies from adolescence through early adulthood. Gordon-Larsen and colleagues' (2010) research using data from Waves II, III and IV of Add Health found that once individuals were identified as obese in adolescence, the vast majority remained obese into their late twenties and early thirties. In fact, only about 1% of obese adolescents were not obese twelve years later (Gordon-Larsen et al. 2010). Similarly, Malhotra and colleagues (2013) identified men and women's weight trajectories from their mid-twenties to mid-forties, using data from the *National Longitudinal Survey of Youth 1979* (NLSY79), finding that over 90% of men and women experienced net gains in weight from 1990 to 2008. Moreover, 55% of men and 39% of women moved into higher weight categories (e.g., movement from normal weight to overweight, overweight to obese, etc.) by 2008, while less than 1% of men and only 2% of women moved to lower weight categories in the same period (Malhotra et al. 2013). With these upward trajectories in mind, when longitudinal data are available it may be useful to consider how weight-based paths, rather than static indications of body weight, relate to social and health outcomes.

#### **Obesity, Social Stigma, and Interpersonal Relationships**

An underlying thread in the social research on obesity is the idea that experiencing obesity is socially stigmatizing (Carr and Friedman 2005, 2006; Carr, Jaffe, and Friedman 2008; Puhl and Brownell 2006; Puhl and Heuer 2010; Puhl and Latner 2007; Puhl and Luedicke 2012). The stigma experienced by obese individuals is often internalized, and as a result, individuals experiencing obesity often blame themselves for perceived discrimination in everyday life (Lewis et al. 2011). Indeed, even in Goffman's (1963:7) early monograph on stigma, he argued

that it was "a pivotal fact" that "the stigmatized individual tends to hold the same beliefs about [her/his stigmatized identity] as" individuals lacking the stigmatizing trait.

It would be remiss, however, to ignore how obesity stigma affects individuals of different genders and racial/ethnic identities. In a brief autoethnographic manuscript, Bergman (2009:139) highlights the ambiguity and complexity of experiencing weight-based discrimination by detailing the author's own experience as a gender non-conforming person, stating, "whether I'm fat depends on whether the person or people looking at me believe me to be a man or a woman." Bergman (2009:139) furthers this point by stating, "even though I don't identify as a man... I am taken for a man about two-thirds of the time. And when I am taken for a man, I am not fat." Women's bodies (and individuals perceived to be women) are more highly scrutinized when viewed as carrying too much excess weight than men. Among women, race/ethnicity also shapes perceptions of weight and what it means to be of a particular body size. For example, while overweight and obese adolescent girls are considered less attractive than normal weight girls on average, Black girls who are overweight or obese "[face] a significantly smaller penalty" in terms of perceived attractiveness than White girls (Ali et al. 2013:547). Similarly, others suggest that obese White men experience greater social stigma from obesity than obese Black men, as well (Trautner, Kwan, and Savage 2013). Not only is there variation in terms of whether women or men experience greater weight-based discrimination, there is additional social meanings about body weight by race/ethnicity, as well.

Of central concern to this dissertation, experiencing obesity stigma can result in social isolation (Strauss and Pollack 2003; Valente et al. 2009). For example, researchers using data from Add Health found that obese adolescents receive fewer friendship nominations than non-obese peers (Ali, Amialchuk, and Rizzo 2012; Cunningham et al. 2012) and are less likely than

normal and overweight peers to have their best friendship reciprocated (Cunningham et al. 2012). The effects of obesity stigma on social integration are modified by gender and race/ethnicity. With regard to gender, similar to findings on the prevalence of obesity among women and girls, girls and women also report experiencing discrimination on the basis of body weight more frequently than boys and men do (Tang-Péronard and Heitmann 2008). Findings on the significance of obesity on racial and ethnic minorities' social integration are particularly interesting. For example, White obese youth are at particular risk of experiencing social exclusion (Ali et al. 2012; Crosnoe, Frank, and Mueller 2008; Cunningham et al. 2012). Ali and colleagues (2012) found no significant differences within race/ethnicity groups of Black and Hispanic adolescents' number of friendship nominations by obesity status. However, Cunningham and colleagues (2012) found that obese Black girls and obese Latinos are more likely than non-obese Whites (and non-obese Black girls and non-obese Latinos, respectively) to have their best friendship reciprocated. Some have argued that overweight and obesity may be less stigmatizing for racial/ethnic minorities than Whites due to cultural variations in definitions of beauty by body size (Ali et al. 2013; Barroso et al. 2010; Cachelin et al. 2002; Cheney 2011; Sabik, Cole, and Ward 2010; Trautner et al. 2013). Similarly, among adults, it also appears that obesity stigma is not a major cause of difficulties in forming and sustaining interpersonal relationships for racial/ethnic minorities, though it can be for Whites (Carr et al. 2008).

Few studies have explicitly examined how gender, race/ethnicity and obesity histories work together to shape romantic relationship experiences. For example, obese Whites appeared less likely than normal weight Whites to engage in first vaginal intercourse by the transition to adulthood, but the relationship between Whites' obesity and sexual initiation were not statistically significant once controls were included in the model (Cheng and Landale 2011).

Among Latinas/os and Blacks, obesity was not associated with sexual debut at a bivariate level (Cheng and Landale 2011), suggesting that the potential stigma of obesity in romantic relationship found in Whites does not necessarily carry over to racial/ethnic minorities at all. Similarly, others have found that White obese adolescent girls were less likely to be in a romantic relationship and less likely to have had sex than non-obese White adolescent girls (Ali et al. 2014). However, no differences were found between non-obese and obese adolescent Black girls' romantic and sexual experiences (Ali et al. 2014).

Evidence for the negative effects of obesity on romantic relationships in adolescence appears to carry into adulthood, as well. For example, grade II and III obesity is associated with lower likelihoods of having a sexual partner, less sexual satisfaction, and lower frequency of sexual activity in the last six months (Carr et al. 2013). In a study ranking sexual desirability of college students' potential partners who were either "healthy," armless, wheelchair users, "mentally ill," obese, or those with sexually transmitted infections, it was found that wheelchair users and obese individuals were consistently rated as the least desirable potential romantic partners for both women and men (Chen and Brown 2005). Unsurprisingly, "healthy" potential partners were most desirable (Chen and Brown 2005). As a result, of pervasive stigma against obesity, obese individuals may face considerable barriers to engaging in romantic relationships.

Romantic relationship satisfaction is modified considerably when individuals are obese, especially when they are women. For example, women experiencing overweight and obesity report less satisfaction with their romantic relationships and also believe their relationships are more likely to end than normal weight women (Boyes and Latner 2009). For men, however, similar patterns do not hold, suggesting that the stigma of obesity did not modify men's romantic relationships (Boyes and Latner 2009). Likewise, partnered women in focus groups reported that

they experience considerable stigma from their romantic partners, and as a result, some avoid sexual intimacy (Williams and Merten 2013).

Notably, there are considerable gaps in the literature on the influence of obesity on romantic relationships. The evidence presented suggests that obesity influences men and women's, and racial/ethnic groups' romantic relationships in different manners. In particular, obesity stigma places Whites and women at disadvantages in terms of romantic relationship formation, and women with regard to relationship satisfaction. However, scant literature examines specific relationship pathways and experiences as modified by obesity, especially when considering how gender and race/ethnicity interact with obesity. One study suggests minimal influence of obesity on relationship quality among obese women in marital and cohabitation relationships (Sobal, Rauschenbach, and Frongillo 2009). The evidence is further limited when considering how changes in body weight come to influence romantic relationships among young people. As obesity stigma in romantic relationships is also intrinsically linked to gender and race/ethnicity, a more nuanced discussion of stigma in romantic relationships is developed in the next section.

# Changes in Body Weight and Obesity Stigma

Movement in and out of overweight and obesity is salient in understanding how body weight comes to shape experiences of weight-based social stigma. Findings on the long-term implications of body weight changes on interpersonal relationships are mixed, but appear to suggest that movement in and out of categories can affect women, men and individuals of different racial/ethnic backgrounds in unique ways. In particular, research by Carr and colleagues (2006; 2013) suggests that while obesity is salient in shaping interpersonal relationships, the effects are contingent upon weight status during the transition to adulthood. For example,

individuals who were normal weight at age 21, but were obese later in life, did not report lower quality interpersonal relationships than those who were never obese (Carr and Friedman 2006). Similarly, grade I obese men (i.e., those whose BMI was between 30 and 34.9) who were overweight at age 21 did not differ from normal weight men in their levels of sexual satisfaction or sexual frequency (Carr et al. 2013). Men who were grade II or III obese (i.e., BMI in excess of 35.0), however, reported significantly less sexual satisfaction and sexual frequency than normal weight men, regardless of weight status at age 21 (Carr et al. 2013).

Others studying residual obesity stigma, that is, social stigma against individuals who were obese at one point in time but no longer obese later on, found that the social consequences of obesity stigma endure, even when individuals are no longer obese (Fee and Nusbaumer 2012; Latner et al. 2012; Levy and Pilver 2012). For example, formerly obese individuals were more likely than consistently normal-weight individuals and those who first became obese in adulthood to meet criteria for having an anxiety disorder, a depressive disorder, and to attempt suicide (Levy and Pilver 2012). Importantly, formerly obese individuals did not differ from consistently obese individuals in mental health outcomes, which suggests that ever having experienced obesity has long-term effects on psychological adjustment (Levy and Pilver 2012). Carr and Jaffe's (2012:426) mixed method study examining movement in and out of weight categories suggests that individuals who have been consistently overweight "since their formative years accept their weight as an integral part of their identity," while those whose weight has fluctuated report significant struggles with identity formation. Others suggest that changes in BMI, obesity, and underweight overtime are negatively associated with married and cohabiting women's relationship happiness, while weight changes are associated with higher

likelihoods of relationship conflict (Sobal, Rauschenbach, et al. 2009). That is, obesity stigma also seems predicated on weight stability.

The evidence on how obesity stigma affects formerly obese individuals' romantic relationship experiences is quite limited, though research suggests that formerly obese individuals are considered less desirable potential partners than consistently normal-weight individuals. For example, in an experimental study, formerly obese individuals were rated as less attractive than consistently normal weight individuals, but were rated as more attractive than consistently overweight individuals (Latner et al. 2012). College students are also significantly more likely to report hesitation on dating a formerly obese individual if they believe that formerly obese individuals will eventually gain back the weight they had lost (Fee and Nusbaumer 2012). The research on residual obesity stigma in romantic relationships does not report actual relationship experiences, however, and instead utilizes hypothetical situations to demonstrate the existence of residual obesity stigma in romantic relationships. Additional questions remain on the qualities of currently and formerly obese individuals' romantic relationships.

In short, the role of obesity stigma in shaping romantic relationship outcomes is not entirely clear. Some of the research suggests that women and Whites will experience greater levels of stigma in their romantic relationships. Other studies also suggest that even when individuals are no longer obese, they may still experience stigma associated with their former body weight. Centrally though, the studies on obesity stigma in romantic relationships examines attitudes toward romantic relationships with obese persons, rather than actual behaviors or experiences of obese individuals in romantic relationships. The findings presented above suggest that additional research is needed to assess whether attitudes toward relationships with obese

persons culminate in differential experiences for obese individuals. Moreover, the prior research indicates that race/ethnicity and gender can significantly modify how histories of obesity come to influence romantic relationship experiences (e.g., Ali et al. 2014; Cheng and Landale 2011), though evidence is quite limited and generally has focused on issues like young people's sexual debut rather than romantic relationship involvement and relationship quality.

#### **Literature Gaps and Current Study Implications**

While much of the aforementioned research is telling, there are relatively few studies examining young people's romantic relationships with regard to histories of obesity. The key objective of this dissertation is to examine how romantic relationship formation, satisfaction, and commitment during the transition to adulthood might be modified by histories of obesity. It is probable that young adults with histories of obesity would be less likely to be involved in a current romantic relationship, as previous research suggests that obesity in adolescence is linked to lower likelihoods of engaging in first sex by the transition to adulthood (Cheng and Landale 2011). Furthermore, as obesity has been found to be associated with less satisfaction with romantic and sexual relationships in both qualitative research and population-level research on older adults (Carr et al. 2013; Williams and Merten 2013), it is likely that young adults with histories of obesity would be less satisfied with their romantic relationships. As a result, it is also expected that young adults with histories of obesity would report less commitment to their relationships. Given the limited and mixed research on residual obesity stigma, some variability is anticipated when considering changes in obesity status over time.

Importantly, as obesity affects individuals of different genders and racial/ethnic backgrounds in divergent fashions, it is likely that men and racial/ethnic minorities with histories of obesity will not experience as much social stigma from obesity as women and Whites in

romantic relationships. Even so, it is likely that racial/ethnic minorities and women will experience greater adversity in forming and sustaining romantic relationships overall, though it is not clear how histories of obesity, as another intersecting oppression (van Amsterdam 2013), further complicate the matter.

# **Conceptual Framework: Obesity Stigma and Intersectional Inequalities**

The evidence on how body size influences romantic relationships suggests that the role of obesity in shaping romantic relationships is contingent on three factors: body weight changes, racial/ethnic identity, and gender. Given that prior research suggests that it is predominantly women and Whites who experience obesity stigma in interpersonal relationships (e.g., Ali et al. 2014, 2013; Carr and Friedman 2006; Cunningham et al. 2012), it is probable that the intersections by which gender, race/ethnicity, and histories of obesity come together will produce special disadvantage in terms of obesity stigma for women and Whites (and in particular, White women). Men and racial/ethnic minorities are unlikely to experience as much obesity stigma in their romantic relationships. It is not clear, however, if identifying as male, rather than female, affords obese men (regardless of racial/ethnic identification) particular advantages in romantic relationships.

As a result, two opposing models are presented. Figure 3 suggests that obese men will report better romantic relationship outcomes than obese women, whereby racial/ethnic minority men will report the most positive relationship outcomes, followed by White men, then racial/ethnic minority women, and finally White women. In contrast, Figure 4 suggests that obese racial/ethnic minorities will report better relationship outcomes than Whites, whereby racial/ethnic minority men will report the most positive relationship outcomes than Whites, whereby racial/ethnic minority men will report the most positive relationship outcomes, followed by racial/ethnic minority men will report the most positive relationship outcomes, followed by racial/ethnic minority women, then White men, and finally White women.

It is important to note that I am not suggesting that racial/ethnic minorities do not experience widespread systemic discrimination in many facets of life. What I am suggesting is that obese men and racial/ethnic minorities are not penalized to the same degree as obese Whites and women in their romantic relationships. This suggestion is in line with considerable evidence that obesity stigma in interpersonal relationships appears less pervasive and harmful for racial/ethnic minorities and men than for women and Whites (Ali et al. 2014, 2013; Carr and Friedman 2006; Cheng and Landale 2011; Cunningham et al. 2012).

In addition, body weight changes over time are also critically important. With regard to changes in body size, a number of studies have found that body weight, BMI, and weight categories change throughout the life course – usually through significant weight gain (e.g., Botoseneanu and Liang 2011; Cunningham et al. 2014; Gordon-Larsen et al. 2010; Li et al. 2007; Malhotra et al. 2013; The et al. 2010). However, only a handful of previous studies on romantic relationships and obesity have considered dynamic indicators of weight change over time, often finding that whether one's weight changes or remains stable is a salient indicator of differences in romantic relationships, whereby individuals with stable weight (regardless of body size) tend to report better relationship outcomes (e.g., Carr and Friedman 2006; Carr et al. 2013; Sobal, Rauschenbach, et al. 2009).

In terms of weight change, it is not clear whether the duration of obesity or stability in body size is central in understanding how obesity over time comes to influence interpersonal relationships. Some studies, for instance, suggest that weight stability (whether non-obese or chronically obese) is particularly salient in shaping relationship outcomes, whereby individuals whose weight has been stable tend to have better psychological outcomes than those who experienced shifts in body weight, regardless of whether the shifts were in terms of weight loss

or gain (Carr and Jaffe 2012). In Figure 5, under the Obesity Stability (1) and Obesity Stability (2) headings, two hierarchies are posed. Both hierarchies suggest that non-obese individuals will report better relationship outcomes than those with any history of obesity, followed by chronically obese individuals. In the Obesity Stability (1) hierarchy, recently obese individuals will report better relationship outcomes than formerly obese individuals, while under Obesity Stability (2), formerly obese individuals will report better relationship outcomes than recently obese individuals.

Another possibility is the idea that current obesity status is salient to understanding the role of obesity stigma on interpersonal relationships - that is, obesity recency. Although most studies which have examined changes in weight statuses on social outcomes suggest support for the idea that stability in weight is central, because only a few studies have examined dynamic indicators of body weight on social outcomes, it does not seem reasonable to exclude obesity recency as potentially salient. The final two hierarchies posed in Figure 5 suggest that non-obese individuals will report better relationship outcomes than individuals with any history of obesity, and chronically obese individuals will have worse outcomes than formerly obese, recently obese, and non-obese individuals. In the Obesity Recency (1) hierarchy, formerly obese individuals will report better relationship outcomes than recently obese individuals, while in the Obesity Recency (2) hierarchy, recently obese individuals will have better relationship outcomes than formerly obese individuals. These four frameworks have been posed because little is known about how body weight changes influence romantic relationships, and in particular, whether obesity stability or obesity recency is more important in shaping romantic relationship outcomes. As such, speculation and openness to alternative possibilities is necessary.

The main theoretical contribution of this dissertation is to attempt to disentangle the complexity of understanding how race/ethnicity, gender, and histories of obesity manifest in differential romantic relationship outcomes. In the next chapter, the data, measures, and methods used in this dissertation are introduced. Then, three specific analyses are conducted to examine how gender, racial/ethnic identity, and histories of obesity come to influence romantic relationship formation (Chapter 4), satisfaction (Chapter 5) and commitment (Chapter 6).

# Figures



Figure 3: Obese Men Report Better Relationship Outcomes than Women



Figure 4: Obese Racial / Ethnic Minorities Report Better Relationship Outcomes than Whites



Figure 5: Comparison of Obesity Stability and Obesity Recency Hierarchies

### **Chapter 3: Data and Measures**

# Data

This dissertation employed restricted-use data from Waves I, III and IV from the National Longitudinal Study of Adolescent Health (Add Health) (Harris et al. 2009a). Add Health is a complex longitudinal survey addressing social, psychological, and economic conditions in adolescence and adulthood, as well as self-reported and objective health indicators. The sample for Wave I was drawn from a school-based design. Data originated from a stratified, random sample of 80 schools in the United States including an 11<sup>th</sup> grade class. Schools were stratified based on school size, school type, urbanicity, region, and racial identities of the sampling frame. Schools feeding in to the 80 upper level schools that had a 7<sup>th</sup> grade class were also recruited to take part in the study. A total of 132 schools participated in the study. Wave I is a nationally representative sample of 7<sup>th</sup> through 12<sup>th</sup> graders from the 1994-1995 school year. Four distinct surveys were given at Wave I: a School Administrator Questionnaire, for the administrators of the 132 schools selected for sampling; an In-School Survey, given to over 90,000 adolescents from the selected 132 schools; an In-Home Survey, for which 20,745 of the In-School participants were selected; and a Parent Survey, given to parents of the In-Home Survey participants (n = 17,713).

Wave II data were collected one year later, following up with the Wave I In-Home Survey participants, excluding those who were in  $12^{\text{th}}$  grade at Wave I (N = 14,738). At Wave III (2001 – 2002), the Wave I In-Home Survey respondents were re-interviewed (n = 15,197), when most respondents were aged 18 to 26 years. The most recent data collection, Wave IV, occurred during 2008 and 2009, when most respondents were aged between 24 and 32 years. Over 80% of Wave I In-Home Survey respondents were interviewed again at Wave IV (n = 15,701). In addition to the main survey, Wave IV respondents were also asked about their romantic relationship histories, pregnancy histories (asked of females and males; for males, regarding their female partners), and parenting histories. Over 30,000 romantic relationships were identified among the Wave IV respondents (n = 30,263).

# Survey Procedures

Analyses were weighted to estimate population values using Wave IV cross-sectional weights (Chantala and Tabor 2010; Tourangeau and Shin 1999). The longitudinal Wave IV weights were not used because these adjust the population along with the Wave II Add Health sampling frame. As 12<sup>th</sup> graders at Wave I were not included in the Wave II sampling frame, using the longitudinal weights would have removed the eldest respondents from the study. All analyses were stratified by region of school attended at Wave I and clustered by the individual schools respondents attended at Wave I in order to account for the complex design of the Add Health study.

#### Missing Data

The primary independent measures in this dissertation originated in the Wave I and III surveys, while the dependent measures were from Wave IV. All controls, excluding gender, were drawn from Waves I and III. See Appendix 1 for details on the specific variables used and their original coding in the Add Health codebook. Listwise deletion procedures were employed in each chapter, along with missing dummy replacement on some measures.<sup>2</sup> Women and adolescents who were pregnant at Wave I and III were removed from the final samples of each

<sup>&</sup>lt;sup>2</sup> Missing values for relationship duration (a control used in Chapters 5 and 6) and income at Wave III (a control used in Chapters 4, 5, and 6) were treated as dummy variables.

chapter to avoid conflating body weight during pregnancy with clinical obesity, as is standard protocol in sociological and public health research on obesity (e.g., Crosnoe 2007; Cunningham et al. 2012; Ogden et al. 2014).

Sample sizes vary between the three analytic chapters because of missing values on the dependent measures of interest. The final sample size in Chapter 4 was n = 9,588. In Chapter 5, additional measures on relationship satisfaction were included. Respondents who did not respond to each of the questions used in the relationship satisfaction index were removed from the final sample in Chapter 5 (n = 9,415). In Chapter 6, the question used to assess commitment to romantic relationships was only asked of respondents who were involved in romantic relationships at the time of interview. As a result, respondents who either did not respond to the question on relationship commitment or were not involved with a romantic relationship at the time of interview were removed from the sample (n = 7,664). All but seven of the respondents lost between Chapter 5 and 6 were the result of omitting respondents who were not involved in a romantic relationship.

Complete descriptive statistics for each chapter are presented in Table 1. Descriptive statistics reported in this chapter are based on values in the first chapter in which the measure was used,<sup>3</sup> unless there were significant differences between chapters. Simple *t*-tests were conducted to explore potential changes in the distribution of independent, dependent, and control measures between chapters.<sup>4</sup>

<sup>&</sup>lt;sup>3</sup> In most cases, this was Chapter 4.

<sup>&</sup>lt;sup>4</sup> Calculations were conducted using survey-adjusted estimates. The survey-adjusted means and standard errors for each variable were imported into Microsoft Excel to conduct the *t*-tests.

### **Dependent Measures**

#### Romantic Relationship Statuses

The unit of analysis in the Wave IV romantic relationship data files was respondents' romantic relationships. In most of the other portions of the Add Health study, the unit of analysis was the individual her/himself. In order to address the unit of analysis change between data files, the data were transposed to identify the current or most recent relationship each respondent was involved in at Wave IV. Although data were available on prior relationships, in order to adequately address the research questions presented herein and to ensure consistent tracking of individual romantic relationships between chapters, only current and most recent (for single respondents) romantic relationships were examined.

In Chapter 4, the primary dependent measure of interest assessed whether respondents were involved in romantic relationships, and if so, the specific type of romantic relationship in which individuals were involved. Two questions were used to identify current romantic relationship involvement. The first asked respondents to identify the most recent "type of relationship" individuals were involved in, with each partner. Relationships were initially categorized as marriages, cohabitations, pregnancy relationships, dating relationships, or most recent relationships (in reference only to those who were not involved in a romantic relationship at the time of interview). "Pregnancy relationships" referred to relationships where at least one pregnancy occurred and the partners were not married or cohabiting at any point.

Respondents who identified marital, cohabitation, and pregnancy relationships were asked a follow-up question to identify whether the relationship was ongoing at the time of interview. Respondents who stated that the relationship was marital were asked, "Are you currently married to [partner's initials]?" Similarly, those involved in cohabitation relationships

were asked the follow-up question, "Are you currently cohabiting with [partner's initials]?" Respondents who identified a pregnancy relationship were asked, "Are you currently in a romantic or sexual relationship with [partner's initials]?" Respondents who stated they were "currently dating" their partner and those who identified their partner as their "most recent" partner, were not asked a similar follow-up question.

Using these variables, a final current relationship status measure was created. Respondents who stated the relationship in question was both marital and current were considered "currently married." Respondents involved in current cohabitation relationships were coded as "currently cohabitating." Respondents who stated they were dating their partner at the time of interview or had a current sexual or romantic relationship with a pregnancy-relationship partner were coded "currently dating." Respondents who listed no current marital, cohabiting, dating, or pregnancy relationships were considered "single."

Current dating and pregnancy relationship categories were combined for two reasons. The first is to remain consistent with the overall objective of the dissertation, which is to understand young adults' romantic relationships. As family formation can influence romantic relationships, controls for whether respondents were parents were considered in multivariate models for all respondents. The second reason is that there were simply too few current pregnancy relationships to consider them as their own category (n = 180).

#### Multiple concurrent relationships

A small portion of the sample identified multiple current romantic and/or sexual relationships (n = 500). Typically, additional relationships involved respondents with multiple concurrent dating partners. Even though some respondents had multiple current partners, the Add Health research team only asked relationship satisfaction and commitment questions regarding

respondents' "highest level" relationship, in terms of the type of relationship, duration of the relationship, and amount of caring reported for the partners. The Add Health team instructed participants to use the following schedule to prioritize their relationships, prior to asking questions on relationship satisfaction and commitment (Harris et al. 2009b:1):

This section is administered for ONE current partner. If there are multiple current partners, priority is: marriage partner, cohabitation partner, pregnancy partner, dating partner. If two or more partners fall in the same type of relationship, the longer/longest relationship is selected. If two or more partners fall in the same type of relationship, and they are of the same duration, then the respondent is asked to pick the partner they care about the most. If there are no current partners then the most recent partner is selected. If there is no current partner and no most recent partner, end dates for each marriage, cohabitation, and relationship with a pregnancy are reviewed to select the one partner with the most recent end date. If two or more partners have the same end date, select the longer/longest relationship.

This same prioritization was retained in this dissertation, in order to identify current romantic relationship and to ensure that the relationships individuals are referring to in these additional questions are the same as the ones for they claim current (or most recent) involvement. Once the initial coding was complete, the categories were broken down into two measures used in univariate, bivariate, and multivariate tests: partnership status and relationship type. Both of these measures are discussed below.

# Note on same sex relationships

Individuals in same-sex relationships were included in all analyses. Of those who reported the sex of their current partner on the survey, only 1.62% (n = 177) of respondents were

involved in a same-sex relationship at the time of interview. Same-sex relationships were not flagged in the analyses for two reasons. The first is that reliable estimates on the types of relationships in which same-sex couples were involved could not be reasonably ascertained because there were so few cases of current same-sex relationships. Second, by the beginning of 2008, only one state had legalized same sex marriage. Meaning, even though some couples may have wanted to marry, most same-sex couples living in the same home would have been involved in cohabitation relationships by default. Moreover, because there were so few individuals currently involved in same-sex relationships, inferences on relationship satisfaction and commitment by whether individuals were involved in same-sex or different-sex relationships could not reasonably be made. Some have responded to these limitations by removing same sex couples from their analyses (e.g., Joyner and Kao 2005). However, because I am not exclusively interested in marriage, it seemed unjustifiable to remove individuals involved in same-sex relationships from the analysis. To avoid losing these respondents from the analyses and further excluding individuals involved in same-sex relationships from the wider body of research on romantic relationships in young adulthood, individuals involved in same-sex relationships were not removed from the analyses.

# Partnership status

Partnership status refers to a dichotomous measure describing whether a respondent is currently involved in any type of romantic relationship. Respondents considered currently married, currently cohabitating, or currently dating as described above were coded "partnered" (1). Respondents who were not involved in any type of current romantic relationship were coded "unpartnered" (0). More than four-fifths of respondents were involved in a romantic partnership at the time of interview (80.91%). This measure was only used in Chapter 4.

#### Romantic relationship type

Romantic relationship type is a nominal level measure of romantic relationship involvement, using the relationship typology described above. Respondents were considered involved in one of the aforementioned romantic relationship types, prioritized as described above: marriage, cohabitation, dating, or single. Note that "single" in the relationship type measure refers to the same group as "unpartnered" in the partnership status measure.

As noted previously, sample sizes vary by chapter because of variation in the number of non-missing cases available. Thus, the distribution across romantic relationship categories varies somewhat by chapter. Between Chapter 4 and the analyses reported in Chapter 5, the distribution across romantic relationship categories remained quite consistent, along with expectations. In Chapter 4, 41.36% of the sample was married, 21.42% were cohabiting, 18.13% were dating, and 19.09% were single. Likewise, in Chapter 5, 41.95% were involved in marriages, 21.70% were involved in cohabitation relationships, and 17.76% were dating their partners, while 18.57% did not have a current romantic partner. There were no significant differences in romantic relationship distributions between Chapters 4 and 5.

However, because all single respondents were dropped in Chapter 6, the shape of the distribution changed. Even so, the pattern remained consistent with that of the prior two chapters (i.e., the largest share of respondents were married, then cohabitations, and finally, dating relationships). Over half of the Chapter 6 sample was married (51.55%). Just over one-quarter of the respondents in Chapter 6 were involved in cohabitation relationships (26.66%). The remainder were dating their current partners (21.79%). As expected, each of the differences in population estimates of romantic relationship type between Chapters 4 and 6 and Chapters 5 and 6 were statistically significant.

# Relationship Satisfaction

The dependent measure of interest in Chapter 5 was romantic relationship satisfaction. Consistent with prior research on relationship satisfaction using the Add Health data (e.g., Maslow et al. 2011), an index using seven questions was used to assess relationship satisfaction. All questions were asked in reference to respondents' current relationship (for currently partnered individuals) or their most recent romantic relationship (for single respondents). Questions were scored along a five-point Likert scale (strongly agree [5], agree [4], neither agree nor disagree [3], disagree [2], strongly disagree [1]). Scores ranged from a maximum of 35 to a minimum score of seven. A score of 35 indicated high levels of relationship satisfaction, while a score of seven suggested very little satisfaction. The index was reliable and internally consistent (Cronbach's  $\alpha = .89$ ). See Table 2 for question verbiage, score values, and the effects of removing each question on the Cronbach's  $\alpha$ . Mean relationship satisfaction score was 28.72 (*SE* = 0.10), suggesting that overall, most respondents were very satisfied with their romantic relationships.

#### Level of Relationship Commitment

The objective of Chapter 6 was to examine variations in romantic relationship commitment. Relationship commitment was measured by the question, "How committed are you to your relationship with [partner]?" with response categories of "completely committed" (69.52%) "very committed" (17.13%), "somewhat committed" (8.20%), and "not at all committed" (5.15%). As a whole, respondents reported strong commitment to their romantic relationships. This question, unlike the relationship satisfaction measures noted previously, was only asked of respondents who were involved in a romantic relationship at the time of interview.

# **Independent Measures**

The primary independent measure of interest was longitudinal obesity history. Obesity history refers to whether respondents were obese during adolescence (Wave I) and/or early adulthood (Wave III), using guidelines for clinical obesity in adolescence and adulthood, as discussed below. In adolescence, height and weight were determined from adolescents' self-reported height and weight. During the first Wave of the Add Health study, interviewers did not measure respondents' height and weight, and as such, measured height and weight could not be used to determine obesity status at that point. In early adulthood, trained interviewers measured respondents' height and weight. Using the procedures described below, measures of height and weight were transformed into measures of body mass index (henceforth, BMI) to determine whether respondents were obese at either point in time.

### Calculating Obesity in Adolescence and Adulthood

In order to determine BMI, calculations on height and weight at Wave I and Wave III were conducted using the following:

$$BMI = \left(\frac{\text{Weight in Pounds}}{\text{Height in Inches}^2}\right) \times 703$$

BMI, as calculated from height and weight, has been found to closely relate to measures of adiposity using skin folds (Must, Dallal, and Dietz 1991). Moreover, Johnson-Taylor and Everhart (2006) argue that BMI measured in childhood and adolescence is a more reliable indicator of adiposity than skin folds or waist-to-hip circumference measures over time (Johnson-Taylor and Everhart 2006). BMI is also highly correlated to overall percent body fat (Camhi et al. 2011; Flegal et al. 2009).

In adolescence, obesity was determined by respondents' gender, age, and self-reported height and weight at Wave I. First, height and weight were calculated into BMI using the formula above. Once BMIs from were calculated from the self-reported scores, *z*-scores of BMIs (*z*BMI) were calculated using 2000 CDC Growth References, by comparing respondents to references matched for gender and age (Centers for Disease Control 2000). Adolescents were considered obese and non-obese using criteria developed by the Child Obesity Working Group of the International Obesity Task Force (Cole et al. 2000). Obesity in early adulthood was ascertained by converting respondents' measured height and weight at Wave III into BMI. Adults whose BMIs were 30.0 or greater were considered "obese," whereas those with BMIs less than 30.0 were considered "not obese."

Values for obesity in adolescence and early adulthood were combined to identify obesity histories across these two periods, thus eliciting a dynamic measure of obesity. This typology elicited four categories of obesity history: 1) chronic obesity, defined as obesity in both adolescence and early adulthood (6.05%), 2) recent obesity, defined as obesity in early adulthood only (13.73%), 3) former obesity, defined as obesity in adolescence which did not carry over into early adulthood (2.34%), and 4) non-obesity, referring to those with no history of obesity (77.88%). In multivariate analyses, non-obese respondents served as the reference group in each model. Despite the sample size reduction from Chapter 4 through Chapter 6, no significant differences in obesity history were found between chapters.

# Potential Problems with Self-Reports of Height and Weight

Under ideal circumstances, self-reported data would not have been used to infer adolescent obesity histories. As detailed earlier, however, height and weight were not measured at Wave I of the Add Health study. At Wave II (n = 14,736) though, interviewers measured respondents' height and weight. The Wave II measures of height and weight are the most viable alternative to using the self-reported measures of height and weight at Wave I. However, Wave

II data did not include the oldest respondents of the survey – that is, respondents who were in 12<sup>th</sup> grade at Wave I and who graduated or left high school were not re-interviewed at Wave II, leading to significant attrition. The eldest respondents in the Add Health study are critical to consider in this dissertation as age is positively associated with union formation. To avoid losing these respondents, Wave I data were used in this dissertation. BMI calculated from self-reported height and weight at Wave I has been used in several studies by health researchers and social scientists (e.g., Crosnoe et al. 2008; Crosnoe 2007, 2012; Cunningham et al. 2012; Goodman, Slap, and Huang 2003; Gordon-Larsen et al. 2006; Lee, Harris, and Gordon-Larsen 2009; Scharoun-Lee et al. 2009; Strauss and Pollack 2003; Trogdon, Nonnemaker, and Pais 2008).

The main limitation of using self-reported height and weight to assess BMI and obesity is the potential introduction of bias. Previous research suggests though that self-reported height and weight at Wave I were very consistent with measures taken at Wave II (Goodman, Hinden, and Khandelwal 2000). Less than four percent of Add Health respondents' weight classifications at Wave I were inconsistent with weight categorizations from measured height and weight at Wave II (Goodman et al. 2000). Though few, some respondents appear to have provided incorrect height and weight estimates.

There are several explanations as to why individuals misreport their height or weight. For one, individuals may not know their precise height/weight. On the other hand, respondents may deliberately over- or underestimate their height and/or weight as a result of social desirability bias in reporting (Larson 2000). Most erroneous self-reports of height and weight are by only a few pounds or inches (e.g., Brener et al. 2003). Because this dissertation relies upon BMI, errors of only a few pounds or a few inches can drastically influence clinical weight and obesity classifications. Indeed, prior studies assessing the reliability of self-reported compared to

measured height and weight have found that estimated obesity prevalence is significantly lower when researchers measure BMI using self-reported height and weight as opposed to measured height and weight (Elgar et al. 2005; Spencer et al. 2002). With this in mind, it is possible that a small portion of the sample used in this dissertation's weight status could have been misclassified. However, the probable direction of this misclassification would be toward considering those who would have been measured as "obese" as "non-obese" based on the selfreport data, rather than overestimating obesity in the sample.

The most common errors in weight and height self-reports are underestimations of weight (Brener et al. 2003; Elgar et al. 2005; Gillum and Sempos 2005; Spencer et al. 2002; Villanueva 2001) and height overestimation (Brener et al. 2003; Spencer et al. 2002). Weight and height misrepresentation varies by gender and race/ethnicity. Women and adolescent girls are more likely than men and boys to underestimate their weight (Brener et al. 2003; Gillum and Sempos 2005; Larson 2000). The mean difference in adolescent girls' measured weight compared to selfreported weight was 4.5 kg (10 pounds), while the difference between adolescent boys' measured and self-reported weight was only 2.4 kg (5.3 pounds) (Brener et al. 2003). Racial and ethnic variations in self-reported height and weight also suggest additional differences, whereby Mexican American men and women are more likely than White and Black Americans to underreport their weight, and thus have less consistent self-reported BMI compared to measured BMI (Gillum and Sempos 2005). In Goodman and colleagues' (2000) study on weight misclassification using the Add Health data, neither race/ethnicity nor gender were significantly associated with weight misclassification. Although misclassifying obesity or non-obesity during adolescence is a substantive concern in this dissertation, its potential influence appears minor.

Body mass also influences the degree and direction of height and weight over- and underestimation. In a study of U.S. adults, researchers found that the degree of weight overestimation was predicated on respondents' measured categories of body weight (Stommel and Schoenborn 2009). Respondents measured as underweight (defined as a BMI less than 18.5) and normal weight (BMI greater than 18.5 but less than 25.0) tended to report they weighed *more* than they actually did, culminating in higher self-reported BMIs. On the other hand, overweight (BMI greater than 25.0 but less than 30.0), obese (BMI greater than 30.0, but less than 40.0) and "extremely obese" (BMI greater than 40.0) individuals underestimated their weight. Overweight individuals underestimated their BMIs by 0.56 points, compared to 1.16 points for obese individuals, and 2.12 points for extremely obese individuals.

In this dissertation using these data, it seems highly unlikely for the over- and underestimation of body weight by underweight, normal weight, and overweight individuals to inadvertently classify respondents as obese rather than non-obese in adolescence. The extent of weight overestimation by underweight and normal weight individuals is not great enough to misclassify them as obese (Stommel and Schoenborn 2009). As overweight individuals tend to underestimate their weight, misclassification of overweight individuals as obese is similarly unlikely (Stommel and Schoenborn 2009). There is a risk, however, of misclassifying respondents who would have been measured as obese in adolescence as non-obese, especially if their body size was near the overweight-obese threshold for their age, gender, and body mass category. Even so, the work by Goodman and colleagues (2000) using the Add Health data suggests this is only a problem for a very small portion of the sample.

# **Control Measures**

# Relationship Context

In Chapters 5 and 6, where the dependent measures include relationship satisfaction and relationship commitment, additional relationship context measures were considered as potential predictors of relationship satisfaction and commitment.

#### Relationship type

In Chapters 5 and 6, the effects of relationship type (as discussed previously) were controlled. Prior research has considered the ways that relationship satisfaction can vary by the type of relationships in which individuals are involved (Ackerman, Griskevicius, and Li 2011; Hsueh, Morrison, and Doss 2009; Niehuis, Reifman, and Lee 2013; Owen, Rhoades, and Stanley 2013; Rhoades, Stanley, and Markman 2010, 2012b; Rusbult, Martz, and Agnew 1998; Sassler 2010; Sprecher 2002; Vennum et al. 2014). The categories and coding used to operationalize relationship type in Chapters 5 and 6 were consistent with the coding used in Chapter 4.

In general, it was expected that involvement in marriages and cohabitations would be associated with higher levels of relationship satisfaction. Respondents who were single, in particular, were presumed to evaluate their most recent relationship as less favorable than others. With regard to commitment, married respondents were expected to feel more committed to their romantic relationships than respondents involved in cohabitation or dating relationships. <u>Relationship duration</u>

Romantic relationship duration has commonly been considered a moderator of relationship satisfaction and commitment, although there is limited evidence that relationship length directly influences either of these (Mirecki et al. 2013; Moore, McCabe, and Brink 2001; Rhoades, Stanley, and Markman 2012a; Whitton et al. 2013). For example, one study found a
negative curvilinear relationship between women's marriage duration and relationship satisfaction, but relationship duration was not a significant predictor of men's marital satisfaction (Minnotte et al. 2010).

Respondents were asked to provide information on the duration of their romantic relationship in months, which was recoded to represent years ( $\bar{x} = 4.68$ , SE = 0.11). Because about five percent of respondents had missing information on the duration of their most recent or current relationship, a separate missing relationship duration category was included. Positive relationships between relationship duration and satisfaction and duration and commitment were expected.

## Individual Context

#### Race and ethnicity

Prior research has found that race/ethnicity is an important predictor of marriage (Harris, Lee, and DeLeone 2010), with Whites more likely to marry than African Americans. Moreover, several studies have observed racial/ethnic variation in obesity in the United States among children, adolescents, and adults, whereby Blacks and Latinas/os tend to have higher rates of obesity than Whites (Cunningham et al. 2014; Ogden et al. 2014; The et al. 2010). In this dissertation, racial and ethnic identification was measured using a series of questions on racial and ethnic identification in early adulthood. With regard to racial background, respondents were asked, "What is your race? You may give more than one answer." Respondents could identify as any combination of "White," "Black/African American," "American Indian/Native American," and/or "Asian/Pacific Islander." Additionally, all respondents were asked, "Are you of Hispanic or Latino origin?" Respondents who responded affirmatively were asked the follow-up question, "What is your Hispanic or Latino background? You may give more than one answer." The most

common response category was "Mexican/Mexican American," which comprised more than one-half of all respondents who identified as Hispanic or Latina/o. Add Health also included six additional categories: Puerto Rican, Cuban/Cuban American, Central/South American, other Hispanic, and Chicana/Chicano. Because there is evidence that Mexican Americans are more likely to be married than Latinas/os of other backgrounds (Gonzalez-Barrera and Lopez 2013; Lopez 2011) and because Mexican Americans comprised about half of all Latinas/os in the sample it seemed necessary to create two categories for Latinas/os.

Responses to these three questions were used to create exclusive race and ethnicity categories. Respondents who identified as one racial group and not as Hispanic or Latina/o were initially coded as their singular racial identification: White, Black, Native American, or Asian. Respondents identifying with more than one racial group and not as Hispanic or Latina/o were considered "multiracial." Respondents who identified as Hispanic or Latina/o were coded as either Mexican American (if they stated their background was Mexican/Mexican American) or Other Latina/o (representing those who identified as Latina/o but not as Mexican American), regardless of their racial identification.

The racial identification of Latinas/os was not included for two key reasons. The first reason is that creating race categories among Latinas/os would have further strained the potential to assess meaningful statistical differences between racial/ethnic groups and contribute to additional loss of degrees of freedom. The second reason is a theoretical argument suggesting that ethnic identity is of more importance to Latinas/os living in the U.S. than the racial categories used in the U.S., as the racial categories used in Latin American countries do not cleanly correspond to those used in the U.S. (O'Brien 2008). Evidence supporting this claim can be found both in peer-reviewed publications and in demographic reports. For example, Vaquera

and Kao's (2006) study using data from Wave I of Add Health found that more than one-third of Latina/o identified adolescents racially identified as an "other" race, while nearly another third did not report a racial identity.<sup>5</sup> Data from the 2010 U.S. Census also found that over 40% of respondents identifying as Hispanic or Latina/o racially identified as either "some other race" or "two or more races" (Ennis, Ríos-Vargas, and Albert 2011). With these points in mind, it seemed for Latinas/os, racial/ethnic identities are more closely aligned to the ethnic categories than racial categories used in the U.S. (i.e., White, Black, Asian, Native American).

Because there were very few otherwise qualified Native American (n = 68), Asian (n = 547), and multiracial respondents (n = 360), a heterogeneous "other race/ethnicity" category was created. The heterogeneous category was used to avoid losing these respondents from the sample. The final and exclusive race and ethnicity categories used in this dissertation were White (68.41%), Black (13.83%), Mexican American (6.32%), Other Latina/o (4.05%) and Other Race/Ethnicity (7.83%).<sup>6</sup>

Given demographic trends in marriage among young adults (Cherlin 2010; Kreider and Ellis 2011), it was expected that Whites would be more likely than the other racial/ethnic groups to be married. Following these same patterns, it was expected that Blacks would be least likely to be married. With regard to cohabitation and dating relationships, however, minimal differences were expected between racial/ethnic groups. Racial and ethnic identification were not anticipated to directly influence romantic relationship satisfaction or commitment.

<sup>&</sup>lt;sup>5</sup> In Wave III of Add Health, "Other" race was no longer included as an option.

<sup>&</sup>lt;sup>6</sup> Coefficients for the Other Race/Ethnicity category have not been reported in the text, as meaningful inferences were unlikely.

## Gender identification

BMI and weight-classifications are known to vary between men and women. The prevalence of obesity is higher among women than men (Flegal et al. 2012; Ogden et al. 2012, 2014; The et al. 2010). Among children, the evidence is mixed. A recent study using data from the 2011-2012 wave of NHANES found that girls between the ages of 6 and 19 were more likely to be obese than boys (Ogden et al. 2014). Research using data from ECLS-K, however, found that the prevalence of obesity was higher among boys than girls at each measured point between kindergarten and eighth grade (Cunningham et al. 2014).

The timing of romantic relationship formation, especially with regard to marriages, and indicators of romantic relationship quality also vary by gender. Men tend to enter marriages and cohabitations at older ages than women (Kennedy and Bumpass 2012; Kreider and Ellis 2011), and some studies suggest men and women report different levels of relationship satisfaction (Bodenmann, Ledermann, and Bradbury 2007; Jackson et al. 2014; Minnotte et al. 2010). For example, while several studies report that women report lower levels of romantic relationship satisfaction than men, much of the difference is moderated by external factors such as stress, family-work conflicts, parenting, and gender ideologies (Dew and Wilcox 2011; Minnotte et al. 2010; Minnotte, Minnotte, and Pederson 2013; van Steenbergen, Kluwer, and Karney 2011). The effects of social context on women and men's romantic relationship satisfaction is also salient, though much of the research on romantic relationship satisfaction focuses on interpersonal factors and individual behaviors (Fincham and Beach 2010; Jackson et al. 2014; Perry-Jenkins and Claxton 2011).

In summary, literature suggests both that women are more likely than men to be obese and some studies suggest that women may be less satisfied with their romantic relationships. It is

expected not only that gender will relate directly to romantic relationship types, satisfaction, and commitment, but also that gender would moderate the effects of obesity history. In this dissertation, gender was measured using a dummy variable (1 = female) recoded from a pre-loaded Wave IV measure. About one-half of the overall sample was composed of women (50.19%).

## <u>Age</u>

Median age of first marriage in the United States has consistently increased in the last several decades (Cherlin 2010; Kreider and Ellis 2011). Explanations for this increase lie in the longer transition to adulthood and differential pathways toward adulthood and family formation by various social strata and life course experiences (Amato et al. 2008; Furstenberg 2010; Shanahan 2000). Some differences in relationship type, satisfaction, and commitment may be explained by differences in age.

Moreover, as individuals age they become more likely to experience obesity (Gordon-Larsen et al. 2010; The et al. 2010). To remain consistent with the longitudinal framing of this study, age at Wave III, rather than at Wave IV, was considered in all multivariate models. Age at Wave III was determined using the Wave III age variable constructed by the Add Health team. This variable is preferable to calculating respondents' ages using the month and year of birth along with the month and year of interview, because the age variable constructed by the Add Health team calculates age using the day of birth, as well. Day of birth was not provided to researchers using the restricted-access data to protect confidentiality (Harris 2009). In most cases, the inclusion of the day of birth was not important. However, for individuals whose birthday was in the same month as their interview, the traditional mode of calculation where the

researcher imputes day "15" as the day of birth can result in some respondents being considered a year younger than they actually were at the time of interview.

At Wave III, respondents ranged in age from 18 to 27 years. Interestingly, respondents' ages in each of the three samples significantly differed. The average age of respondents in the analyses was 21.24 years (SE = 0.16) for the sample reported in Chapter 4, 21.25 years (SE = 0.16) for the sample utilized in Chapter 5, and 21.38 years (SE = 0.16) in Chapter 6.

# Self-reported health

Self-reported health status is included as a potential modifier of romantic relationship statuses, relationship satisfaction, and relationship commitment for two key reasons. The first is to address the possibility that physical health may influence romantic relationship formation and perceptions of romantic relationship quality. Indeed, a recent working paper using data from Wave III of Add Health found minor differences in self-reported health between single parents and cohabiting individuals, compared to those who were single and not parents (Pollard and Harris 2013). Moreover, controlling for self-reported health was also important to ensure that the 'cause' of romantic relationship differences by obesity history was the result of obesity (and its associated stigma) rather than any potential health consequences of obesity (such as diabetes, asthma, or heart disease, among others). It was assumed that perceptions of health might influence romantic relationship experiences among young adults. Perception of health was measured at Wave III by the question, "In general, how is your health?" Respondents stated that their health was excellent (5), very good (4), good (3), fair (2), or poor (1). This measure was treated as a continuous variable. In both Chapters 4 and 5, mean self-reported health was 4.00 (SE = 0.01). Self-reported health scores were significantly higher in analyses reported in Chapter 6 ( $\bar{x} = 4.02$ , SE = 0.01), compared to the analyses reported in Chapters 4 and 5.

Measures of self-reported health, despite their wide use and purported validity (Fosse and Haas 2009), are quite controversial in some public health circles as they can produce inconsistent estimates over time (Salomon et al. 2009), vary between socioeconomic groups (Delpierre et al. 2009), and vary across cultures (Karlsson et al. 2010). Lang and Delpierre's (2009:353) assessment of self-reported health measures, like the one used in this study, is particularly critical:

'How is your health in general?' is supposed to summarize the perception of one's health far beyond the absence of illness, and to cover the social, physical and mental aspects of health. As it appears theoretically to be based on a wide, multidimensional definition of health, this measure of health is also very cheap.

It is an understatement to note that assessments of health are much more complex than what can be reasonably captured by a singular question. Importantly, how people understand their own health is shaped widely by social and cultural contexts.

Jylhä's (2009) procedural model of how individuals evaluate their own health eloquently captures the complexity of responses to general questions on health. First, individuals interpret their "health" within their own cultural and historical contexts. At the second stage, individuals compare themselves to those around them and assess their own health in terms of their age. For example, one might have a chronic health condition, but assess their health as "very good" or "excellent" (even if a trained clinician would argue that their health is not that great) when others around them (and especially those of similar ages) are much "sicker." These assessments are quite subjective and are subject to a great deal of variation, which can produce inconsistent assessments. In the final portion of Jylhä's (2009) model, individuals assess the possible response categories (typically, "excellent," "very good," "good," "fair," or "poor") and

determine which of these best fits their own situation. Reports of health are not one-size-fits-all, even when researchers' interpretations suggest otherwise.

As one would anticipate in a large-scale survey of young people's health, several other measures could have been used to understand how health could moderate the effects of obesity on romantic relationships. Some alternative measures include self-reported regular physical activities (e.g., specific types of exercise), dietary habits, kinds of physical limitations (e.g., "Does your health limit [your ability to bathe] and [dress] yourself?" and "How is your hearing?"), medication and supplement use, and whether physicians had diagnosed them with specific health conditions (e.g., depression, diabetes, asthma). Measures from questions like these were not used because they are too specific and cannot capture a general portrait of health perceptions. It was expected that interpretations of one's own health might mediate the role of obesity in romantic relationship formation and qualities.

# School urbanicity

Evidence from a recent mixed-methods monograph suggests cultural differences in relationship formation among young adults based on the size of the community in which they were raised, whereby young people living in rural communities marry at earlier ages than their suburban and urban counterparts (Waters et al. 2011). School urbanicity in adolescence was considered a potential moderator of relationship outcomes. Respondents attended schools in suburban (58.96%), urban (24.92%), or rural communities (16.12%). The urbanicity measure was coded by the Add Health team and placement into each category was determined by the population size of the community and metropolitan centrality of the schools respondents attended. It was expected that respondents who attended schools in rural communities would be

more likely than those from suburban or urban communities to be married. Urbanicity was not expected to significantly relate to relationship satisfaction or commitment.

# Transitions to Adulthood

The literature on the transition to adulthood has tended to focus on marital, educational, and employment outcomes in early life (e.g., Hogan and Astone 1986; Shanahan 2000). Pathways to adulthood (Shanahan 2000) and family formation (Amato et al. 2008; Cherlin 2010) have historically varied by the timing of certain events, such as gaining full-time employment and/or completing education. Three transition to adulthood measures were included, all of which originate in the Wave III survey: employment status, educational attainment, and school enrollment.

## **Employment**

Demographic shifts over the last two decades have dramatically changed romantic relationship and family formation processes (Amato et al. 2008; Cherlin 2010; Furstenberg 2010). Pathways into marriage are often predicated on economic security (Furstenberg 2010). One indication of economic security during the transition to adulthood is employment. Respondents' employment statuses were determined from the Wave III question, "Are you currently working for pay for at least 10 hours a week?" with valid responses of yes (1) or no (0). A small subset of the sample was not asked this question because they indicated on a prior question that they had never held a job requiring 10 hours of work per week or more. Respondents with no history of employment were grouped with unemployed respondents. Over two-thirds of respondents were employed during the transition to adulthood (70.55%). It was expected that those who were employed during this period would be more likely to be involved in marital or cohabitation relationships. It was not expected that employment during the

transition to adulthood would influence romantic relationship satisfaction or commitment in the following years.

## Educational attainment

Another predictor of marriage is having achieved additional education beyond high school. Given the aforementioned demographic shifts, it is more difficult to find well-paying employment lacking formal vocational training or college education, which can limit opportunities for economic security (Cherlin 2010; Furstenberg 2010). With this in mind, higher levels of educational attainment ought to be associated with involvement in marriages and cohabitations, as well as greater romantic relationship satisfaction. Educational attainment was measured by the question, "What is the highest grade or year of regular school you have completed?" with response categories as low as 6<sup>th</sup> grade (6 years of education)<sup>7</sup> and as much as five or more years of graduate or professional school (22 years of education). Mean educational attainment was 13.07 years (*SE* = 0.11). It was expected that higher levels of educational attainment would be associated with involvement in marriages and cohabitations, as well as greater relationship satisfaction and commitment.

## School enrollment

As the Wave III Add Health participants were quite young (averaging only 21 years of age), it is likely that some respondents were enrolled in higher education at the time of interview, but had not yet achieved a full year of education beyond high school. In addition to educational attainment, school enrollment during the transition to adulthood was also considered a potential modifier of romantic relationship outcomes. In early adulthood, respondents were asked, "Are

<sup>&</sup>lt;sup>7</sup> Some respondents were in  $6^{th}$  grade at Wave I, even though the primary sampling frame was  $7^{th} - 12^{th}$  graders. The sampling frame of Add Health was primarily high schools, but they also sampled middle schools and junior high schools feeding into the high schools. Per the Wave III codebook, six respondents' highest level of education was  $6^{th}$  grade, 13 respondents completed  $7^{th}$  grade, and 71 respondents left school after  $8^{th}$  grade.

you currently attending regular school? If you are enrolled but on school break or vacation, count this as attending." Respondents indicated whether they were enrolled in school at the time of the interview (1 = currently enrolled, 40.10%). Enrollment in school at the time of interview was expected to be negatively associated with involvement in marriages and cohabitations. Enrollment in school was not expected to influence perceptions of romantic relationship quality. *Household Context during the Transition to Adulthood* 

Several questions from Wave III were utilized to provide context for respondents' living situations during the transition to adulthood. Specifically, whether respondents lived with their parents, their individual income, whether they owned their own home, and whether they had biological or stepchildren living with them at the time of interview were considered as potential modifiers of associations between obesity and romantic relationships.

#### Living with parents

Young adults in the 21<sup>st</sup> century live with their parents longer than young adults in the 1960s did (Furstenberg 2010). This shift is mostly thought to be the result of marital delays (Furstenberg 2010). In early adulthood, respondents were asked about their current living situation with the question, "Where do you live now? That is, where do you stay most often?" One of the options respondents could state was living with their parents. Because moving away from one's home is considered a normative transition to adulthood (Furstenberg 2010; Shanahan 2000), it was included as a potential modifier of romantic relationships in early adulthood. Other living situations were not considered on their own, as each of the other options ("another person's home," "your own place," "group quarters," "homeless," and "other") implied that individuals left their childhood home. Living with one's parents was anticipated to negatively relate to romantic partnership formation, especially marriages and cohabitations. A dummy

variable was constructed identifying those who lived with their parents (1) as opposed to those in other housing situations (0). Two-fifths of the sample lived with their parents during the Wave III interview (41.57%).

# Individual income

Having a reliable and stable source of income is often considered another requisite of entering marriages and cohabitations (Cherlin 2010). Indeed, relative income has been found to shape whether men marry or cohabit with their partners, though the effect varies between racial/ethnic groups (Watson and McLanahan 2011). Respondents were asked to report their "personal income before taxes" in the year prior to their Wave III interview). Respondents entered dollar amounts, ranging from \$0.00 to \$250,000.00. Mean income significantly varied in each chapter. Mean annual income in the Chapter 4 sample was 12,948.00 (SE = 459.66). Once respondents who did not respond to each relationship satisfaction measure were excluded (Chapter 5), mean annual income was 12,993.00 (SE = 464.01). In the final analytic chapter, where all single respondents were omitted, mean annual income was \$13,353.00 (SE = \$480.08). About 20% of otherwise qualified respondents had missing values on this question. As a result, a missing income dummy variable was also created, comparing those with missing income values (1) to those with valid income values (0). Higher income was thought to associate with involvement in marriages and greater romantic relationship satisfaction and commitment. Homeownership

Owning a home is associated with marital relationships (Fisher and Gervais 2011). Indeed, much like the previous discussion on finances, education and employment, the ability to purchase a home is contingent upon having adequate resources to either purchase a home outright, or more commonly, be trusted by a financier to pay off said home over the course of

several decades. Homeownership at Wave III was determined by responses to the question, "Do you own a residence such as a house, condominium, or mobile home?" About one-in-five respondents owned a home during the transition to adulthood (19.73%). Homeownership was anticipated to relate to involvement in marriages and higher levels of commitment. It was not expected to significantly influence romantic relationship satisfaction.

#### Biological children

Literature suggests relationship satisfaction decreases for women as they transition to parenthood (Mortensen et al. 2012). Little research has examined how having children can influence relationship trajectories, though there have been recent calls for more research in this area (Sassler 2010). Having children living in the home is associated with less affection and more conflict among cohabiters (Hardie and Lucas 2010). A complex series of questions were asked to identify whether respondents had biological children living in the same home in early adulthood. Similar to the data collection techniques used to assess romantic relationships, the Add Health survey team also collected complex data on each pregnancy experienced by respondents and respondents' sexual partners. For each pregnancy, respondents were asked how the pregnancy ended. Mothers and fathers of each pregnancy ending in the live birth of at least one child (as some multiple births had both live and stillbirth outcomes) were asked a series of follow-up questions about each child, including whether the child lived with the respondent at the time of interview. Because this question was asked in reference to all known living children of the respondent, there are cases where respondents may live with some, but not all of their biological children. As a result, a dummy variable was constructed where (1) indicated that the respondent lived in the same home with any of their biological children and (0) indicated that the respondent did not live with any biological children. About 15% of respondents had a biological

child living with them during the transition to adulthood. Living with biological children was expected to relate to involvement in marriages and cohabitations, greater levels of commitment and lower levels of relationship satisfaction.

# Step, foster, and/or adoptive children

In early adulthood, respondents were asked to complete a household roster regarding the relationship between the respondent and others living in the same home. Regarding each individual living in the same home, respondents were asked, "What is [his/her] relationship to you?" along with the follow-up question, "Which description best fits [his/her] relationship to you?" Respondents who indicated that at least one person living in their home was an adopted son, adopted daughter, step-son, step-daughter, foster son, or foster daughter, were considered to have a step, foster, or adoptive child living in the home. This measure was treated as a dummy variable. Because having a step-child (the most common type of non-biological parenting noted here, by far) implies the existence of a current romantic relationship, this control variable was only introduced in the chapters on romantic relationship satisfaction (Chapter 5) and commitment (Chapter 6). At Chapter 5, 1.23% of respondents had a step-child living with them in the home. At Chapter 6, the proportion of the sample with a step-child significantly increased, but was still considerably uncommon (1.42%). Respondents with non-biological children in the home were expected to report less relationship satisfaction and lower levels of commitment to the relationship.

# Tables

# Table 1: Weighted Descriptive Statistics of Each Analytic Chapter

с I	Chapter 4 <i>n</i> =9,588		Chapter 5 n=9,415		Chapter 6 <i>n</i> =7,664		
	Percent /		Percent /		Percent /		
	Mean	SE	Mean	SE	Mean	SE	
Obesity History							
Chronic Obesity	6.05	0.42	6.00	0.42	5.63	0.41	
Recent Obesity	13.73	0.55	13.84	0.55	13.54	0.62	
Former Obesity	2.34	0.22	2.34	0.22	2.32	0.24	
Non-obesity	77.88	0.83	77.82	0.82	78.52	0.89	
Romantic Partnership Status							
Partnered	80.91	0.81	-	-	-	-	
Unpartnered	19.09	0.81	-	-	-	-	
Romantic Relationship Type							
Marriage	41.36	1.46	41.98	1.48	51.55	1.58	b, c
Cohabitation	21.42	0.81	21.70	0.82	26.66	1.00	b, c
Dating	18.13	0.86	17.76	0.87	21.79	1.12	b, c
Single	19.09	0.81	18.57	0.82	-	-	
Relationship Satisfaction							
Relationship Satisfaction Index (7-35)	-	-	28.72	0.10	29.47	0.10	с
Relationship Commitment							
Completely Committed	-	-	-	-	69.52	0.94	
Very Committed	-	-	-	-	17.13	0.63	
Somewhat Committed	-	-	-	-	8.20	0.48	
Not at all Committed	-	-	-	-	5.15	0.36	
Relationship Context							
Relationship Duration							
Relationship duration in years (0-19)*	-	-	4.68	0.11	5.22	0.12	с
Missing duration	-	-	4.78	0.39	4.74	0.39	
Individual Context							
Race and Ethnicity							
White	68.41	2.77	68.56	2.77	69.76	2.71	
Black	13.83	2.06	13.69	2.06	12.65	1.90	
Mexican American	6.32	1.19	6.34	1.20	6.29	1.16	
Other Latina/o	4.05	0.96	4.06	0.97	4.19	1.03	
Other Race/Ethnicity	7.38	0.86	7.36	0.86	7.11	0.82	
Female	50.19	0.70	50.36	0.70	51.88	0.75	
Age (18-27)	21.34	0.16	21.35	0.16	21.38	0.16	a. b. c
Self-Reported Health (1-5)	4.00	0.01	4.00	0.01	4.02	0.01	b. c
School Urbanicity							- , -
Suburban	58.96	4.89	58.81	4.90	58.38	4.97	
Urban	24.92	4.03	25.00	4.05	24.96	4.07	
Rural	16.12	4.66	16.19	4.68	16.66	4.82	
Transitions							
Employed	70.55	1.15	70.54	1.14	71.47	1.15	
Educational Attainment (6-22)	13.07	0.11	13.07	0.11	13.10	0.11	
Enrolled in school	40.10	1.76	40.14	1.79	39.94	1.73	
Household Context							
Living with parents	41.57	1.51	41.47	1.51	39.69	1.69	
Individual income (\$0-250,000)*	12948.00	459.66	12993.00	464.01	13353.00	480.08	a, b, c
Missing Income	19.73	1.20	19.73	1.21	19.70	1.27	
Homeowner	11.15	0.96	11.24	0.96	12.34	1.06	
Biological children	15.70	1.04	15.93	1.06	17.20	1.15	
Step/foster/adoptive children	-	-	1.23	0.17	1.42	0.19	с

\*For the purposes of determining the mean, all missing values were omitted.

Key: 'a' indicates a significant difference in descriptive statistics between Chapters 4 and 5. 'b' indicates a significant difference in descriptive statistics between Chapters 4 and 6. 'c' indicates a significant difference in descriptive statistics between Chapters 5 and 6.

Table 2. Des	cription o	f Relationshi	n Satisfaction	Index
1 able 2. Des	cription o	I Kelationsin	p Sausiacuon	much

Preface: How much do you agree or disagree with the following statemen	ts?	-	0
	Mean	SE	If deleted
1. We (enjoy/enjoyed) doing even ordinary, day-to-day things together	4.33	0.02	0.87
2. I (am/was) satisfied with the way we handle our problems and	3.84	0.02	0.86
disagreements			
3. I (am/was) satisfied with the way we handle family finances	3.74	0.02	0.88
4. My partner (listens/listened) to me when I need someome to talk to	4.19	0.02	0.86
5. My partner (expresses/expressed) love and affection to me	4.32	0.02	0.86
6. I (am/was) satisfied with our sex life	4.05	0.02	0.89
7. I (trust/trusted) my partner to be faithful to me	4.24	0.02	0.87
Satisfaction Index (7-35)	28.72	0.10	
Cronbach's $\alpha = 0.89$			

All items are graded on a five-point Likert scale, where 5=strongly agree and 1=strongly disagree

# **Chapter 4: Enduring Stigma? Obesity Histories and Romantic Relationship Involvement**

Race/ethnicity, gender, and obesity manifest in different relationship experiences and family formation opportunities, both on their own and together. Though much of the literature on obesity and romantic relationships is not discussed in demographic reports on family formation patterns, the two are likely intertwined. Further leaving an incomplete picture, whereas the fraction of young people who have been involved in cohabitation relationships has increased considerably in the last fifty years, marriages remain the main focus of researchers interested in romantic relationships. In this chapter I seek to bring these ideas together to empirically assess how race/ethnicity, gender, and histories of obesity manifest in varying relationship opportunities for young adults.

## **Intersectional Approaches Toward Romantic Relationships in Early Life**

Theoretical and empirical studies support that an intersectional lens is necessary to understanding patterns in young people's romantic relationship formation and experiences within these relationships (England and Ronen 2013; Syed and Mitchell 2013). Indeed, and in line with life course theory (Elder 1998), historical events, cultural ideals, and social experiences come to shape young people's pathways into (and out of) romantic relationships, as well as the qualities of the relationships herein. Hill Collins (2000), for one, devotes a chapter of *Black Feminist Thought* to examining the complexity of heterosexual and lesbian Black women's romantic relationships vis-à-vis Black men, White men, White women, and Black women. The complexity and difficulties of achieving romantic relationships with "a good Black man" is key, in light of "good Black men" becoming involved with White women, White women's lack of awareness of their own privilege in romantic markets, White men's rejection of Black women, and the perceived threat of Black lesbian relationships, culminating in limited opportunities for some Black women to engage in quality and satisfying romantic relationships. (Hill Collins 2000:161).

Racial/ethnic differences in the role of friendships on opportunities for romantic relationship formation have been found in studies of adolescent girls. For example, White girls with more friends were more likely to have sex for the first time over the course of one year, while friendships were not salient in shaping Black girls' or Latinas' sexual debut (Cavanagh 2004). In light of the findings, Cavanagh (2004:306) argued that "the underlying reasons for these race and ethnic differences may involve differing social meanings attached to puberty, friendships, gender, sexuality, and adolescence" for girls of different racial/ethnic backgrounds. Other studies using qualitative methods have sought to extrapolate some of the complexity in understanding romantic relationships across gender and racial/ethnic lines by specifically considering how gender and racial/ethnic identities become negotiated against cultural and social scripts for romantic and sexual behavior (e.g., Faulkner 2003; Wilkins 2012). With this in mind, employing an explicitly intersectional lens is particularly important in studies using quantitative methods to avoid, as best as possible, essentializing patterns and to build reasonable comparisons between groups.

#### **Romantic Relationships and Family Formation in the U.S.**

Significant changes in romantic relationship and family formation patterns have emerged in the last several decades in the U.S. Young people in the 2010s are marrying at older ages than the young adults of previous generations (U.S. Census Bureau 2013). Indeed, the median age at first marriage in the U.S. was 28.7 for men and 26.5 for women in 2011, compared to only 22.8 and 20.3 years among men and women (respectively) in 1960 (U.S. Census Bureau 2013).

Among young adults, it was estimated that 6.1% of men and 10.6% of women aged 18 to 24 were married, while 40.3% and 48.4% of men and women aged between 25 to 34 years were in 2012 (Vespa, Lewis, and Kreider 2013). Although early adulthood is a major period for relationship and family formation, overwhelming evidence indicates that young people are entering marriages at older ages than in decades passed, whether through agentic decision-making or constraints limiting opportunities to have such relationships in the years following high school.

One recent study concludes that delays in marriage will culminate in lower divorce rates in the coming years as young people are "more selective about their partners" than in prior decades when people married at younger ages (Kennedy and Ruggles 2014:596). Part of this selectivity is due to the prevalence of cohabitation relationships among young people. Instead of marrying and divorcing, many young people cohabit for a period, and either eventually marry (with the possibility for divorce) or break up prior to marriage (Kennedy and Ruggles 2014). In this context, cohabitation relationships are defined as romantic relationships where partners share a home but are not legally married to one another. Cohabiting partners may have some legal ties to one another, such as shared leases, children, mutual debts (e.g., car loans), or be registered as legal domestic partners. Importantly, except where marriage is legally prohibited (as in the case of same-sex marriages in many states), cohabitation does not preclude eventual involvement in marriages with either the cohabitation partner or another person at a later point.

Only in the last several decades have cohabitation relationships become normative experiences for young adults. Historical data from the *National Survey of Families and Households* (NSFH) suggest that of married individuals, 11% of adults who were married between 1965 and 1974 reported experiencing a cohabitation relationship; between 1975 and

1979, the fraction of married individuals who had ever cohabitated increased to nearly one-third (Bumpass and Sweet 1989). Between 1980 and 1984, over forty percent of married individuals had ever cohabited (Bumpass and Sweet 1989).

According to the *National Survey of Family Growth* (NSFG), over one-half of women between 2006 and 2010 reported ever being involved in a cohabitation relationship (Kennedy and Bumpass 2012). Among young women aged 25 - 34, two-thirds had ever been involved in a cohabitation relationship (Kennedy and Bumpass 2012). With this in mind, studies focusing on young people's family formation patterns which do not take cohabitation relationships under consideration omit information necessary to understanding the breadth of young people's romantic relationship pathways and family formation patterns. Moreover, it is also effectively reinforces heteronormative assumptions about romantic relationships by systematically excluding committed relationships involving same-sex partners.

The timing of marital and cohabitation relationships are considerably variable by race/ethnicity and gender. Blacks, on average, experience their first marriages and cohabitations at older ages than Whites and Latinas/os, and women tend to marry and cohabit at younger ages than men (Manning et al. 2014). In line with findings discussing the ubiquity of cohabitation relationships, between 71% and 87% of women and men in each racial/ethnic group's first union was a cohabitation, rather than marital, relationship (Manning et al. 2014). Manning and colleagues' (2014) study suggests that young men and racial/ethnic minorities marry and cohabit when they are significantly older than young women and Whites. Because racial/ethnic minorities and men tend to marry and cohabit at older ages than Whites and women, it seems probable that young men and racial/ethnic minorities would be less likely than women and Whites to be involved in either type of relationship in early adulthood.

#### **Explaining Shifts in Family Formation and Romantic Relationships in Young Adulthood**

Demographers and sociologists have explained recent changes and delays in family formation among young adults by focusing on shifts in the employment sector and the near requisite for tertiary schooling in order to be competitive in today's economy (Furstenberg 2010). In the post-World War II years, manufacturing jobs were central to the U.S. economy. Traditionally, these jobs did not require extensive education, but still afforded solidly middleclass incomes and lifestyles. In the 1970s and 1980s, however, Wilson (1980, 1987) and others (e.g., Reich, Gordon, and Edwards 1973) began to observe changes to the U.S. economy, as it began moving away from manufacturing toward a service and information-based economy (e.g., Symonds, Schwartz, and Ferguson 2011). The service sector, which replaced many manufacturing jobs, does not require significant schooling beyond high school (similar to manufacturing jobs in that respect), but unlike positions in the manufacturing sector, jobs in the service sector are low paid, offer few benefits, and have little job security (e.g., Autor and Dorn 2013). The information-based economy pays quite well; however, it tends to require additional training and education beyond a high school diploma. Lower-income individuals and racial/ethnic minorities who complete college experience greater gains in wages than individuals from advantaged backgrounds who complete college (Brand and Xie 2010), however, achieving college-level education can be particularly onerous for lower-income individuals and racial/ethnic minorities.

The massive shift whereby greater shares of young people attempt and complete high school and college than in earlier generations (Chapman et al. 2012; Symonds et al. 2011) has culminated in divergent family formation pathways (Furstenberg 2010). In 2013, over 60% of high school graduates had enrolled in college (Bureau of Labor Statistics 2014). However, there

is considerable attrition among college students as many leave college prior to completing their degrees, for a number of reasons. For instance, some students have difficulty negotiating work demands with school demands, and as a result, drop out of college to make ends meet (e.g., Mortimer et al. 2002). In fact, in 2006, only 56% of U.S. college students graduated with a bachelor's degree within six years (Symonds et al. 2011). In spite of this high rates of attrition, a recent report from Pew suggests that more young people than ever complete at least a bachelor's degree (Fry and Parker 2012). In 2012, 33% of all U.S. young adults aged 25 to 29 years of age had completed a bachelor's degree, compared to only 17% of 25 to 29 year olds in 1971 (Fry and Parker 2012).

It appears that young people's romantic relationship and family formation pathways are considerably shaped by whether one pursues additional education beyond high school. A study using latent class analysis with data from Wave III of Add Health identified seven family formation pathways for young women aged 18 to 23 years between 2002 and 2003 (Amato et al. 2008). Four of these pathways involved either union formation and/or childbearing. Of these young women, 15% were involved in cohabitation relationships without children, 14% were married mothers, 10% were single mothers, and eight percent were cohabiting mothers (Amato et al. 2008). The other half of women had not begun forming their own families. Indeed, these patterns suggest that young women negotiate two key components in early adulthood: those relating to family formation and those associated with increasing one's educational attainment.

Importantly, Amato and colleagues' (2008) research suggests little overlap between those who formed families and those who went on to further their education. Their research suggests both extrinsic constraints to furthering one's education if one has children or enters cohabitation/marital relationships, and the potential for selection out of either family formation

or furthering one's education in this group. While their contribution is both informative and important, they examined the youngest respondents of the Wave III sample in Add Health by removing those over the age of 24 from their sample. Some of the women aged 18 to 23 may not have begun forming families for reasons other than produced by furthering one's education. Moreover, Amato and colleagues' (2008) study did not examine men, which is a curious pattern found in much of the demographic research on family formation in young adulthood.

The shift from family formation patterns in the mid-twentieth century whereby young people may or may not have completed high school and often were married soon after their high school years, toward a system where young people attempt to achieve higher education and enter into cohabitation relationships and marry at later ages, is central. This more diverse landscape for family formation ought to be clearly considered in research examining family formation patterns. Disproportionately, however, it still seems that marriage is the relationship of interest, even though sociologists and demographers are aware of the prevalence of cohabitation. The trend of focusing solely on marriage understates the complexity of young adults' romantic relationship and family formation experiences. Moreover, much of the research only focuses on women and girls' behaviors, and reduces racial/ethnic differences to mere variables depicting demographic trends rather than meaningful discussions of how race/ethnicity and gender work *together* to produce differential relationship formation and family formation pathways.

## **Obesity and Romantic Relationship Formation**

Body size is another important factor that can shape romantic relationship and family formation experiences in adolescence and early adulthood. Indeed, obese and non-obese individuals have differing romantic relationship experiences and family formation patterns, which tend to manifest in delayed romantic relationship formation among obese young people.

This is particularly interesting, because prior research suggests that for girls, overweight is associated with earlier menarche (e.g., Biro, Khoury, and Morrison 2006), and early puberty is associated with higher likelihoods of engaging in oral, vaginal, and anal intercourse before the age of 18 (Halpern and Haydon 2012). However, obese adolescents are disproportionately represented among those who have never dated (Cawley et al. 2006; Pearce, Boergers, and Prinstein 2002). Others have found that obese adolescents first engaged in vaginal intercourse when they were significantly older than their lower-weight peers (Cheng and Landale 2011). Primarily though, the constrained opportunities observed by Cheng and Landale (2011) occurred for girls and Whites, but not for boys, Black youth, or Latina/o youth, suggesting, again, that an intersectional lens is necessary when studying young people's romantic relationships. Similarly, Ali and colleagues (2014) found that while obese White adolescent girls were less likely than non-obese adolescent White girls to have been in a relationship or had sex, obesity among Black adolescent girls was not associated with romantic relationships or sexual behaviors. It is thought that delays in romantic relationship formation and sexual intimacy are not the result of obese individuals selecting out of romantic relationships or sexual intimacy, but rather, the effects of obesity stigma manifesting in limited opportunities for romantic relationships and sexual intimacy among young people, which disproportionately seem to affect girls and Whites. The evidence on the effects of obesity on romantic relationships during adolescence suggests that obesity can effectively deter, or at least delay, the occurrence of romantic and/or sexual relationships.

The constraints obese adolescents face in romantic relationship formation appear to hold as adolescents age into adulthood as well. Indeed, obesity in adulthood is associated with lower likelihoods of involvement in sexual and romantic relationships (e.g., Averett, Sikora, and Argys

2008; Kark and Karnehed 2012). Many of the studies on obesity and romantic relationships have specifically addressed how obesity influences probabilities of involvement in marriages, rather than other types of romantic relationship formation. For instance, Swedish men who were obese at 18 years of age were significantly less likely than normal weight men to be married at the age of 40 (Kark and Karnehed 2012). Another study using data from the NLSY97 suggests that obese women's opportunities to enter marriages and cohabitation relationships are constrained, while obese men only seem limited in their opportunities to engage in cohabitation relationships (Mukhopadhyay 2008). However, the mean age of respondents in Mukhopadhyay's (2008) study were only 19 years old, suggesting that the conclusions from this research may be premature to understanding population level marital and cohabitation patterns. The negative association between body size and romantic relationship formation tends to be attributed to the pervasive social stigma of obesity (e.g., Carr and Friedman 2006; Puhl and Heuer 2009), though some have argued for more individualist understandings, such as women valuing marital relationships more than men (Mukhopadhyay 2008).

Some studies on obesity and romantic relationship formation have moved beyond examining the relationship between obesity and marriages, to focus on other types of romantic relationships as well. Carr and colleagues' (2013) study using population-based data suggests that severely obese men (grade II obesity and and grade III obesity, that is, BMI in excess of 35.0) have sex less frequently and are less satisfied with their sex lives than normal weight men. Little is known about how race/ethnicity and obesity together shape romantic relationships, let alone population patterns among women. Although Carr and colleagues (2013) reported that statistically significant interactions between race/ethnicity and obesity were not found, they also suggest that this may be the result of small sample sizes, rather than the absence of interactions.

Obese women who participated in Williams and Merten's (2013) focus groups detailed their experiences in romantic relationships by explaining how their own perceptions of their bodies, as well as their partners' perceptions of their bodies, limited opportunities for them to engage in sexual intimacy with their partners. The women in their study reported dissatisfaction with their romantic relationships and some indicated they actively avoid intimacy altogether, especially when their partners' bodies were perceived as smaller than their own (Williams and Merten 2013). As a whole, this study suggests that romantic relationship formation and maintenance may be particularly onerous for women experiencing obesity.

A number of studies have also examined how changes in body size over time influenced romantic relationships. Researchers examining changes in body size argue that body size during the transition to adulthood shapes how obesity later in life comes to influence romantic relationships (Carr and Friedman 2006; Carr et al. 2013; Kark and Karnehed 2012). Specifically, it seems that it may be the movement in and out of obesity that is associated with poorer quality interpersonal relationships, rather than body weight at one point in time. Few studies have posed how gender and race/ethnicity work alongside obesity to shape different relationship formation pathways, but those that have indicate that the effects of obesity on relationship formation are not uniform across groups. Research addressing the timing and endurance of obesity is critical to the literature on obesity and interpersonal relationships, as studies such as the aforementioned demonstrate some of the complexity of how physical bodies shape interpersonal relationships. Even so, questions remain on the ways that changes in body weight from adolescence to early adulthood, gender, and race/ethnicity might be associated with romantic relationship formation among young adults.

## **Current Study**

Previous research demonstrates the importance of examining non-marital romantic relationships in sociological and demographic research. Romantic partnerships ought to be conceptualized and operationalized beyond understandings of whether one is married or has a history of marriage. Furthermore, some of the previous sociological research which focuses on the family formation patterns of young adults under the age of 25 (e.g., Amato et al. 2008; Mukhopadhyay 2008) may have been conducted too soon to adequately examine young people's family formation patterns. An intersectional approach to inequalities in romantic relationships is needed, as constraints faced by obese individuals, women, and racial/ethnic minorities in forming sustaining relationships may also occur with regard to cohabitation and dating relationships, rather than only marital relationships.

The current study extends prior research on histories of obesity, gender, race/ethnicity and romantic relationship formation in several ways. First, given that the average age at first cohabitation occurs between the early to mid-twenties and median age of first marriage occurs during the mid-to-late twenties (Manning et al. 2014), this study specifically explores romantic relationship patterns (including marriages, cohabitations, and dating relationships) among young people in their mid-to-late twenties through early thirties. Second, because a wide body of research finds that obesity tends to be associated with social exclusion (Ali et al. 2012; Crosnoe et al. 2008; Cunningham et al. 2012) and difficulties achieving romantic or sexual relationships (Ali et al. 2014; Carr and Friedman 2006; Carr et al. 2013; Cheng and Landale 2011; Pearce et al. 2002), this chapter examines potential limitations in opportunities for individuals with histories of obesity to enter specific types of romantic relationships. It is likely that women and Whites with histories of obesity have constrained opportunities for all types of romantic

relationships, but these limitations might not similarly affect men and racial/ethnic minorities. Two typologies of romantic relationships are considered in this chapter: romantic partnership status (i.e., whether one has a romantic partner) and romantic relationship type (i.e., the kind of romantic relationship one is involved in, such as marriages, cohabitations, dating relationships, or no relationship).

With respect to the conceptual models detailed in Chapter 2, I suspect that racial/ethnic minority men and White men will be more likely than racial/ethnic minority women and White women to have romantic partners and to be involved in marital and cohabitation relationships. This mirrors the pattern depicted in Figure 3, rather than the one posed in Figure 4, which suggested that racial/ethnic minority women and men would report better relationship outcomes than White women and men. This expectation is consistent with prior literature, which suggests that obesity stigma in romantic relationships is less problematic for racial/ethnic minorities than for Whites (e.g., Cheng and Landale 2011). This does not mean that I am arguing that men and racial/ethnic minorities will not experience some constraints in terms of relationship formation. Indeed, men and racial/ethnic minorities tend to enter cohabitation and marital relationships when they are older than women and Whites (Manning et al. 2014). However, the evidence overall does not seem to suggest that obesity histories will further limit their opportunities to enter such relationships. In line with prior literature suggesting that weight stability, whether non-obese or chronically obese, is associated with better relationship outcomes than outcomes for individuals whose weight has fluctuated (Carr and Jaffe 2012; Latner et al. 2012), I suspect a pattern similar to either Obesity Stability (1) or Obesity Stability (2), as portrayed in Figure 5, will emerge.

# Research Questions

The main question addressed in this chapter is, how do the intersections of race/ethnicity, gender, and histories of obesity in adolescence and the transition to adulthood relate to romantic relationship involvement in one's late twenties to early thirties? Two specific questions are directly addressed herein. First, how are intersections of race/ethnicity, gender and obesity histories related to romantic partnership statuses during the mid-to-late twenties and early thirties? Second, how does type of relationship involvement vary by the intersections of race/ethnicity, gender, and obesity history? The analyses conducted in this chapter test three main hypotheses:

# Hypotheses 1

Chronically obese young adults, that is, young adults who were obese in both adolescence and young adulthood, will be less likely to:

- H1<sub>a</sub>: have a romantic partner than those with no history of obesity.
- H1<sub>b</sub>: be married than those with no history of obesity.
- H1<sub>c</sub>: to be cohabiting than those with no history of obesity.
- $H1_d$ : to be dating than those with no history of obesity.

# Hypothesis 2

Recently obese young adults, meaning, young adults who were not obese in adolescence but became obese in early adulthood, will be less likely to:

- $H2_a$ : have a romantic partner than those with no history of obesity.
- H2<sub>b</sub>: be married than those with no history of obesity.
- H2<sub>c</sub>: be cohabiting than those with no history of obesity.
- $H2_d$ : be dating than those with no history of obesity.

# Hypothesis 3

Formerly obese young adults, representing those who were obese in adolescence but were no longer obese in early adulthood, will be less likely to:

- H3<sub>a</sub>: have a romantic partner than those with no history of obesity.
- $H3_b$ : be married than those with no history of obesity.
- $H3_c$ : be cohabiting than those with no history of obesity.
- $H3_d$ : be dating than those with no history of obesity.

#### **Data, Measures, and Methods**

As described in further detail in Chapter 3, data from Waves I, III, and IV of Add Health were used. After listwise deletion, the final sample was n = 9,588. All analyses were weighted using Wave IV cross-sectional weights, stratified by region of school attended in Wave I, and clustered by the schools attended at Wave I (Chantala and Tabor 2010). To keep this discussion brief and focused on the main research questions, descriptions of particulars on the coding scheme used in this chapter have not been reiterated here as they are discussed in Chapter 3. *Dependent Measures* 

The dependent measures were two indicators of romantic relationship status: romantic partnership status and romantic relationship type during the late-transition to adulthood period (i.e., Wave IV of Add Health). Partnership status referred to a dichotomous measure indicating the existence of any type of current romantic relationship. During the late-transition to adulthood period, 80.91% of respondents were involved in romantic partnerships. The romantic relationship type measure parsed out the specific kinds of relationships in which individuals were involved. Potential romantic relationship types included marriages (41.36%), cohabitations (21.42%),

dating relationships (18.13%) and having no current romantic relationship (that is, the individual was 'single') (19.09%).

# Independent Measures

The primary independent measures of interest in this chapter were history of obesity during adolescence (Wave I) and early adulthood (Wave III), gender, and racial/ethnic identity. When evaluating obesity both in adolescence and early adulthood, four specific obesity tracks were identified, as described in Chapter 3. More than three-quarters of the sample had no history of obesity (77.88%). The most common type of obesity history included those who were first obese during the transition to adulthood (13.73%). About six percent of the sample was chronically obese. The rarest obesity history was former obesity (2.34%). Women comprised just over one-half of the final weighted sample (50.19%). With regard to racial/ethnic identity, 68.41% of respondents were White, 13.83% were Black, 6.32% were Mexican Americans, 4.05% were Other Latinas/os, and 7.38% of respondents were Other Racial/Ethnic minorities. *Control Variables* 

For complete discussions and dissemination of the control measures utilized in this chapter, please see Chapter 3 and the first section of Table 1. The multivariate tests presented in this chapter control for individual context measures taken at Wave III, including age, selfreported health, and school urbanicity; transitions to adulthood including employment status, educational attainment, and school enrollment; and household context, including whether individuals lived with their parents, income, homeownership status, and whether respondents had biological children living in the home.

# Analytic Techniques

First, descriptive statistics of the sample are presented, with a special focus on the ways in which the population differs in terms of gender and race/ethnicity (see Table 3 and Table 4). Additionally, bivariate tests using survey-adjusted ANOVAs examining differences between genders and racial/ethnic groups' obesity histories, romantic relationship patterns, and background characteristics were conducted. Second, cross-tabulations with survey-adjusted Pearson  $\chi^2$  tests detailed patterns in romantic relationship statuses and histories of obesity among the complete sample and within gender categories and racial/ethnic identities (Table 5).

Third, a series of binary logistic regressions were conducted to examine multivariate relationships between histories of obesity and romantic partnership status (Table 6). Similar to the described presentation of the cross-tabulations, these tests were repeated to examine differences within genders (Table 7) and racial/ethnic groups (Table 8) in order to examine how histories of obesity influence women, men, and racial/ethnic groups' romantic partnership statuses in differential manners. Because of the presence of significant three-way interactions in Table 6, it was also necessary to include analyses of Mexican American women and men's romantic partnership statuses, as presented in Table 9. The results presented in Table 6 through Table 9 address H1<sub>a</sub>, H2<sub>a</sub>, and H3<sub>a</sub>.

Fourth, a series of multinomial logistic regressions were employed to examine how pathways into specific types of romantic relationships vary by gender, race/ethnicity, and histories of obesity (Table 10). Finally, two- and three-way interaction terms between histories of obesity, gender, and race/ethnicity in the multinomial logistic regression model were presented (Table 11). Tests presented in Table 10 and Table 11 address the following hypotheses: H1<sub>b</sub>, H1<sub>c</sub>,

 $H1_{d}$ ,  $H2_{b}$ ,  $H2_{c}$ ,  $H2_{d}$ ,  $H3_{b}$ ,  $H3_{c}$ , and  $H3_{d}$ . In both multinomial regression tables, being single serves as the reference category.<sup>8</sup>

#### Results

# Descriptive Statistics by Race/Ethnicity and Gender

In addition to weighted descriptive statistics presented in Table 1, weighted descriptives grouping the sample by gender and race/ethnicity have been presented in Tables 3 through 4, including tests for differences between groups. In Table 3, the analytic sample was divided by gender. While the prevalence of ever experiencing obesity between women (22.55%) and men (21.68%) was quite similar, the patterns of obesity history varied significantly between formerly and recently obese women and men. For instance, 3.28% of men were formerly obese compared to only 1.40% of women ( $p \le .001$ ). A significantly greater share of women was considered recently obese (15.60%) than men (11.84%) ( $p \le .001$ ). Statistically significant differences in chronic obesity or non-obesity were not found between women and men.

Similar differences in women and men's relationship statuses were also observed. With regard to partnership status, 83.49% of women were involved in a romantic partnership while only 78.31% of men were ( $p \le .001$ ). With the exception of dating relationships, there were significant differences in the types of romantic relationships in which women and men were involved. For example, a greater share of women were involved in marriages (45.41%) compared to men (37.28%,  $p \le .001$ ). On the other hand, however, men were significantly overrepresented in dating relationships (19.54%) compared to women (16.73%;  $p \le .05$ ). The sample breakdowns were consistent with those from prior research, which suggested that women enter marital and

<sup>&</sup>lt;sup>8</sup> Analyses using each relationship type as reference groups were conducted and are available upon request. The findings in these were consistent with those presented in the dissertation and have not been presented to improve clarity.

cohabitation and dating relationships when they are significantly younger than men (Manning et al. 2014). For a further breakdown of the gender differences in sample statistics, see Table 3.

Table 4 displays weighted descriptive statistics grouped by racial/ethnic categories. Notably, within each racial/ethnic group, most respondents with any history of obesity fell into the recently obese category, then chronic obese and finally former obese categories. However, the share of the racial/ethnic group experiencing any history of obesity varied considerably. For example, while 20.25% of White respondents had any history of obesity, more than one-quarter of Blacks (28.95%) and Mexican Americans (28.20%) did. About one-in-four Other Latinas/os reported any history of obesity (23.25%). Significantly fewer Whites (5.11%) were chronically obese compared to both Blacks (9.33%;  $p \le .05$ ) and Other Latinas/os (8.84%;  $p \le .05$ ). A significantly greater share of Black respondents was formerly obese (3.85%) compared to Whites (1.93%;  $p \le .05$ ). There were no other significant differences in obesity history between racial/ethnic groups.

Romantic relationship statuses also varied considerably by race/ethnicity. Other Latinas/os were most likely to have a current romantic partner (83.48%), while Black respondents were least represented of all racial/ethnic groups as currently involved in romantic partnerships (75.22%). About four-fifths of Whites (82.34%), Mexican Americans (79.95%) and Other Latinas/os (83.48%) were involved in a romantic partnership. Significantly more Whites were involved in romantic partnerships compared to Blacks ( $p \le .05$ ). Similarly, Other Latinas/os were significantly overrepresented among those with romantic partners compared to Blacks ( $p \le .05$ ). No other significant differences in romantic relationship statuses by race/ethnicity were found.

Involvement in specific relationship types varied by race/ethnicity. A significantly greater proportion of Whites (45.91%) was involved in marriages compared to Other Latinas/os (33.19%,  $p \le .05$ ). Blacks (23.49%) were involved in marital relationships less frequently than Whites ( $p \le .05$ ), Mexican Americans (44.13 %,  $p \le .05$ ) and Other Latinas/os ( $p \le .05$ ). Mexican Americans were significantly more likely than Other Latinas/os to be married ( $p \le .05$ ). With regard to cohabitation relationships, the only significant differences in cohabitation relationship involvement were found between Mexican Americans and Blacks, and Mexican Americans and Whites. Significantly fewer Mexican Americans (15.82%) were involved in cohabitation relationships compared to Whites (20.83%,  $p \le .05$ ) and Blacks (24.12%,  $p \le .05$ ). A significantly greater share of Black respondents (27.61%) were involved in dating relationships, compared to Whites (15.60%,  $p \le .05$ ) and Other Latinas/os (23.13%,  $p \le .05$ ). For a description of the control measures and differences by race/ethnicity, see Table 4.

In this section, weighted cross-tabulations and survey-adjusted Pearson  $\chi^2$  tests were used to identify differences in romantic relationship statuses and obesity. Results presented in Table 5 examine bivariate relationships between histories of obesity and romantic relationship statuses. The analyses presented describe the percentage of individuals, by their history of obesity, involved in each type of romantic relationship. The first section of the table describes the portion of the sample that was not involved in a romantic relationship. The second set considers all of those involved in a romantic relationship of any type. The following three sections report on the specific types of relationships participants were involved in: marriages, cohabitation relationships, and dating relationships. Notations of significant differences in romantic partnership status have been placed within the "All Partnered" section of Table 5. With regard to

romantic relationship type, significant differences are flagged alongside the "Married" section and have not been replicated elsewhere in the table to avoid redundancy.

Preliminary evidence suggested that chronically obese respondents were significantly less likely than non-obese respondents to have a romantic partner. For example, 81.62% of non-obese individuals had a romantic partner, while only 75.71% of chronically obese respondents did ( $p \le$  .05). There were no significant differences in partnership statuses with regard to recently obese or formerly obese individuals and chronically obese and non-obese, however. No significant differences were found in partnership status and obesity histories among women or men. Similarly, among Whites, Blacks and Mexican Americans, there were no significant differences in romantic partnership status by obesity history, either. Among Other Latinas/os, a significantly greater share of individuals with recent histories of obesity were involved in any type of partnership (90.74%), compared to those with no history of obesity (71.08%,  $p \le .05$ ).

Similar to the pattern found with regard to romantic partnership status, the type of romantic relationship individuals were involved in significantly varied by obesity history. In particular, chronically obese and non-obese respondents were disproportionately under- and overrepresented, respectively, in some romantic relationship types. Among non-obese respondents for example, 41.51% were married, 21.74% were cohabiting, 18.38% were single, and 18.37% were involved in dating relationships. In contrast, among chronically obese respondents, 37.35% were married, 24.29% were single, 20.14% were dating, and 18.21% were cohabiting. This pattern suggests that the types of relationships chronically obese respondents are able to enter may be constrained. There
were no other significant differences in the types of relationships individuals were involved in by their history of obesity.

Variations emerged in the types of relationships individuals were involved in depending on gender and history of obesity, as well. For women, it appears that chronic obesity, compared to having no history of obesity, may be a barrier to becoming involved in specific types of relationships, as the type of romantic relationship involvement significantly differed between non-obese and chronically obese women ( $p \le .05$ ). As evidenced, 46.09% of non-obese women were married, 21.73% were cohabiting, 16.76% were dating, and 15.41% were single. Among chronically obese women, however, only 39.68% were married, 22.78% were single, 19.34% were cohabiting and 18.19% were dating. Histories of obesity were not salient predictors of the types of relationships in which men were involved.

For Black and Mexican American respondents, histories of obesity were not associated with differences in the types of relationships in which individuals became involved. Among Whites and Other Latinas/os, they were. Chronically obese Whites, for example, experienced barriers compared to non-obese Whites, in entering specific types of romantic relationships ( $p \le$ .05). Forty-six percent of non-obese Whites were married, while 21.21% were cohabiting, 19.98% were dating, and 16.75% were single. Among chronically obese Whites, however, 41.78% were married, 23.68% were single, 18.96% were dating and 15.52% were cohabiting. Indeed, while chronically obese and non-obese Whites were most commonly represented in marriages, non-obese Whites who were not married tended to be involved in either cohabitation or dating relationships instead. On the other hand, chronically obese Whites who were not married were overrepresented among those not involved in any relationship, followed by dating relationships.

For Other Latinas/os, the ways in which histories of obesity were associated with type of relationship involvement were more complex. That is, histories of obesity were not entirely prohibitive for relationship involvement, and specific histories appeared to be associated with involvement in higher-level relationships. For example, almost half of recently obese Other Latinas/os were married (42.62%), about a third were cohabiting (33.02%), 15% were dating and nine percent were not involved in a relationship. Marriage and cohabitation was less common among chronically obese Other Latinas/os in favor of being single (28.92%). Together marriage and cohabitation accounted for almost half of respondents in this group (26% and 21% respectively), with the rest (24%) in dating relationships.

#### Partnership Status and Histories of Obesity

The first hypotheses addressed in this chapter posited that chronically obese (H1<sub>a</sub>), recently obese (H2<sub>a</sub>), and formerly obese young adults (H3<sub>a</sub>) would be less likely than young adults with no history of obesity to have a romantic partner. To examine the role of obesity histories on romantic partnership statuses, a series of binary logistic regression tests were conducted (Table 6). The first model reports the influence of obesity history on romantic partnership status without controls. Against expectations, only chronic obesity was significantly associated with partnership status. Respondents considered chronically obese were 30% less likely to have a romantic partner than those with no history of obesity (OR = 0.70,  $p \le .05$ ). Once individual context measures were accounted for (Model 2) the relationship between chronic obesity and partnership statuses was only marginally significant (OR = 0.76,  $p \le .10$ ), which held with the inclusion of the transition to adulthood controls (Model 3) and household context controls (Model 4). Findings presented in Models 5 through 7 included interactions between histories of obesity, gender, and race/ethnicity, in order to examine whether the relationship between histories of obesity and partnership status was contingent upon race/ethnicity and/or gender (see Table 27 for additional information). In Model 5, interactions between histories of obesity and gender were introduced, though none proved statistically significant. In Model 6, interactions between histories of obesity and race/ethnicity were assessed.<sup>9</sup> A significant interaction between recent obesity and identifying as Black emerged ( $OR = 2.13, p \le .001$ ), suggesting an interesting paradox linking obesity and race/ethnicity. Specifically, although recently obese Black respondents were less likely than non-obese Whites to have a romantic partner, they were more likely to have romantic partners than Blacks with no history of obesity and chronically obese Whites. Later in the chapter, these findings will be interrogated further with additional models.

Three-way interaction terms were considered in Model 7 to determine whether the effects of obesity histories on partnership status were contingent upon race/ethnicity and gender. Once all two-way interactions and three-way interactions were included in the model, a significant two-way interaction emerged between gender and recent obesity (OR = 0.55,  $p \le .05$ ), which suggested that recently obese women were less likely than non-obese men to have romantic partners. The interaction also suggested that recent obesity among men was not associated with partnership status. It seems then, that women with recent histories of obesity faced barriers in entering romantic partnerships not experienced by non-obese women or men. Another notable significant two-way interaction emerged between chronic obesity and identifying as Other

<sup>&</sup>lt;sup>9</sup> In this chapter and all those that follow, no interaction terms were included for Other Racial/Ethnic minorities. There were two reasons I chose not to include interaction terms between histories of obesity, gender, and Other Racial/Ethnic minorities throughout. First, and as described earlier, the Other Racial/Ethnic minority category is heterogeneous and meaningful interpretations for this group are not feasible. Second, the decision not to include interaction terms for histories of obesity and Other Racial/Ethnic minorities also preserves three additional degrees of freedom, and given that the final models include many variables, it became necessary to avoid including extraneous measures.

Latina/o (OR = 0.35,  $p \le .05$ ), suggesting that individuals who identified as Other Latina/o and experienced chronic obesity were less likely than non-obese Whites and non-obese Other Latinas/os to have romantic partners. Further analyses examine the differing role of histories of obesity on partnership status by gender (see Table 7) and race/ethnicity (see Table 8).

Significant three-way interactions between obesity histories, race/ethnicity, and gender were particularly telling and suggest that these three characteristics work together to shape young people's partnership experiences in complex ways. The three-way interaction between identifying as Mexican American, gender, and having a recent history of obesity (OR = 57.55,  $p \le .001$ ) indicated that the effects of recent obesity on partnership status were contingent upon both race/ethnicity and gender for Mexican Americans.<sup>10</sup> As such, recently obese Mexican American women appeared to be significantly more likely than non-obese White men were to have romantic partners. To further parse out the meaning of the significant three-way interaction, additional analyses have been conducted examining Mexican American women and men separately (see Table 9).

First though, multivariate tests were conducted when splitting the sample by gender (see Table 7; Table 28 includes additional supporting information). As presented in Model 1, chronically obese women were 38% less likely than non-obese women to have a romantic partner ( $OR = 0.62, p \le .05$ ). However, once controls were introduced in Model 2, chronic obesity (OR = 0.71, p > .10) was not associated with women's partnership statuses. Former obesity and recent obesity were not significantly associated with women's partnership statuses in either model. Likewise, histories of obesity were not significantly associated with men's partnership statuses.

<sup>&</sup>lt;sup>10</sup> Inferences based on this three-way interaction may be unreliable due to small bin sizes.

Among both women and men, the effects of obesity histories on partnership status were contingent upon racial/ethnic identity. Black women who were chronically obese ( $OR = 2.22, p \le .05$ ) and recently obese ( $OR = 2.59, p \le .01$ ) faced barriers in terms of forming romantic partnerships compared to non-obese White women, but they were not as strong as those faced by non-obese Black women or chronically obese White women. Recently obese Mexican American women, however, were significantly more likely than non-obese White women to have romantic partners ( $OR = 15.51, p \le .001$ ). For women, race/ethnicity and histories of obesity work together to manifest in increased opportunities for romantic partnership formation for Mexican American women, and chronic obesity among Black women modifies some of disadvantages faced by Black women in terms of partnership formation.

For men, of the relationship between their histories of obesity and race/ethnicity were different than those found among women. Chronically obese (OR = 0.30,  $p \le .05$ ) and recently obese Mexican American men (OR = 0.26,  $p \le .01$ ) were both less likely to have a romantic partner than non-obese White men, suggesting that the effects of obesity on partnership status vary considerably by gender and racial/ethnic identity (see Model 6). Because a significant three-way interaction was found in Table 6, further analyses have been presented in Table 9 to further interrogate the role of histories of obesity, gender, and Mexican American identity on partnership status. To summarize, Black women's chronic and recent obesity histories offset some of the barriers faced by Black women in terms of partnership formation. Moreover, recently obese Mexican American women had net higher odds of having a partner than non-obese White women. However, chronically and recently obese Mexican American men had additional difficulties forming romantic partnerships formation not experienced by non-obese White men.

These findings support an intersectional framework in addressing obese individuals' romantic relationship experiences.

As Table 6 suggested significant two-way interactions between histories of obesity and race/ethnicity, additional tests were conducted to examine histories of obesity and partnership status within racial/ethnic groups (see Table 8).<sup>11</sup> Considerable variability in how obesity history mattered for romantic partnership status was observed within racial/ethnic groups prior to including controls, though many of the relationships were reduced to non-significance once controls were introduced. Among Whites (OR = 0.65,  $p \le .05$ ; see Model 1) and Other Latinas/os  $(OR = 0.46, p \le .05;$  see Model 7), chronic obesity initially appeared to be associated with lower odds of having a current romantic partner. Once controls were considered, chronic obesity among Whites was no longer significantly associated with partnership (OR = 0.76, p > .10; see Model 2). However, chronically obese Other Latinas/os were half as likely as non-obese Other Latinas/os to have a current romantic partner (OR = 0.50,  $p \le .05$ ; see Model 8). Interestingly, once controls were introduced, the relationship between recent obesity and romantic partnership among Whites became statistically significant, suggesting that recently obese Whites were less likely than non-obese Whites to have a romantic partner (OR = 0.72,  $p \le .05$ ; see Model 2). In contrast, it initially seemed that recently obese Blacks had higher odds of having a romantic partner than non-obese Blacks (OR = 1.60,  $p \le .05$ ; see Model 3), but once controls were introduced, the relationship, though still strong and positive, was reduced to marginal significance ( $OR = 1.54, p \le .10$ ). Former obesity was not related to romantic partnership formation among any of the racial/ethnic groups prior to considering controls. Overall, the

<sup>&</sup>lt;sup>11</sup> As significant three-way interactions between histories of obesity, gender, and Mexican American identity were found in Table 6, Mexican Americans have been omitted from the current discussion. Mexican Americans will be discussed while splitting respondents between Mexican American women and men, in the following pages and on Table 9.

findings from Table 8 suggested that the relationship between obesity histories and partnership status varied by race/ethnicity in important ways. In particular, among recently obese Whites and chronically obese Other Latinas/os, histories of obesity seemed to inhibit romantic partnerships. Between the racial/ethnic groups, the longitudinal effects of obesity histories vary between racial/ethnic groups and obesity timing. Enduring obesity seemed particularly detrimental for Other Latinas/os, while obesity that first occurs during early adulthood negatively affected Whites.

As significant three-way interactions were found in Table 6 regarding Mexican American women and men's obesity histories and corresponding partnership statuses, a final set of binary logistic regressions were conducted to examine Mexican American women and men alone (see Table 9). Mexican American women with recent histories of obesity were much more likely than non-obese Mexican American women to have a romantic partner, even after controls were entered into the model (OR = 11.04,  $p \le .01$ ). Among Mexican American men, however, both chronic obesity (OR = 0.25,  $p \le .05$ ) and recent obesity (OR = 0.31,  $p \le .01$ ) were associated with significantly lower odds of having a romantic partner. Thus, while recent obesity may serve as beneficial for Mexican American women in terms of partnership status, both chronic and recent obesity appeared to inhibit Mexican American men's ability to enter into romantic partnerships.

The role of obesity histories on romantic partnership status appears mostly contingent upon gender and racial/ethnic identity. The findings presented here indicate no support for the hypothesis that formerly obese individuals would be less likely than non-obese individuals to have a romantic partner ( $H3_a$ ). However, some support was found for hypotheses that chronic obesity ( $H1_a$ ) and recent obesity ( $H2_a$ ) would be associated with lower odds of having a romantic partner, but only for specific groups. For example, chronically obese Black women and recently obese Black women were both less likely to have a romantic partner than non-obese White women, even though the interactions actually softened the effects of obesity and race/ethnicity on partnership status alone. Likewise, chronically obese Other Latinas/os, chronically obese Mexican American men, and recently obese Mexican American men were less likely than nonobese White men to have romantic partners. Moreover, chronically and recently obese Mexican American men were also significantly less likely than non-obese Mexican American men to have romantic partners. Among Mexican American women with recent histories of obesity, however, a different pattern emerged. Recently obese Mexican American women were significantly more likely than both non-obese White women and non-obese Mexican American women to have romantic partners.

#### Histories of Obesity and Romantic Relationship Types

Once associations between histories of obesity and romantic partnership status were extrapolated, further analyses were conducted to ascertain whether the kinds of romantic relationships in which individuals became involved varied by histories of obesity. The multinomial logistic regression models presented in Table 10 and Table 11 test the following hypotheses. First, chronically obese respondents would be less likely than non-obese respondents to be married (H1<sub>b</sub>), involved in cohabitation relationships (H1<sub>c</sub>), and dating relationships (H1<sub>d</sub>). Second, recently obese respondents would be less likely to be involved in marital relationships (H2<sub>b</sub>), cohabitation relationships (H2<sub>c</sub>), and dating relationships (H2<sub>d</sub>). Finally, formerly obese respondents would be less likely than non-obese respondents to be married (H3<sub>b</sub>), cohabiting (H3<sub>c</sub>), or dating (H3<sub>d</sub>). Table 10 presents relative risk ratios of involvement in specific types of romantic relationships, first displaying findings without controls and then with all controls. Models 1 through 6 predict likelihoods of marriage (Models 1 - 2), cohabitation relationships (Models 3 - 4), and dating relationships compared to being single (Models 5 - 6).

Both before and after the introduction of controls, recent and former obesity were not associated with involvement in marital, cohabitation, or dating relationships. Chronic obesity was negatively associated with likelihoods of being married prior to controls being included in the model (*RRR* = 0.68,  $p \le .05$ ), but once controls were included, the influence of chronic obesity on likelihoods of being married was no longer statistically significant (*RRR* = 0.84, p >.10). Chronically obese respondents were, however, significantly less likely to be involved in cohabitation relationships as opposed to being single, both before (Model 3; *RRR* = 0.63,  $p \le .05$ ) and after (Model 4; *RRR* = 0.67,  $p \le .05$ ) controls were included in the models.

Given the prior findings on partnership status, which suggested several statistically significant interactions between race/ethnicity and obesity histories (see Table 8) on romantic partnership status, and moreover, the complex portrait demonstrated in the multinomial logistic regressions reported in Table 10, further examination of interactions between obesity histories, race/ethnicity, and gender on romantic relationship types was necessary. The two- and three-way interactions presented in Table 11 suggested the relationship between obesity histories and race/ethnicity on romantic relationships were even more complex than previously ascertained (also see Table 29). In particular, racial/ethnic identity explained variations in romantic relationship type by histories of obesity. Moreover, similar to findings presented on partnership status, significant three-way interactions between Mexican American identity, recent obesity, and gender were also found.

Some of the two-way interactions between obesity histories and race/ethnicity suggested that racial/ethnic minorities with histories of obesity were more likely than non-obese Whites to

be involved in specific types of relationships rather than being single. For example, recently obese Blacks were more likely than non-obese Whites to be married ( $RRR = 3.64, p \le .01$ ). Similarly, chronically obese Blacks were also significantly more likely than non-obese Whites to cohabitate ( $RRR = 4.59, p \le .05$ ). A divergent pattern emerged when considering the two-way interactions between gender and histories of obesity on relationship type. For example, recently obese women were significantly less likely than non-obese men to be involved in marital ( $RRR = 0.58, p \le .05$ ) and cohabitation ( $RRR = 0.53, p \le .05$ ) rather than being single. Among women, then, recent histories of obesity appear to limit potential involvement in marital and cohabitation relationships.

Table 11 shows statistically significant three-way interactions between histories of obesity, Mexican American racial/ethnic identity and gender, suggesting that how obesity affects the types of relationships in which Mexican Americans' became involved was contingent upon gender. According to this table, Mexican American men and women with recent histories of obesity experienced different likelihoods of being married, cohabiting, and dating as opposed to single. In each case, and consistent with findings already presented in Table 9, Mexican American women with recent histories of obesity were more likely to be married (*RRR* = 34.80,  $p \le .001$ ), cohabiting (*RRR* = 57.02,  $p \le .001$ ), and dating (*RRR* = 47.37,  $p \le .001$ ) as opposed to single than non-obese White men.<sup>12</sup> For Mexican American men though, recent histories of obesity inhibited their abilities to enter each of these types of relationships. A similar pattern was found with regard to chronic histories of obesity, identifying as Mexican American, and gender on likelihoods of being involved in dating relationships (*RRR* = 50.88,  $p \le .01$ ), as the disadvantages in entering dating relationships experienced by chronically obese Mexican Americans primarily affects men, while Mexican American women with chronic histories of

<sup>&</sup>lt;sup>12</sup> Inferences based on these three-way interactions may be unreliable due to small bin sizes.

obesity seem to benefit from experiencing obesity when it comes to relationship formation of all types. One critical exception to this pattern is notable, as formerly obese Mexican American women were much less likely to be involved in dating relationships rather than being single  $(RRR = 0.01, p \le .05)$ , compared to non-obese White men. However, formerly obese Mexican American American men did not face these same barriers in entering dating relationships.

### Discussion

None of the evidence presented in this chapter supported the hypothesis that chronically obese young adults would experience lower likelihoods of being involved in marital relationships (H1<sub>b</sub>). Some support was found for the hypotheses that chronic obesity would be associated with lower likelihoods of being involved in cohabitation  $(H1_c)$  and dating relationships  $(H1_d)$ , but only among Mexican American men. Stronger support was found for the hypotheses that recently obese individuals would be less likely to be involved in marital  $(H2_b)$ , cohabitation (H2<sub>c</sub>) and dating relationships (H2<sub>d</sub>). Recently obese women were less likely than non-obese men to be involved in in marital and cohabitation relationships as opposed to being single. Moreover, while recently obese Mexican American women were more likely than non-obese White men to be involved in marital, cohabitation, and dating relationships, this same pattern did not hold for recently obese Mexican American men. Only among Mexican American women were former histories of obesity associated with lower likelihoods of being involved in any type of relationship – specifically, dating relationships, suggesting support for the hypothesis that formerly obese individuals would be less likely than non-obese individuals to be involved in dating relationships (H3<sub>d</sub>). Support was not found for the hypotheses that formerly obese individuals would be less likely to enter marital (H3<sub>b</sub>) or cohabitation (H3<sub>c</sub>) relationships.

Unlike some have suggested before (e.g., Cawley et al. 2006), findings in this chapter demonstrate that histories of obesity are not consistently associated with lower likelihoods of relationship involvement. A particularly interesting turn in the findings was that Mexican Americans and Blacks with chronic histories of obesity, Mexican American women with recent histories of obesity, and formerly obese Mexican American men, were more likely than others to become involved in marital, cohabitation, and dating relationships. This finding, in particular, suggests that the influence of obesity on relationship formation is contingent upon the characteristics of the individual who experiences obesity. The idea that obesity is uniformly stigmatizing for romantic relationship formation overstates the negative influence of obesity on romantic relationships, as, in line with an intersectionality framework, it is the combination of experiencing obesity, gender, and race/ethnicity, which explains differential relationship formation patterns.

The findings presented here build upon the body of research that suggests that moving in and out of weight categories is a more salient predictor of romantic relationship experiences than static measures of weight at one point in time (e.g., Carr et al. 2013; Kark and Karnehed 2012) Importantly, this chapter elucidates that histories of obesity can moderate the ways in which race/ethnicity and gender influence romantic relationship and union formation among young adults. In particular, the difference of obesity histories for racial/ethnic minorities on romantic involvement suggests that obesity may not constrain the development of marriages and cohabitations for some groups, such as Black Americans. On the other hand, obesity histories may be especially inhibiting for other groups (including women, Whites and Mexican Americans). This is consistent with some previous findings on the effects of obesity on social integration among minority adolescents (Cunningham et al. 2012) and delays in sexual initiation

among racial/ethnic minority young adults (Ali et al. 2014; Cheng and Landale 2011), whereby obesity is not as socially problematic for racial/ethnic minorities as it can be for Whites.

As two-thirds of U.S. adults are either overweight or obese (Ogden et al. 2014), and this has been consistent over the last several years (Flegal et al. 2010, 2012; Ogden et al. 2006), social stigma stemming from obesity may be lower than in decades past because obesity and overweight have become ubiquitous. This is surprising, as a wide body of recent research either directly discusses or alludes to persistent social stigma of obesity (Carr and Friedman 2006; Carr et al. 2013; Cunningham et al. 2012; Puhl and Brownell 2006), which can extend even when individuals are no longer obese (Fee and Nusbaumer 2012; Latner et al. 2012; Levy and Pilver 2012).

The findings in this chapter suggest that the conceptual models posed in Chapter 2, which are developed from current research on this area, may be too simplistic to fully grapple with the ways in which histories of obesity are associated with differential romantic relationship involvement by gender and race/ethnicity. The idea that obese racial/ethnic minorities fair better than Whites, and men have better relational outcomes than women, is not complex enough. The pattern depicted in this chapter suggest no purely consistent patterns with regard to obesity histories, gender, and race/ethnicity, let alone rankings in terms of obesity stability and recency. Indeed, even though attempts were made to effectively address some of the complexity within the conceptual framework, the emergent pattern did not neatly fit. While this chapter cannot provide a uniform response to the question as to whether gender, race/ethnicity, or obesity is a more salient predictor of relationship formation, findings do suggest that the effects of each of these are contingent on one another.

## Conclusion

This chapter examined romantic relationship experiences in early adulthood, with a focus on how gender, race/ethnicity, and histories of obesity. As specific dimensions of romantic relationships were not considered and this chapter only identifies the reported existence of such romantic relationships, the interpretations of the results from this chapter cannot be used to decipher much about the qualities of young adults' romantic relationships. Some studies have demonstrated that obese persons' romantic relationships may be less satisfying and fulfilling than the relationships experienced by normal weight individuals (Boyes and Latner 2009; Carr et al. 2013; Chen and Brown 2005; Smith et al. 2011; Sobal, Rauschenbach, et al. 2009), though none, to my knowledge, have examined the movement in and out of weight categories on romantic relationship qualities among young adults. This dissertation now turns to examine how intersections between race/ethnicity, gender, and histories of obesity may influence perceptions of romantic relationship quality (romantic relationship satisfaction and commitment to current relationships) are considered to help address these questions.

# Tables

Table 3: V	<i>N</i> eighted	Descriptive	Statistics	bv	Gender
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<u> </u>	2			
	Female		Male	
	n = 5,138		n = 4,450	
	Percent / Mean	SE	Percent / Mean	SE
Obesity History				
Chronic Obesity	5.55	0.41	6.57	0.65
Recent Obesity	15.60	0.76	11.84	0.76 ***
Former Obesity	1.40	0.20	3.28	0.40 ***
Non-obesity	77.45	1.04	78.32	1.09
Partnership Status				
Partnered	83.49	0.82	78.31	1.20 ***
Unpartnered	16.51	0.82	21.69	1.20 ***
Relationship Type				
Marriage	45.41	1.63	37.28	1.62 ***
Cohabitation	21.35	1.12	21.49	0.82
Dating	16.73	0.97	19.54	1.11 *
Single	16.51	0.82	21.69	1.20 ***
Individual Context				
Race and Ethnicity				
White	68.42	2.88	68.41	2.81
Black	14.24	2.19	13.42	2.04
Mexican American	5.97	1.15	6.67	1.40
Other Latina/o	4.17	1.06	3.94	0.91
Other Race/Ethnicity	7.20	0.87	7.55	0.95
Age (18-27)	21.29	0.16	21.40	0.16 *
Self-Reported Health (1-5)	3.91	0.02	4.08	0.02 ***
School Urbanicity				
Suburban	59.12	5.10	58.79	4.76
Urban	24.63	4.13	25.21	4.01
Rural	16.25	4.84	15.99	4.51
Transitions				
Employed	68.64	1.24	72.49	1.41 **
Educational Attainment (6-22)	13.22	0.12	12.91	0.12 ***
Enrolled in school	43.65	2.12	36.52	1.67 ***
Household Context				
Living with parents	37.57	1.48	45.60	1.86 ***
Individual income (\$0-250,000)^	10926.00	485.01	14905.00	536.14 ***
Missing Income	21.33	1.33	18.12	1.28 **
Homeowner	12.50	1.09	9.79	1.00 **
Biological children	23.20	1.54	8.14	0.77 ***

^For the purposes of determining the mean, all missing values were omitted.

 $p \le .05, p \le .01, p \le .001$ 

	Whit	e	Blac	k	Mexican A	merican	Other La	atina/o	Other Race/	Ethnicity	
	n = 5,3	331	n = 1,9	936	<i>n</i> = 6	83	n = 6	63	$n=9^{\prime}$	75	
-	Percent /		Percent /		Percent /		Percent /		Percent /		
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	
Obesity History											
Chronic Obesity	5.11	0.45	9.33	0.97	7.22	1.60	8.84	1.46	6.17	1.37	a, c
Recent Obesity	13.22	0.66	15.76	1.41	17.07	1.92	12.49	1.85	12.46	1.57	
Former Obesity	1.93	0.24	3.86	0.63	3.91	1.40	1.92	0.91	2.11	0.72	а
Non-obesity	79.75	0.94	71.06	1.42	71.80	2.31	76.75	2.37	79.26	2.44	a, b, g
Partnership Status											
Partnered	82.34	0.85	75.22	2.00	79.95	2.26	83.48	2.22	77.69	1.80	a, d, f, j
Unpartnered	17.66	0.85	24.78	2.00	20.05	2.26	16.52	2.22	22.31	1.80	a, d, f, j
Relationship Type											
Marriage	45.91	1.35	23.49	2.01	44.13	2.76	33.19	3.00	34.71	2.94	a, c, d, e, f, g, h, i, j
Cohabitation	20.83	0.96	24.12	1.47	15.82	1.80	27.16	4.07	23.50	2.41	b, e, i, j
Dating	15.60	0.88	27.61	1.96	20.00	2.56	23.13	2.41	19.48	2.17	a, c, g
Single	17.66	0.85	24.78	2.00	20.05	2.26	16.52	2.22	22.31	1.80	a, d, f, j
Individual Context											, , , , ,
Age (18-27)	21.31	0.16	21.48	0.26	21.44	0.31	21.30	0.37	21.36	0.20	
Female	50.19	0.97	51.67	1.77	47.42	3.65	51.57	2.68	49.01	2.16	
Self-Reported Health (1-5)	4.01	0.02	4.01	0.03	4.00	0.03	3.91	0.06	3.83	0.05	d, g, i
School Urbanicity											
Suburban	63.06	5.50	58.18	9.04	30.47	7.67	34.21	9.33	60.35	7.12	b, c, e, i, j,
Urban	18.22	3.29	27.77	6.77	64.19	8.42	63.77	9.78	26.63	5.77	b, c, e, i, j,
Rural	18.71	5.67	14.05	7.46	5.33	4.06	2.02	1.14	13.02	5.39	c, i, j
Transitions											-
Employed	73.07	1.23	58.72	2.08	73.41	2.86	72.65	2.21	65.84	2.37	a, d, e, f, g, j
Educational Attainment (6-22)	13.17	0.11	12.79	0.21	12.38	0.15	12.77	12.77	13.37	0.16	b, g, i, j
Enrolled in school	41.87	2.02	33.91	3.45	29.55	2.76	42.56	3.94	42.96	2.92	b, h, i
Household Context											
Living with parents	39.36	1.68	42.68	2.64	48.72	2.81	43.14	4.66	45.52	3.02	b, c, f
Individual income (\$0-250,000)^	13577.00	519.07	9902.99	683.82	15215.00	1062.71	10195.00	1158.20	11766.00	695.02	a, c, e, g, h, i
Missing Income	18.29	1.30	29.32	2.52	21.20	2.43	15.76	2.85	16.06	2.08	a, f, g
Homeowner	13.28	1.07	6.62	1.38	8.05	1.97	4.54	1.31	6.27	1.14	a, b, c, d
Biological children	14.00	1.17	21.14	1.48	25.75	3.91	15.90	1.85	12.54	1.91	a, b, f, g, h, i

Table 4: Weighted Descriptive Statistics by Race/Ethnicity

<sup>^</sup>For the purposes of determining the mean, all missing values for income were omitted.

Each at the  $p \le ..05$  level: 'a' indicates a significant difference between Whites and Blacks. 'b' indicates a significant difference between Whites and Mexican Americans. 'c' indicates a significant difference between Whites and Other Latinas/os. 'd' indicates a significant difference between Whites and Other Racial/Ethnic minorities. 'e' indicates a significant difference between Blacks and Mexican Americans. 'f' indicates a significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Mexican Americans and Other Racial/Ethnic minorities. 'j' indicates a significant difference between Mexican Americans and Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Latinas/os and Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Latinas/os and Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Latinas/os and Other Racial/Ethnic minorities. 'g' indicates a significant difference between Other Latinas/os and Other Racial/Ethnic minorities. 'g' indicates a significant difference between Other Latinas/os and Other Racial/Ethnic minorities.

	Chronic	Recent	Former	Non-
	Obesity 9 8 1	Obesity	Obesity	Obese
	Percent	Percent	Percent	Percent
Single				
Total	24.29	20.58	20.56	18.38
Female	22.78	19.74	16.22	15.41
Male	25.57	21.71	22.42	21.33
White	23.68	20.73	17.97	16.75
Black	21.39	18.23	32.17	26.27
Mexican American	32.71	23.16	7.35	18.73
Other Latina/o	28.92	9.26	41.64	15.65
Other Race/Ethnicity	25.09	27.97	13.11	21.45
All Partnered				
Total	75.71	79.42	79.44	81.62 b
Female	77.22	80.26	83.78	84.59
Male	74.43	78.29	77.58	78.67
White	76.32	79.27	82.03	83.25
Black	78.61	81.77	67.83	73.73
Mexican American	67.29	76.84	92.65	81.27
Other Latina/o	71.08	90.74	58.36	84.35 a
Other Race/Ethnicity	74.91	72.03	86.89	78.55
Married				
Total	37.35	42.96	37.25	41.51 b
Female	39.68	44.43	41.03	46.09 b
Male	35.37	41.00	35.62	36.94
White	41.83	46.87	43.24	46.08 b
Black	26.56	29.04	12.91	22.44
Mexican American	39.06	44.91	50.70	44.10
Other Latina/o	26.34	42.62	39.31	32.29 a
Other Race/Ethnicity	40.58	35.42	47.48	33.80
Cohabiting				
Total	18.21	20.12	16.33	21.74
Female	19.34	19.24	31.78	21.73
Male	17.25	21.29	24.60	21.74
White	15.52	19.44	28.79	21.21
Black	29.55	24.81	30.52	22.91
Mexican American	3.37	12.52	13.23	18.00
Other Latina/o	20.59	33.02	18.24	27.18
Other Race/Ethnicity	19.73	17.56	22.54	24.75
Dating				
Total	20.14	16.33	15.43	18.37
Female	18.19	16.59	10.96	16.76
Male	21.80	15.99	17.36	19.98
White	18.96	12.97	10.00	15.96
Black	22.51	27.92	24.41	28.38
Mexican American	24.86	19.41	28.73	19.17
Other Latina/o	24.14	15.11	0.82	24.87
Other Race/Ethnicity	14.60	19.05	16.87	19.99

Table 5: Weighted Cross-tabulations of Obesity Histories and Romantic Relationship Statuses

Significant differences in partnership status by history of obesity reported next to the "All Partnered" section. Significant differences in relationship type by history of obesity denoted next to the "Married" section and have not been replicated to avoid redundancy. Each at the  $p \le .05$  level: 'a' indicates significant difference between chronically obese and recently respondents. 'b' indicates a significant difference between chronically obese respondents. No other statistically significant differences were found.

|--|

	Model 1	Model 2	Model 3	Model 4	Model 5	M odel 6	Model 7
Measure	OR	OR	OR	OR	OR	OR	OR
Obesity History	011	011	on	011	on	011	on
Chronic Obesity	0.70 *	0.76 +	0.77 +	0.79 +	0.87	0.75	0.95
Recent Obesity	0.87	0.87	0.86	0.83	0.95	0.72 *	0.96
Former Obesity	0.87	1.03	1.02	1.01	1.01	1.05	1.07
Non-obesity (ref.)	-	-	-	-	-	-	-
Individual Context							
Race and Ethnicity							
Black		0.65 ***	0.66 ***	0.69 ***	0.70 ***	0.59 ***	0.74
Mexican American		0.87	0.87	0.87	0.86	0.87	1.00
Other Latina/o		1.12	1.12	1.22	1.23	1.21	1.27
Other Race/Ethnicity		0.77 *	0.78 *	0.82 +	0.82 +	0.82 +	0.82 +
White (ref.)		-	-	-	-	-	-
Female		1.46 ***	1.48 ***	1.35 ***	1.43 ***	1.34 ***	1.58 ***
Age		1.09 **	1.08 *	1.02	1.02	1.02	1.02
Self-Reported Health		1.15 ***	1.15 ***	1.14 ***	1.14 ***	1.14 ***	1.14 ***
School Urbanicity							
Urban		1.03	1.04	1.04	1.04	1.05	1.05
Rural		1.20 +	1.21 +	1.18 +	1.18 +	1.18 +	1.18 +
Suburban (ref.)		-	-	-	-	-	-
Transitions							
Employed			1.18 *	1.16 *	1.16 *	1.17 *	1.16 *
Educational Attainment			1.01	1.03	1.03	1.03	1.03
Enrolled in school			0.94	1.01	1.01	1.01	1.01
Household Context							
Living with parents				0.83 +	0.83 +	0.84	0.84 +
Individual income				1.00 *	1.00 *	1.00 *	1.00 *
Missing Income				1.13	1.13	1.13	1.13
Homeowner				1.61 **	1.61 **	1.64 **	1.64 **
Biological children				1.70 ***	1.70 ***	1.70 ***	1.77 ***
Interactions							
Chronic Obesity*Female					0.79		0.57 +
Recent Obesity *Female					0.77		0.55 *
Former Obesity*Female					1.02		1.05
Chronic Obesity*Black						1.83 +	1.82
Chronic Obesity*Mexican American	L					0.63	0.32 +
Chronic Obesity*Other Latina/o						0.61	0.35 *
Recent Obesity *Black						2.13 ***	2.14
Recent Obesity *Mexican American						1.02	0.27 *
Recent Obesity *Other Latina/o						2.48	3.91
Former Obesity*Black						0.83	0.64
Former Obesity*Mexican American						3.11	4.90
Former Obesity*Other Latina/o						0.29	0.28
Black*Female							0.61 +
Mexican American*Female							0.74
Other Latina/o*Female							0.90
Chronic Obesity*Black*Female							1.26
Chronic Obesity*Mexican American	*Female						7.67 +
Chronic Obesity*Other Latina/o*Fe	male						4.19
Recent Obesity*Black*Female							1.23
Recent Obesity*Mexican American*	Female						57.55 ***
Recent Obesity*Other Latina/o*Fen	nale						0.61
Former Obesity *Black*Female							1.68
Former Obesity*Mexican American	*Female						0.18
Former Obesity *Other Latina/o*Fer	nale						1.90
F	2.97 *	7.55 ***	6.61 ***	9.48 ***	8.41 ***	7.55 ***	6.48 ***
df	3,86	12, 77	15, 74	20, 69	23, 66	29,60	44, 45

+  $p \le 0.10$ ,  $*p \le 0.05$ ,  $**p \le 0.01$ ,  $***p \le 0.001$ . Note: Due to clustering in the models, *F*- statistics are reported instead of pseudo-likelihood ratios.

		Female			Male	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Measure	OR	OR	OR	OR	OR	OR
Obesity History						
Chronic Obesity	0.62 *	0.71	0.54 *	0.79	0.86	0.93
Recent Obesity	0.74 +	0.75	0.54 **	0.98	0.94	0.96
Former Obesity	0.94	1.08	1.13	0.94	1.00	1.07
Non-obesity (ref.)	-	-	-	-	-	-
Individual Context						
Race and Ethnicity						
Black		0.60 ***	0.46 ***		0.83	0.75
Mexican American		1.17	0.79		0.71 +	0.97
Other Latina/o		1.42	1.20		1.10	1.24 *
Other Race/Ethnicity		0.95	0.95		0.73 *	0.72
White (ref.)		-	-		-	-
Age		1.01	1.01		1.03	1.03
Self-Reported Health		1.11	1.11		1.17 ***	1.17 ***
School Urbanicity						
Urban		1.03	1.03		1.04	1.05
Rural		1.12	1.11		1.23	1.23
Suburban (ref.)		-	-		-	-
Transitions						
Employed		1.00	1.01		1.30 *	1.30 *
Educational Attainment		1.02	1.02		1.05	1.06
Enrolled in school		1.05	1.05		0.99	0.98
Household Context						
Living with parents		0.70 *	0.71 *		0.98	0.97
Individual income		1.00	1.00		1.00 *	1.00 +
Missing Income		1.09	1.11		1.14	1.12
Homeowner		1.87 **	1.94 **		1.37	1.40
Biological children		1.42 *	1.43 *		2.55 ***	2.73 ***
Interactions						
Chronic Obesity *Black			2.22 *			1.92
Chronic Obesity *Mexicar	n American		2.49			0.30 *
Chronic Obesity *Other L	atina/o		1.48			0.36 +
Recent Obesity*Black			2.59 **			2.11
Recent Obesity *M exican	American		15.51 ***			0.26 **
Recent Obesity*Other La	tina/o		2.29			3.93
Former Obesity*Black			1.08			0.66
Former Obesity*Mexican	American		0.82			4.73
Former Obesity*Other La	atina/o		0.53			0.26
-						
F	3.11 *	4.19 ***	4.00 ***	0.56	4.32 ***	6.58 ***
df	3, 86	19, 70	28, 61	3, 86	19, 70	31, 58

Table 7: Odds of Having a Romantic Partner by Gender

+  $p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

Note: Due to clustering in the models, F- statistics are reported instead of pseudo-likelihood ratios.

	W	hite	Bla	nck	Mexican	American	Other I	atina/o	Other Rac	e/Ethnicity
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Measure	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
Obesity History										
Chronic Obesity	0.65 *	0.76	1.31	1.33	0.47 +	0.48 +	0.46 *	0.50 *	0.82	1.27
Recent Obesity	0.77 +	0.72 *	1.60 *	1.54 +	0.76	0.82	1.82	1.68	0.70	0.65
Former Obesity	0.92	0.96	0.75	0.76	2.91	3.47	0.26	0.37	1.81	4.30 +
Non-obesity (ref.)	-	-	-	-	-	-	-	-		-
Individual Context										
Female		1.33 **		0.80		2.64 **		1.80		2.08
Age		1.01		1.00		1.13		0.94		1.08
Self-Reported Health		1.16 **		0.93		1.37 +		1.07		1.36 *
School Urbanicity										
Urban		0.96		1.29		0.79		0.99		2.14 **
Rural		1.26 *		0.95		2.65 *		0.85		0.75
Suburban (ref.)		-		-		-		-		-
Transitions										
Employed		1.18		1.34 *		1.33		1.11		0.81
Educational Attainment		1.05 +		1.05		0.95		0.99		0.98
Enrolled in school		0.99		1.10		0.93		0.95		0.85
Household Context										
Living with parents		0.79 +		1.00		1.54		0.74		0.60
Individual income		1.00 +		1.00		1.00 +		1.00 *		1.00 *
Missing Income		1.15		0.73		2.28 *		2.00		2.37 **
Homeowner		2.05 ***		0.84		0.67		5.12 *		0.75
Biological children		1.75 **		2.28 ***		1.41		0.64		1.63
F (3, 86)	2.92 *		1.35		1.80		3.53 *		1.02	
F (16, 73)		5.80 ***		2.62 **		3.80 ***		3.33 ***		5.07 ***

## Table 8: Odds of Having a Romantic Partner by Race/Ethnicity

 $+p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

Note: Due to clustering in the models, F-statistics are reported instead of pseudo-likelihood ratios.

_	Mexican An	nerican Female	Mexican A	Mexican American Male		
	Model 1 Model 2 Mo		Model 3	Model 4		
Measure	OR	OR	OR	OR		
Obesity History						
Chronic Obesity	1.35	1.45	0.32 *	0.25 *		
Recent Obesity	7.98 **	11.04 **	0.29 **	0.31 **		
Former Obesity	1.02	0.87	5.13	4.62		
Non-obesity (ref.)	-	-	-	-		
Individual Context						
Age		0.92		1.27 +		
Self-Reported Health		1.35 +		1.29		
School Urbanicity						
Urban		0.77		0.77		
Rural		4.56		2.91 *		
Suburban (ref.)		-		-		
Transitions						
Employed		1.16		1.38		
Educational Attainment		1.00		0.95		
Enrolled in school		0.62		1.30		
Household Context						
Living with parents		1.38		1.80		
Individual income		1.00		1.00 *		
Missing Income		3.18 *		2.19		
Homeowner	1.34 0.54					
Biological children		1.66		1.42		
F	6.14 ***	5.74 ***	6.48 ***	5.57 ***		
df	3, 86	15, 74	3, 86	15, 74		

Table 9: Odds of Mexican American Females and Males of Having a Romantic Partner

+  $p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

Note: Due to clustering in the models, *F*-statistics are reported instead of pseudo-likelihood ratios.

	Married	vs. Single	Cohabitati	on vs. Single	Dating	vs. Single
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Obesity History						
Chronic Obesity	0.68 *	0.84	0.63 *	0.67 *	0.83	0.86
Recent Obesity	0.92	0.87	0.83	0.79	0.79	0.81
Former Obesity	0.80	1.02	1.10	1.20	0.75	0.76
Non-obesity (ref.)	-	-	-	-	-	-
Individual Context						
Race and Ethnicity						
Black		0.37 ***		0.85		1.35 *
Mexican American		0.84		0.66 *		1.21
Other Latina/o		0.89		1.52 +		1.67 *
Other Race/Ethnicity		0.67 **		0.96		1.00
White (ref.)		-		-		-
Female		1.56 ***		1.31 *		1.08
Age		1.11 **		0.92 +		0.97
Self-Reported Health		1.24 ***		1.07		1.06
School Urbanicity						
Urban		1.17		0.95		0.94
Rural		1.37 **		1.16		0.87
Suburban (ref.)		-		-		-
Transitions						
Employed		1.29 **		1.30 **		0.89
Educational Attainment		1.06 *		0.97		1.03
Enrolled in school		0.99		0.83		1.35 *
Household Context						
Living with parents		0.73 **		0.84		1.06
Individual income		1.00 *		1.00		1.00 *
Missing Income		1.14		1.16		1.07
Homeowner		2.05 ***		1.00		1.14
Biological children		2.04 ***		1.48 **		1.29
Incomplete Model: $F(9, 80)$	= 1.57, p > .1	0				
Complete Model: $F(60, 29)$	$= 12.98, p \leq .$	001				

Table 10: Relative Risk Ratios Predicting Type of Romantic Relationship Involvement

 $+p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

Note: Due to clustering in the models, F- statistics are reported instead of pseudo-likelihood ratios.

	M arried	Cohabitation	
	vs. Single	vs. Single	Dating vs. Single
	Model 1	Model 2	Model 3
Measure	RRR	RRR	RRR
Two-way Interactions			
Chronic Obesity*Black	1.56	4.59 *	1.32
Chronic Obesity *Mexican American	0.58	0.04 ***	0.13 *
Chronic Obesity *Other Latina/o	0.51	0.29	0.29
Chronic Obesity*Female	0.62	0.77	0.51
Recent Obesity*Black	3.64 **	2.22	2.53 +
Recent Obesity*Mexican American	0.35 +	0.20 *	0.34 *
Recent Obesity*Other Latina/o	2.54	5.41 +	4.30
Recent Obesity*Female	0.58 *	0.53 *	0.79
Former Obesity*Black	0.46	0.63	1.09
Former Obesity*Mexican American	7.06 +	1.85	9.13 +
Former Obesity*Other Latina/o	0.58	0.23	0.02 **
Former Obesity *Female	1.20	1.10	1.11
Three-way Interactions			
Chronic Obesity*Black*Female	1.57	0.46	0.86
Chronic Obesity*Mexican American*Female	1.41	25.86 +	50.88 **
Chronic Obesity*Other Latina/o*Female	1.55	6.58	7.37
Recent Obesity*Black*Female	0.59	1.04	0.79
Recent Obesity*Mexican American*Female	34.80 ***	57.02 ***	47.37 ***
Recent Obesity*Other Latina/o*Female	1.34	0.43	0.20
Former Obesity*Black*Female	1.25	1.98	0.71
Former Obesity*Mexican American*Female	0.12	0.46	0.01 *
Former Obesity *Other Latina/o*Female	~	~	~

## Table 11: Interactions between Obesity Histories, Race/Ethnicity and Gender

+  $p \le 0.10, *p \le 0.05, **p \le 0.01.$ 

Note: See Appendix 1 for all main effects. The three-way interaction term between former obesity\*Other Latina/o\*female was forced out of the model due to there being too few valid cases.

## Chapter 5: Fat and Happy: Obesity Histories and Romantic Relationship Satisfaction

Evidence presented in the previous chapter suggested that involvement in specific types of romantic relationship was moderated by histories of obesity, racial/ethnic identities, and gender. In this chapter, the discussion moves toward assessing how histories of obesity relate to romantic relationship satisfaction. Notably, the literature on romantic relationship satisfaction among young adults is quite limited, but in line with the previous discussions on obesity stigma and intersectionality and the findings from Chapter 4, it is expected that obesity histories would be associated with different levels of relationship satisfaction, but only for some groups. In this chapter, I develop an intersectional discussion of romantic relationship satisfaction in early adulthood.

#### Health and Romantic Relationship Satisfaction in the Transition to Adulthood

A wide body of research has examined the ways in which health and illness are associated with marital satisfaction. Chronic disease and resulting depressive symptoms among partners relates to less satisfaction with marriages among older adults (Pruchno, Wilson-Genderson, and Cartwright 2009). In contrast, young people with histories of chronic diseases reported similar levels of romantic relationship satisfaction as young people without histories of chronic disease (Maslow et al. 2011). It is unclear whether obese young adults report similar levels of relationship satisfaction to peers who are not obese.

Previous research tends to find that obese individuals, and especially obese women, report lower quality sexual and romantic relationships than normal weight individuals (Boyes and Latner 2009; Carr et al. 2013; Meltzer et al. 2011; Sobal, Rauschenbach, et al. 2009;

Williams and Merten 2013). Obese women, for example, were significantly less likely than normal weight women to report their relationships were "very happy" (Sobal, Rauschenbach, et al. 2009). Similarly, men with grade II and III obesity were significantly less satisfied with their sex lives and reported having sex less frequently than normal weight men; however, men with grade I obesity did not differ from normal weight men (Carr et al. 2013).

Some have suggested that when partners' bodies are relatively similar in size, there are few negative effects of obesity on romantic and sexual satisfaction. For example, when both partners were overweight, obese women did not report barriers to engaging in intimate contact with their partners (Williams and Merten 2013). In contrast, obese women with non-obese partners reported considerable emotional barriers to sexual contact with partners (Williams and Merten 2013). Others have reported that increases in husbands' BMIs are positively associated with wives' marital satisfaction, while increases in wives' BMIs were associated with husbands reporting less marital satisfaction over four years of observations (Meltzer et al. 2011). This pattern harkens back to Bergman's (2009) observation that women are not socially permitted to hold as much excess weight as men. Curiously, few studies have explored how racial/ethnic differences and obesity are associated with romantic relationship satisfaction.

Giving credence to the idea that changes in body weight over time might influence romantic relationship satisfaction, one study found that women who experienced a change in obesity status reported significantly more conflict and were significantly less happy with their romantic relationships than those whose weight did not change (Sobal, Rauschenbach, et al. 2009). Findings such as these support the idea that movement in and out of weight categories, rather than obesity alone is associated with deleterious outcomes in romantic relationships (e.g., Carr and Friedman 2006; Carr and Jaffe 2012; Carr et al. 2013; Fee and Nusbaumer 2012; Latner

et al. 2012; Levy and Pilver 2012; Meltzer et al. 2011; Sobal, Rauschenbach, et al. 2009). Few studies have given reasonable discussion to the ways in which obesity, gender, and race/ethnicity interact to shape relationship satisfaction, though Carr and colleagues' (2013) study suggested that obese men's relationship and sexual satisfaction was not contingent on race/ethnicity. Particularly among young adults, the effects of obesity histories on romantic relationship satisfaction have not been given adequate attention in the social research on obesity. The objective of this chapter is to address questions on how race/ethnicity, gender, and histories of obesity are associated with young adults' romantic relationship satisfaction.

## **Current Study**

#### Research Questions

Two main questions are addressed in this chapter. First, how does satisfaction in romantic relationships vary by histories of obesity? Second, how do race/ethnicity and gender intersect with histories of obesity to influence romantic relationship satisfaction? The corresponding hypotheses are:

- H4: Chronically obese young adults, that is, young adults who were obese in adolescence and early adulthood, will express lower levels of romantic relationship satisfaction than non-obese young adults.
- H5: Recently obese young adults, meaning, young adults who first became obese in early adulthood, will report lower levels of romantic relationship satisfaction than non-obese young adults.
- H6: Formerly obese young adults, meaning, those who were obese in adolescence but were not obese in early adulthood, will be less satisfied with their romantic relationships than non-obese young adults.

It was generally expected that young people with histories of obesity would report less satisfaction with their relationships than non-obese individuals. However, much like the discussion throughout this dissertation, the effects of obesity may be contingent on gender and racial/ethnic identities. Indeed, as obesity stigma seems to be particularly detrimental to women and Whites' relationships, it is likely that men and racial/ethnic minorities will not have obesity stigma manifest in less satisfaction with their relationships, although race/ethnicity and gender alone likely shape satisfaction with relationships. Because few studies have addressed how race/ethnicity and obesity influence romantic relationship satisfaction, I suspect that the model posed in Figure 3, that men with histories of obesity would report more relationship satisfaction than women with histories of obesity, though racial/ethnic minority men would report more satisfaction than obese Whites. Moreover, because it appears that changes in weight status are important in shaping relationship satisfaction (Carr et al. 2013; Sobal, Rauschenbach, et al. 2009), I believe the patterns posed by the Obesity Stability models will reflect the patterns in relationship satisfaction (see Figure 5). That is, even though non-obese individuals are likely to report the highest levels of romantic relationship satisfaction, chronically obese individuals will report the second-highest levels, while those with recent and former histories of obesity will report the least satisfaction.

#### **Data, Measures and Methods**

Data from Waves I, III, and IV of Add Health were used to test the hypotheses posed in this chapter. Respondents who did not answer each of the romantic relationship satisfaction questions were removed from the sample, resulting in a loss of 173 respondents from the prior

chapter (n = 9,415). The complex design of the Add Health study was taken into consideration by weighting, stratifying, and clustering the analyses (Chantala and Tabor 2010).<sup>13</sup>

## Dependent Measure: Relationship Satisfaction Index

As discussed in Chapter 3, the relationship satisfaction index was constructed from seven questions asked of respondents regarding their satisfaction with various aspects of their current or most recent romantic relationship each graded along a five-point Likert scale (5 = strongly agree; 1 = strongly disagree). Scores ranged from a minimum of seven and a maximum score of 35. Scores of 35 indicated very high levels of satisfaction with one's relationship and 7 very little relationship satisfaction ( $\bar{x} = 28.72$ , SE = 0.10, Cronbach's  $\alpha = .89$ ). Respondents involved in marital, cohabitation and dating relationships were asked about their satisfaction with their current romantic relationship. Single respondents were asked about their satisfaction with their most recent (terminated) romantic relationship in these questions, it is expected that they will report these relationships as less satisfactory than respondents in any other type of relationship.

#### Independent Measures

Histories of obesity were the primary independent measures of interest in this chapter, coded in the same manner as the previous chapter. Six percent of respondents were considered chronically obese. Most respondents with any history of obesity had only recently become obese (13.84%). A small portion of the segment was considered formerly obese (2.34%). Over three-quarters of the sample had no history of obesity (77.82%). Gender and race/ethnicity were central independent measures in this chapter as well. About one-half of respondents were women (50.36%). With regard to racial/ethnic identity, over two-thirds of the sample identified as White

<sup>&</sup>lt;sup>13</sup> See the second column in Table 1 for descriptive statistics of all measures utilized in this chapter.

(68.56%), 13.69% identified as Black, 6.34% as Mexican American, 4.06% as Other Latinas/os, and 7.36% were Other Racial/Ethnic minorities.

#### **Control Measures**

Romantic relationship context, individual context, transitions to adulthood and household context in early adulthood were considered in the multivariate models to examine differences in romantic relationship satisfaction. Relationship context was controlled for using two measures: relationship type and relationship duration. Relationship type refers to the type of romantic relationship young adults were involved in at the time of interview. Relationship duration was measured by the reported duration of respondents' current or most recent romantic relationships. The average relationship length was 4.68 years (SE = 0.11). About five percent of respondents were unsure of the length of their current or most recent relationship or refused to answer the question (4.78%). For these respondents, instead of dropping them from the final sample, dummy replacement was used to account for respondents with missing values on the relationship duration measure.

Individual context, transitions to adulthood and household context measures were previously discussed in Chapter 3 and for the sake of brevity, are not discussed here. Descriptive statistics for each measure used in this chapter can be found in the second column of Table 1 (see Chapter 3). One additional household context measure was included in this chapter, which has not been previously discussed: having stepchildren living in the home. Just over one percent (1.23%) of the sample had a step, foster, or adoptive child who lived with them during the transition to adulthood.

## Analytic Techniques

First, weighted percentages and means of each measure have been presented after dividing the analytic sample by gender (Table 12) and race/ethnicity (Table 13). Second, bivariate relationships between histories of obesity and reported levels of romantic relationship satisfaction were assessed using survey-adjusted Wald statistics, as presented in Table 14. Finally, multivariate ordinary least squares regression tests examining the relationship between histories of obesity and romantic relationship satisfaction have been presented in Table 15 through Table 18 to address H4, H5, and H6. Similar to the bivariate tests, multivariate findings examining the full sample were conducted first (Table 15), followed by findings when splitting the sample by gender (Table 16) and race/ethnicity (Table 17). In light of significant interactions identified in Table 15, an additional final set of tests examined Other Latinas and Other Latinos' relationship satisfaction (see Table 18).

#### Results

#### Descriptive Statistics by Gender, Race/Ethnicity, and Relationship Type

Important differences in obesity history and relationship satisfaction emerged after the analytic sample was split by gender and race/ethnicity. For example, even though recent obesity was the most common type of obesity history for both women (15.66%) and men (11.99%), women were significantly overrepresented among recently obese respondents ( $p \le .01$ ; see Table 12). In contrast, significantly more men were formerly obese (3.28%) than women were (1.41%,  $p \le .001$ ). Reported levels of relationship satisfaction were similar between men ( $\bar{x} = 28.75$ , SE = 0.12) and women ( $\bar{x} = 28.70$ , SE = 0.14, p > .10). Refer to Table 12 for a complete list of descriptive statistics by gender.

Variations in obesity history and relationship satisfaction were also observed between racial/ethnic groups (Table 13). The share of respondents with chronic, recent, and former histories of obesity was similar to those discussed in Chapter 4. With regard to relationship satisfaction, a few differences between racial/ethnic groups emerge. For example, Whites reported the highest level of relationship satisfaction ( $\bar{x} = 29.03$ , SE = 0.12), while Blacks reported the least satisfaction with their relationships ( $\bar{x} = 27.41$ , SE = 0.19). After Whites, Other Latinas/os had the next highest level of relationship satisfaction ( $\bar{x} = 28.68$ , SE = 0.31), followed by Mexican Americans ( $\bar{x} = 28.55$ , SE = 0.31). Black respondents reported significantly less satisfaction with their relationships than each of the other racial/ethnic groups ( $p \le .05$ ). Table 13 displays all descriptives broken down by race/ethnicity.

## Relationships between Obesity History and Relationship Satisfaction

Means of relationship satisfaction by obesity history have been presented examining differences between obesity history groups in the full sample, within genders, and within racial/ethnic groups (Table 14). Notably, non-obese respondents indicated the highest levels of relationship satisfaction of any of the obesity history categories ( $\bar{x} = 28.83$ , SE = 0.11). Recently obese respondents showed significantly less relationship satisfaction than non-obese respondents ( $\bar{x} = 28.27$ , SE = 0.24,  $p \le .05$ ). The differences in relationship satisfaction between other obesity history groups in the full study sample were not statistically significant. There is some evidence that weight stability shapes romantic relationship satisfaction, in line with the model in Figure 5, as chronically obese individuals did not differ from non-obese individuals, while a recent change in obesity was associated with less relationship satisfaction.

Differences in relationship satisfaction within gender and racial/ethnic groups were also considered. With regard to women, similar to the overall pattern, non-obese women reported significantly higher levels or relationship satisfaction ( $\bar{x} = 28.92$ , SE = 0.14) compared to recently obese women ( $\bar{x} = 27.96$ , SE = 0.30,  $p \le .05$ ). Men's relationship satisfaction, however, did not significantly differ by histories of obesity, suggesting that obesity histories are more salient predictors of women's relationship satisfaction than men's. There were no significant differences in Other Latinas/os level of relationship commitment by obesity history, but there were significant differences in relationship satisfaction by obesity history among Whites, Blacks, and Mexican Americans. Among Whites, unlike among the pattern depicted in the full sample or women, chronic histories of obesity were associated with significantly lower relationship satisfaction scores ( $\bar{x} = 28.22$ , SE = 0.37) compared to non-obesity ( $\bar{x} = 29.14$ , SE = 0.12,  $p \le$ .05). Significant differences in relationship satisfaction were not found between recently obese whites or formerly obese Whites, compared to non-obese Whites.

Black and Mexican American young adults with histories of obesity tended to report higher levels of relationship satisfaction than their non-obese co-ethnics. Chronically obese Black respondents reported significantly higher relationship satisfaction scores ( $\bar{x} = 28.57$ , SE =0.46) than non-obese Blacks ( $\bar{x} = 27.27$ , SE = 0.21,  $p \le .05$ ). Blacks with former and recent histories of obesity, however, did not significantly differ from non-obese Blacks in their relationship satisfaction. Formerly obese Mexican Americans also reported significantly higher levels of relationship satisfaction ( $\bar{x} = 30.56$ , SE = 0.91,  $p \le .05$ ) than both recently obese Mexican Americans ( $\bar{x} = 27.42$ , SE = 0.88) and non-obese Mexican Americans ( $\bar{x} = 28.67$ , SE =0.34). No other statistically significant differences in relationship satisfaction by race/ethnicity were found.

#### Histories of Obesity and Relationship Satisfaction

Multivariate tests have been conducted to test whether chronically obese (H4), recently obese (H5) and formerly obese (H6) individuals would report less satisfaction with their relationships than non-obese respondents. First, ordinary least squares (OLS) regression models have been presented, examining romantic relationship satisfaction among the whole sample (Table 15). Then, the sample was split between genders (Table 16) and racial/ethnic groups (Table 17), in order to demonstrate how relationship satisfaction varies by gender, race/ethnicity, and obesity histories. Finally, in Table 18, the Other Latina/o subpopulation was divided by gender to further scrutinize the relationship between obesity history and romantic relationship satisfaction, in light of statistically significant three-way interactions found in Table 15.

Table 15 presents findings form a series of nested, survey-adjusted OLS regression models predicting relationship satisfaction.<sup>14</sup> Model 1 ( $R^2 = .00$ ) considered the relationship between obesity history and relationship satisfaction without controls. Recently obese respondents reported relationship satisfaction scores that were 0.57 points lower than non-obese respondents (b = -0.57,  $p \le .05$ ). Model 2 ( $R^2 = .09$ ) included controls for relationship context as potential modifiers of the relationship between obesity history and relationship satisfaction ( $R^2 =$ .09). Notably, once relationship controls were considered, recent obesity became only marginally associated with relationship satisfaction (b = -0.45,  $p \le .10$ ). Once individual context measures were included in Model 3 ( $R^2 = .11$ ), histories of obesity were not associated with relationship satisfaction, which held after transitions to adulthood (Model 4) and household context were controlled (Model 5), as well.

Models 6 through 8 of Table 15 present both two-way and three-way interactions between histories of obesity, gender, and race/ethnicity. As presented in Model 6 ( $R^2 = .12$ ) and

<sup>&</sup>lt;sup>14</sup> Unstandardized coefficients have been presented in all OLS models.

Model 7 ( $R^2 = .12$ ), two-way interactions between obesity histories and gender, and obesity histories and race/ethnicity, were not statistically significant. Model 8 ( $R^2 = .13$ ) built upon Models 6 and 8 by including both sets of two-way interactions and three-way interactions into the model. A statistically significant three-way interaction between recent obesity, identifying as Other Latina/o, and gender was found, suggesting that recently obese Other Latinas reported significantly lower relationship satisfaction than non-obese White men, but that the effect of recent obesity on Other Latinas/os relationship satisfaction was contingent upon gender (b = -3.65,  $p \le .05$ ). As such, additional tests have been conducted while splitting the sample between Other Latinas and Latinos, to further understand how recent obesity differently affects their levels of relationship satisfaction (see Table 18).

To be most thorough and consistent with the presentation in Chapters 4 and 6, I began by examining gender differences (see Table 16). First, in Models 1 ( $R^2 = .01$ ) and 4 ( $R^2 = .00$ ), unstandardized OLS regression coefficients predicting how histories of obesity relate to relationship satisfaction among women and men (respectively) without outside controls were presented. Among women, chronic obesity (b = -0.94,  $p \le .05$ ) and recent obesity (b = -0.96,  $p \le .01$ ) were associated with less relationship satisfaction, compared to women with no history of obesity. Once controls were introduced in Model 2, however, the relationship between chronic obesity (b = 0.09, p > .10) and recent obesity (b = -0.21, p > .10) on women's reported relationship satisfaction was no longer statistically significant (see Model 2,  $R^2 = .14$ ). Among men, however, as presented in Models 4 and 5, chronic obesity, recent obesity and former obesity were not associated with relationship satisfaction.

In Models 3 ( $R^2 = 0.14$ ) and 6 ( $R^2 = .12$ ), two-way interactions between histories of obesity and race/ethnicity were considered in the female and male exclusive tests, to determine

whether any differences in relationship satisfaction by obesity histories were contingent on women and men's racial/ethnic identification. As presented in Model 3, only former obesity among Mexican American women was significantly associated with relationship satisfaction (b =4.08,  $p \le .05$ ), suggesting that Mexican American women who experience obesity in adolescence only, report more satisfying romantic relationships in early adulthood than non-obese White women. In contrast, there were no significant interactions between race/ethnicity and histories of obesity on men's reported level of relationship satisfaction.

To further parse out how obesity histories differentially affect individuals' relationship satisfaction by racial/ethnic background, I examined models by race/ethnicity that appeared in Table 17. Among Whites, there was initial evidence that chronic histories of obesity (b = -0.93,  $p \le .05$ ) were negatively associated with relationship satisfaction (Model 1,  $R^2 = .00$ ). However, after controls were considered (Model 2,  $R^2 = .14$ ) chronic obesity (b = -0.05, p > .10) was not significantly associated with Whites' relationship satisfaction.

Among Black and Mexican American respondents, a much different story emerged. Before controls were introduced (Model 3,  $R^2 = .00$ ) and after (Model 4,  $R^2 = .08$ ), chronically obese Blacks reported relationship satisfaction scores over a point higher than non-obese Blacks (Model 4:  $b = 1.41, p \le .05$ ). Likewise, Mexican Americans (Model 6:  $R^2 = .15$ ) who were formerly obese reported relationship satisfaction scores more than two and a half points higher than non-obese Mexican Americans ( $b = 2.51, p \le .05$ ). For both Blacks and Mexican Americans, having a history of obesity appeared to be associated with reporting more satisfying relationships. Among Other Latinas/os, both before (Model 7,  $R^2 = .01$ ) and after controls were considered (Model 8,  $R^2 = .14$ ), histories of obesity were not significantly associated with relationship satisfaction; however, because a significant three-way interaction term was identified in Table 15, it is possible that an underlying relationship between obesity history, Other Latina/o identity, and gender was there.

Four final OLS regression tests were conducted examining Other Latinas and Other Latinos' reported relationship satisfaction in separate models to further understand the significant three-way interaction found in Table 15 (see Table 18). As presented in Table 18, recent obesity was associated with less relationship satisfaction among Other Latinas, but higher relationship satisfaction among Other Latinas, but higher relationship satisfaction among Other Latinas, but higher relationship satisfaction among Other Latinas. Indeed, even after controls were included in Model 2 ( $R^2 = .26$ ), Other Latinas with recent histories of obesity reported significantly less satisfaction with their relationships than non-obese Other Latinas (b = -1.89,  $p \le .05$ ). Among recently obese Other Latinos, however, even after controls were considered (Model 4,  $R^2 = .20$ ), reported level of relationship satisfaction was nearly three points higher than non-obese Other Latinos (b = 2.83,  $p \le .05$ ). The findings presented in Table 18 bolstered and further demonstrated the idea that histories of obesity effectively were contingent upon racial/ethnic identity and gender.

## Discussion

Findings presented in this chapter suggest some support for the hypothesis that recently obese young adults would report less satisfaction with their relationships (H5). In particular though, this was only the case for Other Latinas, who reported significantly less satisfaction with their relationships compared to non-obese Other Latinas, consistent with the Obesity Stability models presented in Figure 5. Counter to the hypothesized outcome, chronic and former obesity were associated with significantly higher levels of relationship satisfaction among Blacks and Mexican Americans, respectively, compared to non-obese co-ethnics, suggesting not only that obesity stigma has not manifested in poorer perceptions of relationship quality, but also that it may serve as beneficial for relationship satisfaction.
The qualitative differences between chronic obesity and former obesity cannot be overstated. For Mexican Americans and Blacks, it seems that that having a history of obesity is linked to feelings of more satisfaction with relationships. Similarly, recently obese Other Latinos also reported significantly higher levels of relationship satisfaction compared to non-obese Other Latinos. Reporting higher levels of relationship satisfaction when currently obese undercuts the idea that obesity stigma is associated with less satisfaction with interpersonal relationships. Support was not found for the hypotheses that chronically obese (H4) and formerly obese (H6) young adults would report less satisfaction with their relationships than non-obese individuals in any of the final models presented.

### Conclusion

Histories of obesity and their consequences on romantic relationship involvement and satisfaction are largely predicated on gender and racial/ethnic identities, and in many cases presented so far, experiencing obesity is actually associated with qualitatively better relationship outcomes. In this chapter, Other Latinos, Mexican Americans, and Blacks with histories of obesity reported higher levels of satisfaction than those with no history of obesity. In the next chapter, I examine how histories of obesity are associated with commitment to romantic relationships.

## Tables

	Fema	le	Male	2
	n = 5,0	60	n = 4,3	55
	Percent /		Percent /	
	Mean	SE	Mean	SE
Obesity				
Chronic Obesity	5.48	0.41	6.54	0.66
Recent Obesity	15.66	0.76	11.99	0.79 **
Former Obesity	1.41	0.20	3.28	0.39 ***
Non-obesity	77.45	1.04	78.19	1.09
Relationship Satisfaction				
Relationship satisfaction index (7-35)	28.70	0.14	28.75	0.12
Relationship Context				
Relationship Type				
Marriage	45.97	1.66	37.93	1.65 ***
Cohabitation	21.60	1.12	21.80	0.85
Dating	16.36	0.98	19.18	1.13 *
Single	16.07	0.81	21.09	1.21 ***
Relationship Duration				
Relationship duration in years (0-19)*	5.21	0.12	4.13	0.12 ***
Missing duration	5.01	0.45	4.55	0.51
Individual Context				
Race and Ethnicity				
White	68.50	2.87	68.63	2.83
Black	14.16	2.18	13.21	2.03
Mexican American	5.95	1.15	6.73	1.40
Other Latina/o	4.18	1.06	3.93	0.92
Other Race/Ethnicity	7.22	0.88	7.50	0.96
Age (18-27)	21.30	0.16	21.39	0.17 *
Self-Reported Health (1-5)	3.91	0.02	4.09	0.02 ***
School Urbanicity				
Suburban	58.94	5.10	58.68	4.78
Urban	24.67	4.14	25.34	4.03
Rural	16.39	4.87	15.98	4.54
Transitions				
Employed	68.76	1.24	72.35	1.40 **
Educational Attainment (6-22)	13.22	0.12	12.93	0.12 ***
Enrolled in school	43.50	2.15	36.74	1.69 ***
Household Context				
Living with parents	37.43	1.49	45.57	1.88 ***
Individual income (\$0-250,000)^	10,981.00	488.09	14,959.00	541.54 ***
Missing Income	21.23	1.34	18.22	1.30 **
Homeowner	12.60	1.08	9.86	1.01 **
Biological children	23.43	1.56	8.33	0.79 ***
Step/foster/adoptive children	0.51	0.12	1.97	0.32 ***

\*For the purposes of determining the mean, all missing values for income were omitted. \* $p \le .05$ , \*\* $p \le .01$ , \*\*\* $p \le .001$ 

	White	e	Black		Mexican A	merican	Other La	tina/o	Other Race/E	thnicity
	n = 5,23	50	n = 1,83	88	n = 67	71	n = 63	51	n = 95	5
-	Percent /		Percent /		Percent /		Percent /		Percent /	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Obesity Histories										
Chronic Obesity	4.99	0.45	9.40	0.95	7.34	1.62	8.99	1.48	6.31	1.41 a, c
Recent Obesity	13.31	0.67	16.07	1.45	16.96	1.87	12.72	1.88	12.61	1.59
Former Obesity	1.93	0.23	3.92	0.64	3.98	1.43	1.93	0.94	2.03	0.67 a
Non-obesity	79.78	0.93	70.61	1.46	71.72	2.32	76.35	2.43	79.05	2.38 a, b, g
Relationship Satisfaction										
Relationship satisfaction index (7-35)	29.03	0.12	27.41	0.19	28.55	0.31	28.68	0.31	28.45	0.31 a, e, f, g
Relationship Context										
Relationship Type										
Marriage	46.54	1.36	23.83	2.05	44.51	2.75	33.83	3.06	35.49	2.96 a, c, d, e, f, g, h, i
Cohabitation	21.09	0.97	24.43	1.51	16.10	1.83	27.42	4.24	24.02	2.50 e, h, i
Dating	15.21	0.88	27.11	1.91	20.18	2.56	22.86	2.48	19.15	2.17 a, c, g
No current relationship	17.16	0.85	24.62	2.01	19.21	2.07	15.89	2.15	21.34	1.68 a, f, j
Relationship Duration										
Relationship duration in years (0-19)*	4.75	0.12	4.35	0.14	5.10	0.27	4.77	0.19	4.18	0.22 d, e, i, j
Missing duration	4.06	0.37	8.21	0.81	4.36	1.34	5.29	1.29	5.21	1.46 a, e
Female	50.31	0.93	52.08	1.76	47.29	3.62	51.93	2.62	49.39	2.26
Age (18-27)	21.31	0.16	21.49	0.26	21.44	0.31	21.29	0.37	21.36	0.20
Self-Reported Health (1-5)	4.02	0.02	4.02	0.03	4.00	0.04	3.90	0.06	3.84	0.05 d, g, i
School Urbanicity										
Suburban	62.79	5.52	58.61	9.03	30.16	7.57	34.20	9.34	60.35	7.11 b, c, e, i, j
Urban	18.32	3.31	27.43	6.78	64.54	8.35	64.24	9.69	27.08	5.83 b, c, e, f, i, j
Rural	18.89	5.72	13.96	7.38	5.30	4.13	1.55	0.98	12.57	5.27 с, ј
Transitions										
Employed	73.16	1.22	58.28	2.15	73.08	2.87	72.30	2.24	65.82	2.47 a, d, e, f, g
Educational Attainment (6-22)	13.18	0.11	12.81	0.22	12.36	0.15	12.75	0.20	13.40	0.16 b, g, i, j
Enrolled in school	41.89	2.04	34.15	3.47	29.38	2.76	42.73	3.91	42.90	2.94 b, h, i
Household Context										
Living with parents	39.16	1.67	43.09	2.63	48.76	2.78	56.65	4.71	45.35	3.04 b, c, f
Individual income (\$0-250,000)*	13,631.00	524.09	9,914.76	689.58	15,167.00	1,044.90	10,240.00	1,176.73	11,790.00	703.16 a, c, e, g, h
Missing Income	18.28	1.31	29.41	2.51	21.34	2.50	15.78	2.81	16.02	2.00 a, f, g
Homeowner	13.32	1.07	6.79	1.42	8.19	2.00	4.62	1.34	6.41	1.15 a, b, c, d
Biological children	14.20	1.18	21.47	1.48	26.18	3.95	16.20	1.90	12.81	1.95 a, b, f, g, h, i
Step/foster/adoptive children	1.09	0.19	1.38	0.44	1.87	0.88	2.43	1.10	1.14	0.58

Table 13: Weighted Descriptive Statistics by Race/Ethnicity

\*For the purposes of determining the mean, all missing values for income were omitted.

Each at the  $p \leq ..05$  level: 'a' indicates a significant difference between Whites and Blacks. 'b' indicates a significant difference between Whites and Mexican Americans. 'c' indicates a significant difference between Whites and Other Latinas/os. 'd' indicates a significant difference between Whites and Other Racial/Ethnic minorities. 'e' indicates a significant difference between Blacks and Other Latinas/os. 'g' indicates a significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Blacks and Other Latinas/os. 'g' indicates a significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Mexican Americans and Other Latinas/os. 'i' indicates a significant difference between Mexican Americans and Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Racial/Ethnic minorities.

		Relationship Satisfaction									
	Chronic	Obesity	Recent	Recent Obesity		Former Obesity		obese			
	Mean	SE	Mean	SE	Mean	SE	Mean	SE			
Total	28.35	0.28	28.27	0.24	28.61	0.49	28.83	0.11 c			
Female	27.97	0.44	27.96	0.30	27.63	0.87	28.92	0.14 c			
Male	28.68	0.44	28.67	0.70	29.04	0.50	28.75	0.14			
White	28.22	0.37	28.66	0.28	28.92	0.65	29.14	0.12 a			
Black	28.57	0.46	27.52	0.54	26.74	0.73	27.27	0.21 a			
Mexican American	28.89	0.84	27.42	0.88	30.56	0.91	28.67	0.34 b, d			
Other Latina/o	27.16	1.47	28.46	0.93	28.60	0.55	28.90	0.30			
Other Race/Ethnicity	29.16	0.74	27.00	0.89	29.37	1.53	28.61	0.38			

Table 14: Means and Bivariate Tests of Differences in Relationship Satisfaction by Obesity History

Each at the  $p \le .05$  level: 'a' indicates a significant difference between chronically obese and non-obese respondents. 'b' indicates a significant difference between recently obese and formerly obese respondents. 'c' indicates a significant difference between recently obese and non-obese respondents. 'd' indicates a significant difference between formerly obese and non-obese respondents. There were no other statistically significant differences between obesity history categories.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
	b	b	b	b	b	b	b	b
Obesity History								
Chronic Obesity	-0.48 +	-0.24	0.22	0.33	0.34	0.58	0.06	0.35
Recent Obesity	-0.57 *	-0.45 +	-0.15	-0.04	-0.03	0.23	-0.02	0.13
Former Obesity	-0.22	-0.11	0.22	0.28	0.28	0.69	0.11	0.60
Non-obesity (ref.)	-	-	-	-	-	-	-	-
Relationship Context								
Relationship Type								
Cohabitation		-0.73 ***	-0.58 **	-0.44 *	-0.44 *	-0.44 *	-0.43 *	-0.44 *
Dating		-1.13 ***	-0.86 ***	-0.85 **	-0.85 **	-0.85 **	-0.84 **	-0.83 **
Single		-4.57 ***	-4.30 ***	-4.22 ***	-4.25 ***	-4.24 ***	-4.23 ***	-4.23 ***
Marriage (ref.)		-	-	-	-	-	-	-
Relationship Duration								
Relationship duration in years		-0.05 *	-0.02	0.00	0.00	0.00	0.00	0.00
Missing duration		-0.62	-0.28	0.06	0.07	0.05	0.06	0.05
Individual Context								
Race and Ethnicity								
Black			-1.11 ***	-0.99 ***	-0.96 ***	-0.95 ***	-1.11 ***	-0.87 *
Mexican American			-0.08	0.17	0.25	0.24	0.22	0.75 *
Other Latina/o			0.03	0.11	0.12	0.12	0.22	-0.37
Other Race/Ethnicity			-0.17	-0.25	-0.24	-0.24	-0.23	-0.24
White (ref.)			-	-	-	-	-	-
Female			-0.13	-0.28 *	-0.27 +	-0.15	-0.28 *	-0.07
Age			-0.16 **	-0.18 **	-0.16 **	-0.15 **	-0.15 **	-0.16 **
Self-Reported Health			0.74 ***	0.64 ***	0.64 ***	-0.15 ***	0.64 ***	0.64 ***
School Urbanicity								
Urban			-0.56 **	-0.54 **	-0.54 **	-0.54 **	-0.53 **	-0.53 **
Rural			0.01	0.11	0.07	0.06	0.07	0.07
Suburban (ref.)			-	-	-	-	-	-
Transitions								
Employed				-0.03	-0.02	-0.03	-0.01	-0.01
Educational Attainment				0.23 ***	0.20 ***	0.20 ***	0.20 ***	0.20 ***
Enrolled in school				0.65 ***	0.61 ***	0.62 ***	0.60 ***	0.61 ***
Household Context								
Living with parents					-0.01	-0.01	-0.01	-0.01
Individual income					0.00 *	0.00 *	0.00 *	0.00 *
Missing Income					-0.27	-0.27	-0.28	-0.29

Table 15: OLS Regression Estimates Predicting Relationship Satisfaction

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Measure	b	b	b	b	b	b	b	b
Homeowner					0.42 *	0.42 *	0.42 *	0.43 *
Biological children					-0.47 +	-0.46 +	-0.46 +	-0.44
Step/foster/adoptive children					-1.30 +	-1.32 +	-1.31 +	-1.37 +
Interactions								
Chronic Obesity*Female						-0.53		-0.64
Recent Obesity*Female						-0.46		-0.29
Former Obesity*Female						-1.30		-1.55
Chronic Obesity*Black							1.19 +	0.74
Chronic Obesity*Mexican American							1.02	0.41
Chronic Obesity*Other Latina/o							-0.84	1.08
Recent Obesity*Black							0.37	0.45
Recent Obesity*Mexican American							-0.68	-0.46
Recent Obesity*Other Latina/o							-0.33	1.98 +
Former Obesity*Black							-0.15	-0.38
Former Obesity*Mexican American							1.69 +	0.55
Former Obesity*Other Latina/o							1.03	1.28
Black*Female								-0.50
Mexican American*Female								-1.09
Other Latina/o*Female								1.14 *
Chronic Obesity*Black*Female								0.98
Chronic Obesity*Mexican American*Female								1.23
Chronic Obesity*Other Latina/o*Female								-4.11
Recent Obesity*Black*Female								0.01
Recent Obesity*Mexican American*Female								-0.36
Recent Obesity*Other Latina/o*Female								-3.65 *
Former Obesity*Black*Female								0.85
Former Obesity*Mexican American*Female								3.39
Former Obesity*Other Latina/o*Female								-0.77
Constant	28.83 ***	30.27 ***	30.79 ***	28.23 ***	28.22 ***	28.16 ***	28.22 ***	28.18 ***
df	3, 86	8, 81	17, 72	20, 69	26, 63	29, 60	35, 54	50, 39
F	2.57 +	44.08 ***	27.64 ***	26.46 ***	23.17 ***	20.47 ***	19.76 ***	14.05 ***
<u>R<sup>2</sup></u>	0.00	0.09	0.11	0.12	0.12	0.12	0.12	0.13

Table 15: OLS Regression Estimates Predicting Relationship Satisfaction, continued

		Female			M ale	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	b	b	b	b	b	b
Obesity History						
Chronic Obesity	-0.94 *	0.09	-0.27	-0.07	0.55	0.35
Recent Obesity	-0.96 **	-0.21	-0.12	-0.08	0.22	0.15
Former Obesity	-1.29	-0.55	-0.95	0.29	0.73	0.66
Non-obesity (ref.)	-	-	-	-	-	-
Relationship Context						
Relationship Type						
Cohabitation		-0.18	-0.17		-0.73 **	-0.74 **
Dating		-0.32	-0.29		-1.37 ***	-1.36 ***
Single		-4.47 ***	-4.46 ***		-4.19 ***	-4.17 ***
Marriage (ref.)		-	-		-	-
Relationship Duration						
Relationship duration in years		0.02	0.02		-0.04	-0.04
Missing duration		-0.37	-0.38		0.49	0.51
Individual Context						
Race and Ethnicity						
Black		-1.07 ***	-1.31 ***		-0.84 **	-0.94 **
Mexican American		-0.17	-0.17		0.52	0.57
Other Latina/o		0.34	0.84 *		-0.18	-0.47
Other Race/Ethnicity		-0.55	-0.55		0.05	0.05
White (ref.)		-	-		-	-
Age		-0.19 *	-0.19 *		-0.12	-0.12
Self-Reported Health		0.61 ***	0.61 ***		0.65 ***	0.64 ***
School Urbanicity						
Urban		-0.80 ***	-0.78 ***		-0.27	-0.27
Rural		0.33	0.32		-0.20	-0.18
Suburban (ref.)		-	-		-	-
Transitions						
Employed		-0.04	-0.03		-0.01	-0.01
Educational Attainment		0.25 ***	0.24 ***		0.15 **	0.15 **
Enrolled in school		0.57 *	0.55 *		0.70 *	0.70 *
Household Context						
Living with parents		0.04	0.05		-0.07	-0.07
Individual income		0.00	0.00		0.00 +	0.00 +
Missing Income		-0.52 *	-0.53 *		0.01	0.00
Homeowner		0.47	0.48		0.34	0.35
Biological children		-0.61 +	-0.62 +		0.06	0.08
Step/foster/adoptive children		-2.77 +	-2.82 +		-1.12	-1.13
Interactions						
Chronic Obesity*Black			1.69			0.84
Chronic Obesity*Mexican American			1.51			0.10
Chronic Obesity*Other Latina/o			-3.05			0.87
Recent Obesity*Black			0.35			0.42
Recent Obesity*Mexican American			-0.94			-0.56
Recent Obesity*Other Latina/o			-1.65			2.08 +
Former Obesity*Black			0.47			-0.28
Former Obesity*Mexican American			4.08 *			0.62
Former Obesity*Other Latina/o			0.50			0.96
Constant	28.92 ***	28.18 ***	28.20 ***	28.75 ***	28.13 ***	28.17 ***
df	3, 86	25, 64	34, 55	3, 86	25, 64	34, 55
F 2	4./3 **	26.89 ***	21.96 ***	0.12	12.26 ***	8.50 ***
<u>R</u> <sup>2</sup>	0.01	0.14	0.14	0.00	0.12	0.12

# Table 16: OLS Regression Estimates Predicting Relationship Satisfaction by Gender

	White Black		ack	Mexican	American	Other Latina/o		Other Race/Ethnicity		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
	b	b	b	b	b	b	b	b	b	b
Obesity History										
Chronic Obesity	-0.93 *	-0.05	1.30 *	1.41 *	0.22	1.05	-1.74	-0.70	0.55	0.73
Recent Obesity	-0.48 +	0.12	0.25	0.45	-1.24	-0.71	-0.43	-0.51	-1.60 +	-1.11
Former Obesity	-0.23	0.10	-0.53	-0.18	1.89 *	2.51 *	-0.30	1.26	0.76	0.30
Non-obesity (ref.)	-	-	-	-	-	-	-	-	-	-
Relationship Context										
Relationship Type										
Cohabitation		-0.45 *		-0.49		-1.01		-2.25 **		1.72 +
Dating		-0.68 *		-1.29 *		-1.43 +		-1.38		0.10
Single		-4.65 ***		-3.19 ***		-4.00 ***		-4.00 ***		-3.26 **
Marriage (ref.)		-		-		-		-		-
Relationship Duration										
Relationship duration in years		0.01		-0.14 ***		-0.10		-0.03		0.22 +
Missing duration		0.01		-0.23		-3.38 *		1.00		1.39
Individual Context										
Female		-0.19		-0.30		-0.91 +		0.53		-0.70
Age		-0.17 *		-0.14		-0.17		-0.24		-0.02
Self-Reported Health		0.52 ***		1.03 ***		0.93 +		0.88 *		0.43
School Urbanicity										
Urban		-0.22		-0.76 *		-2.05 ***		-0.44		-0.59
Rural		-0.01		1.03 *		0.17		-4.70		-0.65
Suburban (ref.)		-		-		-		-		-
Transitions										
Employed		-0.03		-0.24		1.12		0.78		0.15
Educational Attainment		0.23 ***		-0.02		-0.21		0.14		0.51 ***
Enrolled in school		0.88 ***		-0.02		-0.30		0.19		0.37
Household Context										
Living with parents		-0.04		0.30		-0.21		-0.30		0.35
Individual income		0.00 *		0.00		0.00		0.00		0.00
Missing Income		-0.14		-0.12		-1.63 +		-0.22		-0.31
Homeowner		0.37		0.25		2.05 **		0.03		0.50
Biological children		-0.54		-0.09		-0.74		-1.03		-0.10
Step/foster/adoptive children		-1.73		-0.93		0.82		-1.79		0.48
Constant	29.14 ***	28.41 ***	27.27 ***	28.34 ***	28.67 ***	34.80 ***	28.90 ***	30.13 ***	28.61 ***	19.85 ***
F (3, 86)	2.49 *		2.36 +		2.20 +		0.68		1.11	
F (22, 67)		22.73 ***		6.42 ***		13.75 ***		3.99 ***		5.97 ***
$R^2$	0.00	0.14	0.00	0.08	0.01	0.15	0.01	0.14	0.01	0.17

Table 17: OLS Regression Estimates Predicting Relationship Satisfaction by Race/Ethnicity

1	Othe	r Latinas	Other Latinos		
	Model 1	Model 2	Model 3	Model 4	
	b	b	b	b	
Obesity History					
Chronic Obesity	-3.99	-2.65	0.25	0.74	
Recent Obesity	-2.04 +	-1.89 *	2.23 *	2.83 *	
Former Obesity	1.17	-1.02	0.36	1.72	
Non-obesity (ref.)	-	-	-	-	
Relationship Context					
Relationship Type					
Cohabitation		-1.04		-4.20 ***	
Dating		0.08		-3.37 *	
Single		-3.23 **		-4.52	
Marriage (ref.)		-		-	
Relationship Duration					
Relationship duration in years		0.06		-0.15	
M issing duration		1.53		1.35	
Individual Context					
Age		-0.41 +		-0.28	
Self-Reported Health		1.17 *		0.63	
School Urbanicity					
Urban		-1.16		0.72	
Rural		-9.91 **		2.45 *	
Suburban (ref.)		-		-	
Transitions					
Employed		0.66		0.61	
Educational Attainment		0.33		-0.28	
Enrolled in school		0.17		0.87	
Household Context					
Living with parents		0.11		-1.19	
Individual income		0.00		0.00	
Missing Income		-0.54		0.97	
Homeowner		1.40		0.24	
Biological children		-0.63		-1.12	
Step/foster/adoptive children		-9.69 ***		-1.06	
Constant	29.63 ***	30.36 ***	28.12 ***	37.24 ***	
df	3, 86	21, 68	3, 86	21, 68	
F	3.66 *	23.18 ***	1.80	18.01 ***	
$R^2$	0.05	0.26	0.02	0.20	

 Table 18: OLS Regression Coefficients of Other Latinas' and Other Latinos' Reported

 Relationship Satisfaction

#### **Chapter 6: In For the Long Haul: Obesity Histories and Relationship Commitment**

Few population-based studies have examined reported romantic relationship commitment. Typically, relationship commitment is inferred based on the type of relationship in which one is involved, and as a result, deferring to demographic and tangible references of commitment, such as divorce, break-ups, and whether young people enter into marital or cohabitation relationships. As such, little is known about young people's feelings or perceptions of commitment to their relationships. The little that is known about relationship commitment tends to stem from studies using non-probability samples. For example, one recent study using an internet survey which allowed for open-responses to reported problems in romantic relationships found that respondents in dating relationships were significantly more likely than those in cohabitation relationships to report feeling a lack of commitment to their relationship (Hsueh et al. 2009). Importantly, the authors did not compare married respondents and cohabiting respondents in their analyses because too few married respondents indicated that a lack of commitment was a problem in their relationship (Hsueh et al. 2009). Another study found that cohabiters felt more commitment to their relationships than daters (Rhoades et al. 2012b). Though both of these studies inform understandings about commitment to cohabitation relationships, they are unable to address population-level dynamics and differences between types of relationships and commitment, let alone provide nuanced discussions of how gender, race/ethnicity, and obesity interact to potentially create different commitment patterns.

One recent demographic report using the Couples Sample of Add Health (Wave III) suggests that young adults involved in romantic relationships overwhelmingly feel quite

committed to their relationships. Indeed, about 90% of married young adults reported feeling very committed to their relationship, compared to 83% of cohabiting women, 70% of cohabiting men, 70% of women in dating relationships and 63% of men in dating relationships (Wildsmith et al. 2013).<sup>15</sup> Although there is some variation by relationship type on reported commitment, the majority of young people involved in any type of relationship reported high levels of commitment. With this in mind, does simply having a relationship that one would *identify* as a relationship imply commitment by default? That is, if people did not feel even a trifle committed to their relationships, would they even report them as relationships in large-scale studies? This question is beyond the purview of this dissertation, but it is important to keep in mind nonetheless, especially given the limited evidence from population-based studies on relationship commitment.

There is an assumption in much of the sociological literature on relationship commitment that it is equivalent to the type of relationship in which one is involved. The basic logic here is that people enter marriages when they feel very committed, cohabitation relationships when they are less committed to the relationship than they would need to be to enter a marriage, and remain in dating relationships when commitment is relatively low. Moreover, there is an assumed progression toward marital relationships over time (or, the relationship eventually terminates). Given recent population shifts whereby large segments of the young adult population are involved in cohabitation relationships (Kennedy and Bumpass 2012; Manning et al. 2014), this

<sup>&</sup>lt;sup>15</sup> In this report, the authors use the phrase "very committed" to refer to the highest levels of relationship commitment. In the Wave III Add Health Codebook, respondents taking part in the Couples Sample were able to respond "completely committed," "very committed," "moderately committed," "somewhat committed," or "not at all committed" (n = 4,002, non-missing only). Per my calculations, I believe that Wildsmith and colleagues (2013) collapsed "completely committed" (n = 2,773, 69.29%, per codebook) along with "very committed" (n = 668, 16.69%, per codebook), and used the phrase "very committed" in the text of the report.

clean and linear trajectory of "successful relationships" is unlikely to reflect relationship patterns among young adults today.

Many of the ideas that cohabitation relationships are associated with less commitment stem from studies of divorce, several of which found that women (especially White women) who cohabited with a partner were more likely to divorce in the years following cohabitation (e.g., Dush, Cohan, and Amato 2003; Newcomb 1986; Phillips and Sweeney 2005; Teachman 2003). Others have argued that those who enter into cohabitation relationships feel less commitment to their relationships and have more positive attitudes toward divorce (Axinn and Thornton 1992), thus resulting in higher likelihoods of eventual marital dissolution. Another branch of research on cohabitation and divorce suggests that it is not the fact that individuals cohabited that makes them more likely to divorce, but rather, selection into cohabitation relationships (Lillard, Brien, and Waite 1995). Among more recent cohorts, however, studies suggest that involvement in cohabitation relationships is not particularly salient in shaping whether marriages eventually dissolve (Kuperberg 2014; Reinhold 2010). For example, Kuperberg's (2014) recent study examining cohabitation and divorce using 25 years of data from the NSFG found that age at cohabitation, rather than cohabitation alone, explained away the differential in divorce between those who cohabited and those who had not.

Even with these studies in mind, little is known about how individuals perceive their relationships and their commitment to them. When considering histories of obesity and relationship commitment, even less is known. As discussed in the previous chapters, however, prior research suggests that obesity is associated with lower quality relationships (e.g., Carr and Friedman 2006; Carr et al. 2013; Sobal, Rauschenbach, et al. 2009). It would be expected, then,

that if obesity is linked to poorer quality relationships, that obese individuals would feel less committed to them.

#### **Current Study**

### **Research Questions**

The final question explored in this dissertation is, how do gender, race/ethnicity, and histories of obesity relate to romantic relationship commitment in early adulthood? Given the theoretical work on obesity stigma in other realms of life, it was generally anticipated that histories of obesity would be associated with less relationship commitment. Of central importance is the idea that histories of obesity can be stigmatizing in interpersonal relationships, especially among some individuals. The findings from previous chapters provide some support for this idea. Another plausible hypothesis though, is that young adults with histories of obesity might feel *more* commitment to their relationships, perhaps as a result of stigma and feelings that obese individuals might have a harder time finding another viable partner if their current relationship terminated. Given the very limited evidence on relationship commitment and obesity, I considered both outcomes.

## Hypothesis 7

- H7<sub>a</sub>: Chronically obese young adults will be less likely than non-obese young adults to report they are completely committed to their relationships.
- H7<sub>b</sub>: Recently obese young adults will be less likely than non-obese young adults to report they are completely committed to their relationships.
- H7<sub>c</sub>: Formerly obese young adults will be less likely than non-obese young adults to report they are completely committed to their relationships.

#### Hypothesis 8

- H8<sub>a</sub>: Chronically obese young adults will be more likely than non-obese young adults to report complete commitment to their relationships.
- H8<sub>b</sub>: Formerly obese young adults will be more likely to report complete commitment to their relationships than non-obese young adults.
- H8<sub>c</sub>: Recently obese young adults will be more likely to report complete commitment to their relationships than non-obese young adults.

#### **Data, Measures and Methods**

This chapter builds upon the findings in Chapter 4 and Chapter 5 to further examine the ways obesity histories may be associated with relationship commitment. I employed data from Waves I, III, and IV of Add Health. All analyses were weighted using Wave IV cross-sectional weights, stratified by region at Wave I, and clustered by the schools attended at Wave I. Due to the nature of the dependent variable of interest in this chapter, respondents who were not involved in a romantic relationship at the time of interview were not asked questions on relationship commitment, and thus were excluded from the analytic sample. A total of 1,751 respondents from Chapter 5 were single or did not answer questions on their level of commitment to their relationships. The sample size was n = 7,664.

#### **Dependent Measures**

Reported romantic relationship commitment was the dependent measure of interest in this chapter. Relationship commitment was measured by a single self-reported question asking, "How committed are you to your relationship with [partner]?" Potential responses were measured using a four-point ordinal scale: completely committed (69.52%), very committed (17.13%), somewhat committed (8.20%), and not at all committed (5.15%) (see Table 1). As

these responses were highly skewed, the measure was recoded to a dummy variable for use in the multivariate models, where 1 = completely committed and 0 = very, somewhat, and not at all committed.

#### Independent Measures

As in the previous chapters, obesity histories, gender and race/ethnicity were the primary independent measures of interest (see Table 1). Within the sample, 5.63% of respondents were considered chronically obese, 13.54% were recently obese, and 2.32% were formerly obese. Seventy-nine percent did not have a history of obesity. About 52% of respondents were women. Almost 70% of respondents identified as White, 12.65% as Black, 6.29% as Mexican American, 4.19% as Other Latina/o, and 7.11% as Other Race/Ethnicity.

#### **Control Measures**

Relationship context measures, individual context measures, transitions to adulthood and household context during the transition to adulthood were held constant in all multivariate models, as each of these factors were anticipated to modify the relationship between gender, race/ethnicity, and histories of obesity on relationship commitment. To keep the discussion succinct, these controls have not been discussed further here. The same controls were used in this chapter as used in Chapter 5, with one exception. Relationship satisfaction was included as a potential modifier of relationship commitment. See Chapter 3 (Table 1) for a complete discussion and descriptives of each measure utilized in this chapter.

### Analytic Techniques

Similar to the prior two chapters, first, descriptive statistics for gender and race/ethnicity subpopulations were presented (see Table 19 and Table 20). Then, in Table 21, cross-tabulations with tests for significance were conducted to examine differences in reporting complete

commitment to one's relationship by obesity history, among the full sample and within genders and racial/ethnic groups. Table 22 through Table 25 present odds of reporting completely commitment to one's romantic relationship, first in the complete analytic sample (Table 22) and then when dividing the analytic sample by gender (Table 23) and race/ethnicity (Table 24).

With regard to multivariate testing, binary logistic regression was used to predict odds of reporting one was completely committed to her/his romantic relationship, rather than selection probit models, ordered logistic regression, or multinomial logistic regression. Under ideal circumstances, selection model would have been used to attempt to correct for the loss of respondents who were not involved in a relationship at the time of interview from the sample. Unfortunately, a suitable endogenous measure was not found. Other reasonable alternatives to the binary logistic regression models were ordinal logistic regression and multinomial logistic regression, using the original ranked categories of relationship committed (see Table 1). Ordinal logistic regression was not used as the models did not pass the parallel lines test, which checks the reliability and suitability of this modeling approach.

Multinomial logistic regression was also considered. Preliminary findings from multinomial models were consistent with those presented in the binary logistic regression models reported here and did not offer much additional nuance, regardless of which level of commitment served as the reference category. In part, this is likely due to the fact that nearly 70% of respondents stated they felt completely committed to their relationship (see Table 1). Overall, most of the variability in relationship commitment emerged between those who felt complete commitment to their relationship versus the collective lesser categories, rather than between each individual category. With this in mind, I deemed it most prudent to move forward with a more

parsimonious approach, the binary logistic regression models, rather than multinomial logistic regressions.

#### Results

#### Descriptives by Gender and Race/Ethnicity

Table 19 presents weighted descriptive statistics grouped by gender. As in the prior two analytic chapters, women were significantly overrepresented among those with recent histories of obesity (14.98%) compared to men (11.98%,  $p \le .05$ ). In contrast, men were marginally overrepresented among those with chronic histories of obesity (6.22%) compared to women (5.08%,  $p \le .10$ ) and significantly overrepresented among formerly obese respondents (women: 1.41%;  $p \le .001$ ; men: 3.30%). Significant variability emerged in women and men's reported levels of romantic relationship commitment. Indeed, nearly three-quarters of women indicated they were completely committed to their relationship (74.13%), compared to less than two-thirds of men (64.57%;  $p \le .001$ ). See Table 19 for complete descriptives grouped by gender.

Racial/ethnic group differences were also found in obesity histories and levels of romantic relationship commitment (see Table 20). With regard to chronic obesity, Blacks (9.76%) were significantly overrepresented, compared to Whites (4.67%;  $p \le .05$ ). Other significant differences were also found when comparing those with no history of obesity. Indeed, Whites were significantly overrepresented among those with no history of obesity (80.59%) compared to Blacks (69.29%,  $p \le .05$ ) and Mexican Americans (73.30%,  $p \le .05$ ). Similarly, Blacks were also significantly less likely than Other Latinas/os (77.31%) to be considered nonobese ( $p \le .05$ ). There were no other significant differences in obesity history by race/ethnicity.

Several differences emerged among the different racial/ethnic group's commitment to their current romantic relationship. Nearly three-quarters of Whites reported they were

completely committed to their relationship (74.87%). Less than two-thirds of Mexican Americans (62.39%) and Other Latinas/os (59.04%) reported they were completely committed to their romantic relationship. Only half of Blacks reported they were completely committed to their romantic relationship (50.38%). As expected, Whites were overrepresented among those reporting complete commitment, compared to Blacks, Mexican Americans, and Other Latinas/os, while Blacks were less represented among those reporting complete commitment to their relationship compared to Mexican Americans and Other Latinas/os (each  $p \le .05$ ). Please see Table 20 for complete sample statistics grouped by race/ethnicity.

## Comparisons of Relationship Commitment by Obesity History

To examine the variation in obesity histories and reporting complete commitment to one's relationship in further detail, Table 21 presents findings from a series of cross-tabulations with survey-adjusted  $\chi^2$  tests to examine differences within the full sample, along with gender and racial/ethnic sample subsets. A significantly smaller share of chronically obese respondents reported feeling completely committed to their relationship (62.60%) compared to non-obese respondents (69.98%,  $p \le .05$ ). Similarly, chronically obese men (55.07%) were also significantly less likely than non-obese men (64.57%,  $p \le .05$ ) to report feeling completely committed to their relationships. Among women, Whites, Blacks, Mexican Americans, and Other Latinas/os, however, significant differences in reported relationship commitment were not found by histories of obesity.

### Likelihoods of Feeling Completely Committed by Obesity History

In light of the bivariate relationships presented in Table 21, suggesting that overall and among men specifically, histories of obesity were associated with less strong feelings of commitment, multivariate tests were conducted. Table 22 shows binary logistic regression models predicting odds of reporting complete commitment to romantic relationships. The first model examines how histories of obesity, alone, relate to feeling completely committed to one's current romantic relationship. Chronically obese individuals were significantly less likely than non-obese individuals to indicate they felt completely committed to their relationship ( $OR = 0.72, p \le .01$ ). Recently obese (OR = 0.97, p > .10) and formerly obese individuals (OR = 1.09, p > .10) did not significantly differ from non-obese individuals in reported relationship commitment. Once romantic relationship type, duration, and satisfaction controls were considered in Model 2, chronically obese respondents reported only marginally lower odds of feeling completely committed to their relationships compared to non-obese respondents ( $OR = 0.76, p \le .10$ ).

In addition to histories of obesity and relationship context, the findings presented in Model 3 also included individual context measures. Once the individual context measures were included, chronic obesity was no longer associated with relationship commitment (OR = 0.84, p > .10). Interestingly, however, once the individual context measures were included, formerly obese individuals were significantly more likely than non-obese individuals to report feeling completely committed to their relationship (OR = 1.78,  $p \le .05$ ). The pattern observed in Model 3 held through Models 4 and 5, as none of the transition to adulthood measures or household context measures were meaningfully associated with relationship commitment, suggesting that the controls employed in the chapter were poorly fitted to the model. Once all controls were held constant in Model 5, formerly obese individuals were 74% more likely than non-obese individuals to report feeling complete commitment to their relationships (OR = 1.74,  $p \le .05$ ).

In Model 6, two-way interactions were introduced to examine how relationships among histories of obesity and commitment might vary by gender (also see Table 30). Interestingly,

there was a positive and significant interaction between chronic obesity and gender (OR = 2.13,  $p \le .05$ ). The significant interaction suggested that the relationship between chronic obesity and relationship commitment was contingent upon gender. This finding is further addressed in Table 23.

To assess how histories of obesity along with race/ethnicity shaped perceptions of relationship commitment, two-way interaction terms between the two were presented in Model 7. Two significant two-way interactions were found in Model 7. The first was a positive interaction between chronic obesity and identifying as Other Latina/o ( $OR = 7.21, p \le .05$ ), and the second was a negative interaction between former obesity and identifying as Mexican American ( $OR = 0.20, p \le .05$ ). Together, both terms suggest that the relationships between chronic obesity and commitment were contingent upon racial/ethnic identifications. In particular, it appeared that Mexican Americans with chronic histories of obesity and formerly obese Other Latinas/os report different levels of relationship commitment than non-obese Whites.

The significant two-way interaction between chronic obesity and gender ( $OR = 2.67, p \le .05$ ), along with the interaction between chronic obesity and identifying as Other Latina/o ( $OR = 5.68, p \le .05$ ) held once three-way interactions were included in the model (see Model 8). These interactions, when considered alongside relevant main effects, suggested that chronically obese women and chronically obese Other Latinas/os were more likely than non-obese men and non-obese Whites (respectively) to feel completely committed to their relationships.

The two-way interaction between former obesity and identifying as Mexican American was no longer statistically significant (OR = 0.52, p > .10), though a three-way interaction between former obesity, Mexican American, and gender emerged ( $OR = 0.02, p \le .01$ ). The

elimination of the two-way interaction between former obesity and Mexican American identity and the emergence of a three-way interaction including gender indicated that the effects of former obesity on relationship commitment were contingent upon gender for Mexican American young adults. This finding is further disentangled in the following sections and in Table 25.

Additionally, a significant three-way interaction was found between chronic obesity, Mexican American identity, and gender (OR = 0.07,  $p \le .05$ ). Taken together, the pattern presented in Model 8 demonstrates the complexity of understanding how histories of obesity, gender, and race/ethnicity relate to feelings of commitment. As a result, additional tests were necessary to further extrapolate how gender, race/ethnicity, and histories of obesity differentially shape individuals' perceptions of relationship commitment.

First, binary logistic regression tests were conducted while grouping the sample by gender, as presented in Table 23. Among women, prior to controls being introduced, histories of obesity were not significantly associated with commitment. Once controls were included in Model 2, formerly obese women were found to be three times more likely than non-obese women to report feeling completely committed to their relationships ( $OR = 3.02, p \le .01$ ), suggesting that the inclusion of controls revealed the otherwise obscured relationship between former obesity and relationship commitment among women. In Model 3, two-way interactions between histories of obesity and race/ethnicity were included to examine how these might interact to differently shape women's commitment to their relationships (see Table 31).<sup>16</sup> The only statistically significant interaction emerged between former obesity and identifying as Mexican American ( $OR = 0.01, p \le .001$ ), but because of the significant three-way interaction

<sup>&</sup>lt;sup>16</sup> Because there were too few formerly obese Other Latinas in Model 3, this interaction term could not be reliably included in the model.

noted in Table 22, I will hold off on discussing this finding here, as additional analyses were conducted when only considering Mexican American women and men (see Table 25).

For men, histories of obesity and interacted with race/ethnicity, resulting in quite different patterns of relationship commitment than those found among women. For example, before and after controls were considered, chronically obese men were significantly less likely than non-obese men to report feeling complete commitment to their relationships. As presented in Model 5, chronically obese men were 41% less likely than non-obese men to indicate complete commitment to their relationships, when holding controls constant ( $OR = 0.59, p \le .05$ ). However, recently obese men (OR = 1.10, p > .10) and formerly obese men (OR = 1.39, p > .10) did not differ from non-obese men in likelihoods of reporting complete commitment to romantic relationships. Once two-way interaction terms were included in Model 6, the net effects of the significant two-way interaction and relevant main effects between chronic obesity and Other Latino identity ( $OR = 5.66, p \le .05$ ) indicated that chronically obese Other Latinos were significantly more likely than non-obese White men to report feeling completely committed to their relationships.

Because race/ethnicity was consistently associated with relationship commitment and in some cases interacted with histories of obesity in both the overall sample (Table 22) and within gendered subsets (Table 23), additional tests have been presented in Table 24 examining relationship commitment within racial/ethnic categories. In none of the final models presented in Table 24 were histories of obesity associated with lower levels of commitment. Among Whites, there were initial indications that histories of obesity would be associated with lower likelihoods of reporting complete commitment, as chronically obese Whites were significantly less likely than non-obese Whites to report feeling completely committed to their relationships (OR = 0.67,

 $p \le .05$ ). However, the effects of relationship context and individual context effectively explained the relationship between chronic obesity and relationship commitment away to nonsignificance (OR = 0.73, p > .10). Both Blacks (Model 3) and Other Latinas/os' (Model 7) obesity histories were not significantly associated with relationship commitment prior to controls being included in the models. After controls were introduced, former obesity among Blacks (OR = 2.19,  $p \le .05$ ) was associated with higher odds of reporting complete commitment to relationships, compared to non-obesity among Blacks.

Among Mexican Americans, none of the obesity history categories were significantly associated with differences in relationship commitment among men (Models 5 - 6). However, given the significant three-way interactions between obesity history, Mexican American identity and gender presented in Table 22, it was probable that histories of obesity were related to Mexican Americans' relationship commitment, but that the association was contingent upon gender. To test this idea, four additional models have been considered in Table 25, examining Mexican American women and men's odds of reporting complete commitment to relationships.

In Model 1, Mexican American women's obesity histories were considered as lone predictors of reporting complete commitment, and in Model 2 controls were considered. Both before and after controls, chronic and recent histories of obesity were not significantly associated with differences in Mexican American women's relationship commitment. Once controls were considered, former obesity among Mexican American women, which was not significantly associated with relationship commitment prior to controls being introduced, became associated with significantly lower odds of reporting complete relationship commitment ( $OR = 0.02, p \le$ .001). Overall, these findings suggested that formerly obese Mexican American women were much less likely than non-obese Mexican American women to report feeling completely committed to their relationships. Overall, the significant-three way interaction presented in Table 25 suggested that formerly obese Mexican American women had much lower likelihoods of reporting complete commitment to their relationships compared to non-obese White men, non-obese Mexican American men, and formerly obese Mexican American men. Importantly, in neither model including only Mexican American men in Table 25 were histories of obesity significantly associated with relationship commitment. That is, the effects of former obesity on Mexican Americans' level of relationship commitment was entirely contingent upon gender.

## Discussion

In this chapter, because very few studies have used population-based data to understand perceptions of relationship commitment, two sets of hypotheses were posed suggesting opposing outcomes. The first set of hypotheses (H7) suggested that individuals with histories of obesity would be less likely to feel completely committed to their relationships, because their relationships might be perceived as lower quality overall. The second set (H8) posited that individuals with histories of obesity would be more likely to feel completely committed to their relationships, perhaps due to the difficulties some obese individuals may face in seeking out alternative relationships. Some support was found for both hypotheses, which was consistent with findings presented in both Chapters 4 and 5. Among chronically obese Other Latinos, formerly obese Blacks, formerly obese Mexican American men, and formerly obese women, support was found for the hypotheses that chronically obese (H8<sub>a</sub>) and formerly obese individuals (H8<sub>c</sub>) would be more likely than non-obese individuals to report feeling completely committed to their relationships. Formerly obese Mexican American women and chronically obese men, however, were significantly less likely to report feeling complete commitment to their relationships compared to non-obese Mexican American women and non-obese men,

suggesting support for the hypothesis that formerly and chronically obese individuals would be less likely to feel complete commitment to their relationships ( $H7_a$  and  $H7_c$ , respectively). Support was not found for either hypothesis addressing recently obese respondents ( $H7_b$  and  $H8_b$ ).

The findings from this chapter suggest that histories of obesity are associated with divergent reports of relationship commitment, depending on the gender and racial/ethnic identities of individuals with histories of obesity. The pattern detailed in this chapter is consistent with an intersectional framework, which suggests that individuals' experiences cannot be reduced to simply one characteristic, but rather, the overlap and interplay of a number of factors (e.g., van Amsterdam 2013; Hill Collins 2000; Moya 2001).

The analyses in this chapter sought to address questions on perceptions of relationship commitment, and how gender, race/ethnicity, and obesity histories intersect to produce differential levels of relationship commitment. Studies examining young adults' relationship commitment are sparse, as instead of examining population-level perceptions of relationship commitment, sociologists and demographers have concentrated on tangible relationship outcomes. Even with the type of relationship in which individuals were involved held constant, histories of obesity, gender and race/ethnicity together were associated with differing levels of relationship commitment. In some respects then, and consistent with some of the other findings from this dissertation, histories of obesity are important and salient in shaping perceptions of commitment and the role of obesity is variable, depending on who experiences obesity and their racial/ethnic background and gender. For men, some support was found for the Obesity Recency models posed in Chapter 2, as men who were recently and formerly obese did not differ from

non-obese men, while chronically obese men were less likely to report feeling completely committed to their relationships.

Unlike the findings from previous chapters, this chapter also elucidated some of the potentially harmful effects of residual obesity stigma on perceptions of relationship commitment. In particular, formerly obese Mexican American women were less likely than non-obese Mexican American women to report feeling completely committed to their relationships, indicating some support for the Obesity Stability framework posed in Chapter 2. As suggested in previous studies, residual obesity stigma can negatively manifest in poorer quality interpersonal relationships later on (Carr and Friedman 2006; Carr and Jaffe 2012; Carr et al. 2013; Latner et al. 2012). However, an alternative interpretation may be that formerly obese Mexican American women felt less committed to their relationships than non-obese Mexican American women because, given that they were no longer obese, they may have perceived opportunities to leave their current relationship and engage in relationships with others. This is plausible, as about onequarter of formerly obese Mexican American women were dating their partners without sharing a home.<sup>17</sup> As such, it would not be the stigma of experiencing obesity in adolescence, but rather, empowerment to engage in new relationships, as a result of feeling less commitment to one's current relationships and perceived ease by which one could find an alternative partner.

## Conclusion

A critical finding from this chapter, and along the lines of the discussion in Chapters 4 and 5, is that understandings of relationship commitment are differentially shaped by the combination of race/ethnicity, gender, and histories of obesity. To my knowledge, to date, no other studies have examined how obesity is associated with relationship commitment, let alone

<sup>&</sup>lt;sup>17</sup> Notably, inferences regarding former obesity among Mexican American women should be made cautiously, as few Mexican American women had former histories of obesity.

employed an intersectional lens to examine how obesity works alongside gender and race/ethnicity to shape reported relationship commitment. In some cases, obesity histories relate to qualitatively better relationship outcomes, while in others, experiencing obesity can inhibit the development of relationships, satisfaction with relationships, and commitment to relationships.

# Tables

Table 19: Weighted Descriptive Statistics by Gender

	Femal	le	Male	20
	$\frac{n=4,1}{Porcont}$	92	n=3,4	12
	Mean	SE	Mean	SE
Obesity	Wiedh	5L	Wiedh	5L
Chronic Obesity	5.08	0.42	6.22	0.61 +
Recent Obesity	14.98	0.86	11.98	0.83 *
Former Obesity	1.41	0.23	3.30	0.46 ***
Non-obesity	78.53	1.15	78.51	1.12
Relationship Commitment				
Completely Committed	74.13	1.00	64.56	1.20 ***
Relationship Context				
Relationship Type				
Marriage	54.78	1.79	48.07	1.71 ***
Cohabitation	25.76	1.36	27.63	0.99
Dating	19.46	1.16	24.30	1.53 **
Relationship Duration	1,110		2.110.0	100
Relationship duration in years (0-19)*	5.68	0.13	4.73	0.13 ***
Missing duration	5.07	0.49	4.40	0.52
Relationship satisfaction index (7-35)	29.44	0.13	29.50	0.13
Individual Context	_,			
Race and Ethnicity				
White	69.50	2.81	70.04	2.83
Black	12.78	2.03	12.51	1.90
Mexican American	6.15	1.20	6.44	1.33
Other Latina/o	4.39	1.16	3.98	0.95
Other Race/Ethnicity	7.18	7.18	7.03	0.88
Age (18-27)	21.33	0.16	21.44	0.17 *
Self-Reported Health (1-5)	3.93	0.02	4.11	0.02 ***
School Urbanicity				
Suburban	58.54	5.19	58.19	4.86
Urban	24.77	4.18	25.17	4.04
Rural	16.69	4.96	16.64	4.72
Transitions				
Employed	68.89	1.26	74.25	1.39 ***
Educational Attainment (6-22)	13.23	0.12	12.96	0.12 ***
Enrolled in school	43.33	2.14	36.28	1.70 ***
Household Context				
Living with parents	35.50	1.66	44.21	2.05 ***
Individual income (\$0-250.000)*	11117.00	501.18	15660.00	558.47 ***
Missing Income	21.40	1.40	17.86	1.40 **
Homeowner	13.76	1.25	10.81	1.08 **
Biological children	24.33	1.69	9.51	0.92 ***
Step/foster/adoptive children	0.60	0.14	2.31	0.36 ***

\*For the purposes of determining the mean, all missing values for income were omitted.

	White	e	Black	c	Mexican Ar	nerican	Other Lati	na/o	Other Race/E	Ethnicity
	$n = 4,3^{2}$	78	<i>n</i> = 1,4	41	<i>n</i> =56	8	n = 528	3	n = 74	9
-	Percent /		Percent /		Percent /		Percent /		Percent /	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Obesity Histories										
Chronic Obeisty	4.67	0.50	9.76	1.07	6.12	1.34	7.61	1.39	6.01	1.39 a
Recent Obesity	12.79	0.74	17.41	1.76	16.02	1.89	13.72	2.27	11.66	1.80
Former Obesity	1.94	0.27	3.54	0.75	4.57	1.85	1.36	0.75	2.39	0.79
Non-obesity	80.59	0.99	69.29	2.00	73.30	2.47	77.31	2.83	79.94	2.34 a, b, g
Relationship Commitment										
Completely Committed	74.87	0.88	50.38	1.59	62.39	2.64	59.04	3.08	63.65	2.59 a, b, c, d, e, f, g
Relationship Context										
Relationship Type										
Marriage	56.17	1.50	31.68	2.45	55.09	3.50	40.22	3.95	45.12	3.41 a, c, d, e, g, h, i
Cohabitation	25.46	1.11	32.47	2.09	19.93	2.10	32.60	4.90	30.54	3.18 a, e, h, i
Dating	18.37	1.08	35.84	2.27	24.98	2.99	27.18	2.60	24.34	2.80 a, c, e, g
Relationship Duration										
Relationship duration in years (0-19)*	5.30	0.13	4.74	0.20	5.76	0.28	5.25	0.21	4.73	0.25 a, e, i
Missing duration	4.11	0.39	8.29	1.09	3.50	1.09	4.89	1.54	5.65	1.76 a, e
Relationship satisfaction index (7-35)	29.79	0.12	27.99	0.21	29.16	0.37	29.16	0.30	29.34	0.33 a, e, f, g
Female	51.69	1.07	52.41	2.08	50.70	3.99	54.32	3.18	52.39	2.49
Age (18-27)	21.35	0.16	21.50	0.26	21.49	0.31	21.27	0.38	21.43	0.19
Self-Reported Health (1-5)	4.04	0.02	4.01	0.04	4.03	0.05	3.91	0.07	3.89	0.04 d, i
School Urbanicity										
Suburban	62.44	5.63	57.48	9.29	31.01	7.75	35.16	9.76	58.00	7.17 b, c, i, j
Urban	18.08	3.36	28.72	7.14	62.94	8.58	63.38	10.09	29.56	6.11 b, c, e, f, i, j
Rural	19.48	5.84	13.80	7.32	6.05	4.56	1.46	1.04	12.45	5.18 c, i
Transitions										
Employed	73.80	1.24	59.98	2.14	74.60	2.92	73.15	2.03	65.32	2.24 a, d, e, f, i, j
Educational Attainment (6-22)	13.21	0.12	12.83	0.22	12.38	0.17	12.76	0.23	13.36	0.17 b, g, i, j
Enrolled in school	41.48	2.00	34.43	2.90	28.73	3.00	43.15	3.79	42.68	3.23 b, h, i
Household Context										
Living with parents	37.19	1.84	42.59	2.86	49.33	3.08	55.08	5.05	41.48	3.36 b, c, j
Individual income (\$0-250,000)*	13918.00	552.30	9925.18	651.37	16075.00	1463.90	10927.00	1364.82	12422.00	678.56 a, e, g
Missing Income	18.45	1.40	27.67	2.87	22.73	2.59	16.49	3.24	16.94	2.31 a, f, g
Homeowner	14.78	1.19	6.55	1.13	8.06	2.11	5.34	1.61	6.70	1.35 a, b, c, d
Biological children	15.34	1.31	24.24	2.00	27.75	3.62	15.89	1.98	14.32	2.35 a, b, f, g, h, i
Step/foster/adoptive children	1.28	0.22	1.83	0.57	1.15	0.58	2.87	1.31	1.42	0.71

Table 20: Weighted Descriptive Statistics by Race/Ethnicity

## Table 20: Weighted Descriptive Statistics by Race/Ethnicity (continued)

\*For the purposes of determining the mean, all missing values for income were omitted.

Each at the  $p \le ..05$  level: 'a' indicates a significant difference between Whites and Blacks. 'b' indicates a significant difference between Whites and Mexican Americans. 'c' indicates a significant difference between Whites and Other Latinas/os. 'd' indicates a significant difference between Whites and Other Latinas/os. 'd' indicates a significant difference between Blacks and Mexican Americans. 'f' indicates as significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Blacks and Other Racial/Ethnic minorities. 'h' indicates a significant difference between Mexican Americans and Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Latinas/os. 'i' indicates a significant difference between Other Racial/Ethnic minorities. 'j' indicates a significant difference between Other Racial/Ethnic minorities.

	Chronic Obesity	Recent Obesity	Former Obesity	Non-obese
Total	62.60	69.39	71.68	69.98 a
Women	71.14	69.81	82.27	74.99
Men	55.07	68.82	66.79	64.57 a
White	66.75	77.20	79.01	74.86
Black	45.70	55.02	53.09	49.73
Mexican American	64.57	50.83	58.71	64.96
Other Latina/o	70.54	58.46	65.94	57.89
Other Race/Ethnicity	72.02	53.62	85.93	63.81 b, c

Table 21: Percent Reporting Complete Commitment to Relationships by Obesity History

Each at the  $p \le ..05$  level: 'a' indicates a significant difference between chronically obese and nonobese respondents. 'b' indicates a significant difference between recently obese and formerly obese respondents. 'c' indicates a significant difference between formerly obese and non-obese respondents. There were no other statistically significant differences between obesity history categories.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Measure	OR	OR	OR	OR	OR	OR	OR	OR
Obesity History								
Chronic Obesity	0.72 **	0.76 +	0.84	0.85	0.84	0.61 *	0.81	0.55 *
Recent Obesity	0.97	1.02	1.04	1.04	1.04	1.14	1.10	1.23
Former Obesity	1.09	1.44	1.78 *	1.77 *	1.74 *	1.38	2.47 *	1.90
Non-obesity (ref.)	-	-	-	-	-	-	-	-
Relationship Context								
Relationship Type								
Cohabitation		0.44 ***	0.47 ***	0.48 ***	0.47 ***	0.47 ***	0.47 ***	0.47 ***
Dating		0.11 ***	0.12 ***	0.12 ***	0.12 ***	0.12 ***	0.11 ***	0.11 ***
Marriage (ref.)		-	-	-	-	-	-	-
Relationship duration		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Missing duration		1.34	1.39	1.42	1.43	1.44	1.45	1.46
Relationship satisfaction		1.30 ***	1.31 ***	1.31 ***	1.31 ***	1.31 ***	1.31 ***	1.32 ***
Individual Context								
Race and Ethnicity								
Black			0.50 ***	0.50 ***	0.49 ***	0.48 ***	0.50 ***	0.37 ***
Mexican American			0.54 **	0.55 **	0.53 **	0.53 **	0.63 *	0.42 ***
Other Latina/o			0.51 ***	0.52 ***	0.51 ***	0.51 ***	0.48 ***	0.44 **
Other Race/Ethnicity			0.61 **	0.61 **	0.60 **	0.61 **	0.60 **	0.61 **
White (ref.)			-	-	-	-	-	-
Female			1.89 ***	1.90 ***	1.92 ***	1.84 ***	1.93 ***	1.61 ***
Age			0.99	0.97	0.97	0.97	0.97	0.97
Self-Reported Health			1.01	1.01	1.01	1.01	1.00	1.01
School Urbanicity								
Urban			1.05	1.06	1.06	1.06	1.05	1.05
Rural			1.03	1.03	1.05	1.05	1.05	1.05
Suburban (ref.)			-	-	-	-	-	-
Transitions								
Employed				1.01	1.00	1.00	0.99	0.98
Educational Attainment				1.04	1.04	1.04	1.04	1.04
Enrolled in school				0.85	0.86	0.86	0.86	0.86
Household Context								
Living with parents					1.12	1.12	1.12	1.11
Individual income					1.00	1.00	1.00	1.00
Missing Income					1.27 +	1.28 *	1.27 +	1.29 *
Homeowner					0.90	0.90	0.89	0.90
Biological children					1.06	1.06	1.05	1.01
Step/foster/adoptive children					1.47	1.50	1.43	1.53

Table 22: Odds of Reporting Completely Committed to Romantic Relationship

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Measure	OR	OR	OR	OR	OR	OR	OR	OR
Interactions								
Chronic Obesity*Female						2.13 *		2.67 *
Recent Obesity*Female						0.85		0.82
Former Obesity*Female						2.28		2.57
Chronic Obesity*Black							0.67	0.68
Chronic Obesity*Mexican Ame	rican						1.72	5.59 +
Chronic Obesity*Other Latina/	)						7.21 *	5.68 *
Recent Obesity*Black							1.13	0.80
Recent Obesity*Mexican Ameri	ican						0.44	0.54
Recent Obesity*Other Latina/o							0.74	1.10
Former Obesity*Black							0.80	0.52
Former Obesity*Mexican Amer	ican						0.20 *	0.52
Former Obesity*Other Latina/o							0.39	0.50
Black*Female								1.84 *
Mexican American*Female								2.49 *
Other Latina/o*Female								1.22
Chronic Obesity*Black*Female								0.69
Chronic Obesity*Mexican Ame	rican*Female							0.07 *
Chronic Obesity*Other Latina/	o*Female							1.36
Recent Obesity*Black*Female								1.58
Recent Obesity*Mexican Amer	ican*Female							0.58
Recent Obesity*Other Latina/o	*Female							0.56
Former Obesity*Black*Female								1.79
Former Obesity*Mexican American*Female							0.02 **	
Former Obesity*Other Latina/o	*Female							~
df	3, 86	8, 81	17,72	20, 69	26, 63	29,60	35, 54	49, 40
F	3.01 *	129.32 ***	69.32 ***	57.38 ***	46.24 ***	46.99 ***	34.22 ***	36.89 ***

Table 22: Odds of Reporting Completely Committed to Romantic Relationship, continued

Ł		Female		· · · ·	Male	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Measure	OR	OR	OR	OR	OR	OR
Obesity History						
Chronic Obesity	0.82	1.26	1.53	0.67 *	0.59 *	0.52 *
Recent Obesity	0.77 +	0.98	1.06	1.21	1.10	1.17
Former Obesity	1.55	3.02 **	5.28 *	1.10	1.39	1.88
Non-obesity (ref.)	-	-	-	-	-	-
Relationship Context						
Relationship Type						
Cohabitation		0.49 ***	0.49 ***		0.45 ***	0.46 ***
Dating		0.12 ***	0.11 ***		0.11 ***	0.11 ***
Marriage (ref.)		-	-		-	-
Relationship duration		0.98	0.98		1.03	1.03
Missing duration		1.13	1.14		1.80 *	1.86 *
Relationship satisfaction		1.30 ***	1.30 ***		1.33 ***	1.33 ***
Individual Ĉontext						
Race and Ethnicity						
Black		0.64 *	0.64 **		0.34 ***	0.37 ***
Mexican American		0.67	1.00		0.42 ***	0.43 **
Other Latina/o		0.50 ***	0.49 ***		0.50 **	0.44 **
Other Race/Ethnicity		0.55 **	0.55 **		0.66 +	0.66 +
White (ref.)		-	-		-	-
Age		0.99	0.99		0.95	0.95
Self-Reported Health		1.09	1.10		0.94	0.94
School Urbanicity						
Urban		1.23	1.23		0.94	0.93
Rural		1.22	1.21		0.93	0.93
Suburban (ref.)		-	-		-	-
Transitions						
Employed		1.11	1.09		0.88	0.88
Educational Attainment		1.06	1.06		1.02	1.02
Enrolled in school		0.89	0.90		0.82	0.82
Household Context						
Living with parents		1.12	1.10		1.12	1.12
Individual income		1.00	1.00		1.00	1.00
Missing Income		1.16	1.16		1.44 *	1.43 *
Homeowner		0.79	0.77		1.06	1.07
Biological children		1.10	1.08		0.96	0.94
Step/foster/adoptive children		0.73	0.74		1.85	1.82
Interactions						0.10
Chronic Obesity*Black			0.49			0.68
Chronic Obesity*Mexican American			0.33 +			6.58 +
Chronic Obesity*Other Latina/o			6.27			5.66 *
Recent Obesity*Black			1.25			0.80
Recent Obesity*Mexican American			0.31			0.54
Recent Obesity*Other Latina/o			0.63			1.16
Former Obesity*Black			0.85			0.53
Former Obesity*Mexican American			0.01 ***			0.44
Former Obesity* Other Latina/o	2.96	25 64	~	2.96	25 64	0.47
aj	3, 80	25, 64	33, 30	3, 80	25, 64	34, 33
F	1.88	30.59 ***	24.84 ***	3.15 *	22.29 ***	17.74 ***

## Table 23: Women and Men's Odds of Reporting Complete Commitment to Romantic Relationship

 $p \le 0.10, p \le 0.05, p \ge 0.01, p \ge 0.001, p \le 0.001$ . ~ The two-way interaction term between former obesity and identifying as an Other Latina was forced out of the model because there were too few formerly obese Other Latinas in the model.

~	White		Black		Mexican American		Other Latina/o		Other Race/Ethnicity	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Measure	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
Obesity History										
Chronic Obesity	0.67 *	0.73	0.85	0.57	0.98	1.02	1.74	10.36 +	1.46	1.94
Recent Obesity	1.14	1.13	1.24	1.15	0.56	0.58	1.02	0.57	0.66	0.95
Former Obesity	1.26	2.15 +	1.14	2.19 *	0.77	0.54	1.41	1.03	3.46 +	3.99 *
Non-obesity (ref.)	-	-	-	-	-	-	-	-	-	-
Relationship Context										
Relationship Type										
Cohabitation		0.50 ***		0.39 ***		0.49 +		0.63		0.37 **
Dating		0.10 ***		0.15 ***		0.26 ***		0.08 ***		0.08 ***
Marriage (ref.)		-		-		-				-
Relationship duration		1.01		0.98		1.03		0.95		0.97
Missing duration		1.59		1.05		3.03 +		0.61		2.88
Relationship satisfaction		1.33 ***		1.33 ***		1.28 ***		1.49 ***		1.28 ***
Individual Context										
Female		1.73 ***		3.25 ***		2.65 *		2.60 **		1.55 +
Age		0.94		1.06		1.03		1.01		0.89
Self-Reported Health		0.97		0.99		1.27 +		1.11		0.97
School Urbanicity										
Urban		1.02		1.11		1.09		0.65		1.26
Rural		1.07		0.74		0.68		0.06 **		2.58 *
Suburban (ref.)		-		-		-				-
Transitions										
Employed		0.94		1.42 +		0.61		1.46		0.68
Educational Attainment		1.03		1.05		1.11		0.90		1.16 +
Enrolled in school		0.85		1.04		0.90		0.49 +		0.96
Household Context										
Living with parents		1.18		0.94		0.95		0.77		1.13
Individual income		1.00		1.00		1.00		1.00		1.00
Missing Income		1.17		1.08		2.99 *		1.31		1.31
Homeowner		1.02		0.51		0.61		2.18		0.74
Biological children		0.91		1.35		1.52		0.52		0.78
Step/foster/adoptive children		1.36		3.01		0.50		2.72		1.35
df	3, 86	22, 67	3, 86	22, 67	3, 86	22, 67	3, 86	22, 67	3, 86	22, 67
F	2.01	30.30 ***	0.45	11.03 ***	0.64	11.41 ***	0.39	14.91 ***	1.52	6.79 ***

Table 24: Odds of Reporting Complete Commitment to Romantic Relationship by Race/Ethnicity

F	Mexican American Female		Mexican A	merican Male
	Model 1	Model 2	Model 3	Model 4
Measure	OR	OR	OR	OR
Obesity History				
Chronic Obesity	0.35 +	0.40	2.76	5.64
Recent Obesity	0.36 +	0.29 +	0.74	1.03
Former Obesity	0.28	0.02 ***	1.32	0.80
Non-obesity (ref.)	-	-	-	-
Relationship Context				
Relationship Type				
Cohabitation		0.86		0.51
Dating		0.09 **		0.45
Marriage (ref.)		-		-
Relationship duration		0.98		1.06
Missing duration		0.84		15.73 *
Relationship satisfaction		1.28 ***		1.43 ***
Individual Context				
Age		1.34		0.90
Self-Reported Health		1.42		1.18
School Urbanicity				
Urban		0.71		2.30 +
Rural		1.05		0.58
Suburban (ref.)		-		-
Transitions				
Employed		1.59		0.30 +
Educational Attainment		1.28		1.07
Enrolled in school		2.46		0.35
Household Context				
Living with parents		0.59		0.88
Individual income		1.00		1.00
Missing Income		1.20		4.68 *
Homeowner		0.34		0.80
Biological children		4.14 **		0.73
Step/toster/adoptive children	0.04	~	2.06	1.26
df	3, 86	20, 69	3,86	21,68
<u>F</u>	2.59 +	10.15 ***	0.86	6.85 ***

Table 25: Mexican American Females and Males' Odds of Reporting Complete Commitment to Relationships

 $+p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

~ Measure was forced out of the model.
#### **Chapter 7: Discussion and Conclusion**

This dissertation built upon the academic literature on the social consequences of obesity during the first three decades of life by examining romantic relationship experiences through an intersectional lens. The findings of this dissertation speak to the broader literatures on the long term effects of obesity and social positionality on romantic relationships during transition to adulthood. Moreover, this dissertation has implications for theories of stigma and intersectional frameworks on the scholarship of bodies. Overall, this dissertation suggests that histories of obesity interact with gender and race/ethnicity in divergent fashions to influence involvement in romantic relationships, satisfaction with these relationships, and commitment to romantic relationships. Scholars examining the social consequences of obesity ought to pursue more nuanced and complex approaches to understand the lives of individuals experiencing obesity.

## Histories of Obesity in the Transition to Adulthood

A growing body of research examines the social consequences of obesity during the transition to adulthood. Some of the major contributions in this area have found that histories of obesity are negatively associated with educational attainment (Crosnoe 2007) and wages (Han et al. 2011) in early adulthood. A number of studies have examined how obesity in adolescence can shape interpersonal relationships in adolescence. Previous research on the social consequences of obesity in adolescence suggests that overall, obesity is linked to social isolation in friendship and romantic networks (e.g., Ali et al. 2012; Cheng and Landale 2011; Crosnoe et al. 2008; Cunningham et al. 2012; Strauss and Pollack 2003; Valente et al. 2009), but that the effects are shaped considerably by gender and race/ethnicity, whereby girls and Whites tend to experience

more social isolation as result of their obesity than boys and racial/ethnic minorities (Ali et al. 2014; Cheng and Landale 2011; Cunningham et al. 2012). Seldom have young adults' romantic relationships been considered in the literature on the social consequences of obesity. Much of the previous research on romantic relationships and obesity histories examines obesity in early adulthood and middle adulthood and relationship outcomes in midlife (Carr and Friedman 2006; Carr et al. 2013).

Research conducted for this dissertation suggests that obesity can negatively affect the romantic relationships of young adult adults, but that this negative effect is contingent on timing of obesity, race/ethnicity and gender and in some cases, the combinations of these factors. For example, among Blacks, none of the obesity histories were negatively related to any of the romantic relationship outcomes (relationship involvement, satisfaction, and commitment). In addition, within some racial/ethnic and gender groups, positive relationships were found between some obesity histories and some combinations, but not all. For example, Mexican American women with recent histories of obesity and formerly obese Mexican American men were more likely than others to become involved in marital, cohabitation, and dating relationships. On the other hand, formerly obese Mexican American women were less likely than non-obese Mexican American women to report feeling completely committed to the relationships in which they were involved. These patterns suggest that the role of obesity in interpersonal relationships is multifaceted and much more complex than it is often presumed to be. An intersectional lens toward understanding how body size, and in particular, how overweight and obesity relate to differential interpersonal relationships and perceptions of these relationships is necessary.

While well within the purview of life course theory, the relative dearth of literature on the social consequences of obesity during the transition to adulthood on romantic relationship

experiences in early adulthood speaks volumes. Given that obesity is commonly conceptualized as a stigmatizing attribute throughout the life course (e.g., Carr and Friedman 2005, 2006; Carr et al. 2008; Puhl and Brownell 2006; Puhl and Heuer 2009, 2010; Puhl and Latner 2007; Puhl and Luedicke 2012), additional research should consider specifically how obesity can be stigmatizing during the transition to adulthood. Interestingly, the findings from this dissertation suggest that although histories of obesity appeared to be stigmatizing for some groups, with respect to certain romantic relationship experiences, for others obesity was not salient, and further, served as beneficial in some cases, highlighting the nuance of romantic relationship experiences by gender, race/ethnicity, and obesity histories.

# **Romantic Relationships and Histories of Obesity**

Previous research on how obesity can affect romantic relationships suggests that experiencing obesity can limit relationship opportunities and satisfaction with romantic relationships when they do occur. For one, currently and formerly obese individuals are often considered undesirable romantic partners (Chen and Brown 2005; Fee and Nusbaumer 2012; Latner et al. 2012). Second, measured delays have been found in adolescents' sexual initiation (Cheng and Landale 2011) and men who were obese in young adulthood report both less frequent sexual activity and less satisfaction with sexual relationships than normal weight individuals (Carr et al. 2013). Finally, obese young women, in particular, feel less secure and comfortable in their romantic relationships than non-obese men and women (Boyes and Latner 2009; Williams and Merten 2013). This dissertation worked to advance the prior research on obesity and romantic relationships by concentrating on the relationship between histories of obesity in adolescence and early adulthood on romantic relationship experiences in young adulthood.

When this dissertation was proposed, I expected to find further support for the idea that obesity can be stigmatizing in romantic relationships. The evidence presented in this dissertation suggested that obesity is a multidimensional experience that affects individuals in unique ways that are contingent upon gender and racial/ethnic identity. The one-size-fits-all proposition that obesity negatively shapes romantic relationships was not supported in this dissertation. Certainly, some of the findings from this dissertation suggested that the timing and duration of obesity influenced romantic relationships negatively for some groups. However, experiencing obesity was not uniformly negative on relationship outcomes, and in some cases, individuals with histories of obesity reported qualitatively better relationship outcomes than non-obese individuals. Each of these findings, especially when contrasting against other studies suggesting that histories of obesity relate to poorer relationship outcomes, reinforce the idea that an intersectional approach is necessary to attempt to grasp how obesity, gender, and race/ethnicity influence myriad social experiences and relationships. The complex interplay between obesity histories, gender, and race/ethnicity cannot be ignored in studies seeking to understand how obesity is associated with interpersonal relationships.

Three different pathways were identified in assessments of how obesity stigma was associated with romantic relationship outcomes. First, some evidence was found supporting the dominant paradigm that obesity can be stigmatizing in romantic relationships. For example, chronically and recently obese Mexican American men were less likely than both non-obese White men and non-obese Mexican American men to have romantic partners. Similarly, chronically and formerly obese Mexican American women were less likely than non-obese White women and non-obese Mexican American women to report feeling completely committed

to their relationships. Finally, recently obese Other Latinas reported less satisfaction with their relationships than non-obese Other Latinas did.

Relationships between obesity histories and romantic relationship outcomes are moderated by race/ethnicity and gender, and in some cases, a combination of the two. For instance, chronically and recently obese Black women were less likely than non-obese White women to have a partner, but they were both more likely to have partners than non-obese Black women. Likewise, chronically obese Mexican American women were less likely than non-obese White women to have partners, and were similarly less likely than non-obese White men to be involved in cohabitation relationships. However, they were more likely than non-obese Mexican American women to have partners and to be in cohabitation relationships. In part, it is likely that because Mexican Americans are less likely cohabit than individuals of other racial/ethnic groups (per findings in this dissertation), regardless of obesity history, it is not that Mexican Americans are excluded from cohabitation relationships, but rather, due to cultural norms and values, Mexican Americans reject cohabitation relationships in favor of dating and marital relationships.

Finally, most of the significant evidence detailed in this dissertation suggested that obesity may not be stigmatizing for some groups, and appeared to serve as beneficial for romantic relationship formation, satisfaction, and commitment. For example, recently obese Mexican American women were more likely than non-obese Mexican American women to have partners. Similarly, chronically obese Blacks and formerly obese Mexican Americans were more likely to be married than non-obese Whites were. Likewise, chronically obese Blacks and recently obese Other Latinas/os were more likely to be involved in cohabitation relationships than non-obese Whites. Recently obese Mexican American women were also more likely to be cohabiting than non-obese White men. Formerly obese Mexican American women reported

higher levels of relationship satisfaction than non-obese White women. Recently obese Other Latinos also reported more satisfaction with their relationships than non-obese Other Latinos. Finally, chronically obese Mexican American men and Other Latinos were more likely than nonobese White men to report feeling completely committed to their relationships.

With these findings in mind, the idea that experiencing obesity is consistently negative for romantic relationships seems misguided, at least within this age group. The general pattern depicted in many studies on obesity stigma and interpersonal relationships seems most reflective of the experience of obese Whites. For Whites, obesity is appears to be stigmatizing. However, for Blacks, and to a lesser extent, Other Latinas/os and Mexican Americans, the evidence for obesity stigma manifesting in poorer romantic relationship outcomes is slim. Without considering statistical interactions and multivariate analyses within gender and racial/ethnic groups, much of the complexity discussed here would not have been identified. Indeed, together this dissertation could suggest that general assessments on influence of obesity on romantic relationship experiences are almost null. However, most of the effects of obesity on romantic relationship outcomes were contingent upon both gender and race/ethnicity, indicating the necessity of an intersectional approach toward understanding the social consequences of obesity. Most importantly though, the effects of obesity on romantic relationship outcomes were positive for some groups.

There are several potential explanations for the findings of this dissertation. The first, is that because obesity is increasingly common (e.g., Ogden et al. 2014), stigma associated with obesity may not be as powerful as in generations past. Similarly, obesity is much more common among Latinas/os and Blacks than it is in Whites (e.g., Ogden et al. 2014). Moreover, cultural standards of beauty in Latina/o and Black communities value larger body sizes, especially among

women, while among Whites, and especially White women, slimmer bodies are favored (e.g., Ali et al. 2013; Barroso et al. 2010; Cheney 2011). If thinness were valued, then it would make sense for those who are not thin to be less likely to have partners and report lower quality relationships. However, if "big is beautiful," then why would obesity be detrimental to relationship experiences and outcomes? At best, it could be an asset, while at worse it would simply not be associated with relationship experiences.

A second proposition is that while obesity stigma may be pervasive in education, employment, and friendships, and thus is associated with poorer outcomes in each of these areas (e.g., Ali et al. 2012; Crosnoe 2007; Cunningham et al. 2012; Han et al. 2011; Härkönen et al. 2011), romantic relationships are qualitatively different from each of these and as such they may be protected from some of the most deleterious consequences. A third possibility is that obesity stigma may not consistently manifest in romantic relationships among this age group, but is still pervasive in both adolescence and middle adulthood (Carr and Friedman 2006; Carr et al. 2013; Chen and Brown 2005; Cheng and Landale 2011), relating to negative relationship outcomes but primarily within these age groups. Indeed, perhaps because young adulthood is the pivotal period when young people enter enduring romantic relationships and begin to form families (Kennedy and Bumpass 2012; Kreider and Ellis 2011; Martin et al. 2013; U.S. Census Bureau 2013), young adults may be relatively protected from obesity stigma in romantic relationships overall. Fourth, and perhaps most important, the timing and duration of obesity differentially affected women, men, and racial/ethnic groups' romantic relationships in divergent and sometimes contradictory fashions throughout the dissertation. As such, reassessing the effects of obesity stigma on young adults' romantic relationships using intersectional frameworks in future studies is imperative.

Similarly, it is also possible that even though some of the outcomes in this dissertation suggested that those experiencing obesity did not differ from non-obese individuals, or had qualitatively better relationship outcomes, that stigma still pervaded romantic relationships. In particular, individuals may have felt very satisfied or highly committed to their relationships because they may feel, as a result of their own perceptions of their body, that other potential relationships would be difficult to obtain. This could manifest in individuals being happy simply *because* they were involved in a relationship, rather than reflective of the qualities of the relationship. Likewise, individuals with histories of obesity could remain in relationships to avoid a perceived worse outcome of not being involved in a relationship at all. It is probable that each of these occurred to some extent, but identifying clear motivational pathways could not be identified using these data.

## **Body Size as Intersectional Inequality**

Feminist scholars working within intersectional frameworks have begun to consider that body size is another area by which individuals can experience systemic oppression that intersects with other disadvantaged and privileged statuses (e.g., van Amsterdam 2013; Chrisler 2012). For one, van Amsterdam (2013:157) argues that bodies which are not perceived as "slender" are deemed "fat,", culminating in systemic oppression of individuals who are not "slim" – meaning, overweight, obese, and some normal weight people all share in collective fat oppression. Disproportionately, as evidenced in many of the studies on obesity stigma, perceptions of obesity and of being "fat" in the United States appear most harmful to women and Whites' interpersonal relationships (e.g., Carr and Friedman 2006; Cheng and Landale 2011; Cunningham et al. 2012). Research on friendships in adolescence suggests that obese adolescents perceive themselves as having just as many friends as non-obese adolescents. Even so, many of these friendships are not reciprocated. That is, even though obese adolescents say they have friends, oftentimes these "friends" do not consider their obese peers to be *their* friends (Cunningham et al. 2012). There appears to be a disconnect between individuals' perceptions of their own relationships compared with how others perceive these same relationships, which is likely to have crossed over into this dissertation research, as well.

With respect to the conceptual models posed in Chapter 2, evidence from this dissertation cannot broadly accept or deny the assumptions posed. While some of the emergent patterns did support the idea that racial/ethnic minorities with histories of obesity reported better relationship outcomes than Whites, and men reported better outcomes than women, it was not consistent. In some cases too, the reverse was found. Perhaps most confounding, was that gender, racial/ethnic identity, and obesity histories did not consistently support either of the conceptual models presented in Chapter 2, which attempted to extrapolate whether racial/ethnic minority men and women (Figure 4) or men with histories of obesity (regardless of race/ethnicity, see Figure 3).

The hierarchies of *Obesity Stability* and *Obesity Recency* in shaping romantic relationship outcomes posed in Figure 5 were also only somewhat supported. Importantly, in none of the multivariate models were histories of obesity clearly linked to the outcomes proposed by the Obesity Stability and Obesity Recency frameworks. To a lesser degree, however, some support was found for each of the models. For example, in line with the Obesity Stability (1) model, Mexican American women reported lower likelihoods of feeling completely committed to their relationships than non-obese Mexican American women. Supporting the Obesity Stability (2) model, recently obese women were less likely to be involved in marital or cohabitation relationships than non-obese men, and recently obese Other Latinas also reported less satisfaction with their relationships than non-obese Other Latinas. Some support was also found

for both Obesity Recency models, as chronically obese Other Latinas/os were less likely than non-obese Other Latinas/os to have a romantic partner. Each of the models posed, though imperfect, offer additional nuance to the understandings of how timing and duration of obesity affect romantic relationships in early adulthood.

## Limitations

There are several limitations of this dissertation. First, and as described in Chapter 3, selfreported height and weight from Wave I of Add Health were used to ascertain obesity during adolescence. It is thought that few problems would emerge from using the self-reported data in adolescence, because previous research suggests that the self-reported measures were consistent with measurements taken one year later (Goodman et al. 2000). Even so, the use of self-reported measures of height and weight may have inadvertently resulted in miscoding some respondents' obesity statuses in adolescence. As discussed earlier, it is unlikely that non-obese respondents were incorrectly coded as obese, given that individuals tend to overestimate their height and underestimate their weight, though the degree varies by gender, race/ethnicity, and body size (Brener et al. 2003; Elgar et al. 2005; Gillum and Sempos 2005; Larson 2000; Spencer et al. 2002; Villanueva 2001).

Similarly, because a dynamic measure of obesity was used in the analyses, it was not reasonable to further parse out obesity into varying degrees of body size, such as identifying individuals who were grade I, II, or III obese. As some studies have found that it is not necessarily obesity (as defined by having a BMI score over 30) that influences interpersonal relationships, but rather, extreme cases of obesity (e.g., Carr et al. 2013), this is an important consideration. Unfortunately, including degrees of obesity alongside the current measures would

have exacerbated extant problems of very small bin sizes, especially when considering gender and race/ethnicity alongside obesity history.

Because this dissertation concentrated on obesity histories, it is important to address how age at obesity onset shapes romantic relationship experiences. At Wave I of Add Health, most adolescents were aged 12 to 18 years. Using these data, it is not possible to determine precisely when obesity first occurred; scholars can only specify when it was first observed. When first observed at Wave I, respondents in this study were considered chronically or formerly obese (depending on their obesity status in early adulthood). However, the lived experiences of young people first observed as obese at 12 or 13 years of age likely differs from those first considered obese at 17 or 18 years of age, regardless of duration overall. In part, the problem detailed here is the result of not knowing the obesity statuses of the 17 and 18 year olds when they were younger. Due to issues with small bin sizes, further extrapolation of obesity timing by age was not feasible, though this concern underlies the analyses and findings detailed in this dissertation.

Even though longitudinal data were used in this dissertation, another potential issue is temporal order of romantic relationship involvement compared to obesity onset. There is the potential for reversed causality in terms of romantic relationship formation and histories of obesity. As previous research has found that upon marriage, young people are more likely to become obese (The and Gordon-Larsen 2009), it is possible that some respondents may have entered the romantic relationship they were involved in at Wave IV of data collection by Wave III. However, given some of the methodological constraints, it is not clear if the relationships young adults were involved in at Wave III (if any) were the same relationships as those discussed at Wave IV. As such, some respondents who were obese in Wave III only may have become obese after entry into the same romantic relationship they were involved in at Wave IV, which

would imply that it was not histories of obesity relating to romantic relationship experiences, but rather, romantic relationship experiences causing differential weight outcomes. Because the average relationship duration was less than five years, it is unlikely that many of the relationships identified at Wave IV were the same relationships individuals were involved in at Wave III, but some overlap is possible, especially for the older study participants.

The decision not to control for whether respondents were involved in same- or differentsex relationships also introduced the possibility for error. Given the legal constraints same-sex couples face in many states in the U.S., investigations of romantic relationship involvement in marriages is fraught with potential error, as the states respondents lived in at the time of interview were not disclosed to researchers. As such, whether individuals had not married at Wave IV because they were legally prohibited from marrying or because they simply did not desire a marital relationship at the time could not be determined. Moreover, because less than two percent of respondents were involved in same-sex relationships, estimates on how whether partners are of the same- or different-sex influences romantic relationship experiences may not have been reliable. Future studies concentrating on how sexuality and histories of obesity work together to shape different romantic relationship outcomes should further investigate this issue. Although Add Health could be used, I suggest using data oversampling same-sex couples and LGBT identified individuals in these endeavors to compensate for some of the constraints facing researchers attempting to study LGBT populations using population-based data.

The use of binary logistic regression in Chapter 6 could not account for potential selection bias introduced by removing all of the single participants from the sample. It was necessary to remove single respondents from the sample because they were not asked questions about their commitment to their current relationship. This is an important contrast to the

measures of relationship satisfaction, which were asked to single respondents, but in reference to their most recent (rather than current) relationship. If a suitable measure endogenous to relationship commitment was found, a selection model would have been employed in this chapter, such as a Heckman probit model, rather than the binary logistic regression model. As a result, selection bias may have been introduced in the multivariate models reported in Chapter 6. With this in mind, cautious interpretations of the findings from Chapter 6 are suggested.

Consideration of romantic partners of study participants is also necessary, though analyses of these dynamics were not possible in this dissertation. Questions about romantic relationship dynamics were not asked to Wave IV participants' romantic partners and only limited evidence was gathered from respondents about their romantic partners. As a result, researchers can determine little about individuals' partners and have no way of knowing how romantic partners' saw their romantic relationships. Questions on how partners' weight status, or perceptions of the participants' weight statuses influenced romantic relationship satisfaction and commitment could not be answered using the data utilized in this dissertation. It is likely that if this additional information were available, it would have provided critical insights on young adults' romantic relationships and would be able to further interrogate some of the prior research on weight matching in romantic relationships.

Additionally, even though this dissertation sought to build upon other literature on the social consequences of obesity by utilizing a stigma framework, stigma itself was not measured in this dissertation. I sought to address stigma of obesity, rather than health consequences of obesity, by controlling for the health detriments of obesity by including a self-reported health measure in the multivariate models. Direct measures of obesity stigma were not available. Assessing obesity stigma using population-level data is quite complex and in many cases, not

possible. Self-concept, self-esteem, social confidence, and personality characteristics are all likely to moderate whether experiencing obesity culminates in perceived social stigma. Due to the constraints posed by using secondary data, and the breadth of the study at hand, these additional issues could not be addressed within the dissertation, though it is probable that they too affected the romantic relationship experiences of individuals with and without histories of obesity. Importantly, even though the findings from this dissertation suggest that obesity experiences are not uniformly negative for romantic relationships in early adulthood, it does not mean that obesity stigma simply does not occur. Indeed, obesity stigma has been well documented and crosses over into many facets of life (e.g., Puhl and Brownell 2006), including social integration and romantic relationships (e.g., Ali et al. 2014, 2012; Carr et al. 2013; Cunningham et al. 2012; Williams and Merten 2013). Further interrogations of obesity stigma in early life are necessary, though researchers ought to consider that stigma from obesity may be less pervasive or less detrimental in romantic relationships than previous research (outside of this dissertation) largely suggests.

One of the major objectives of this research was to consider how obesity histories affect individuals of different genders and racial/ethnic backgrounds in unique and complex ways. However, because there were few Native Americans, Asians, and Multiracial individuals in the final analytic sample, I was unable to investigate how obesity histories culminated in different relationship outcomes for individuals who identified with these racial/ethnic groups. It is probable that because obesity among Asians is less common than obesity in any other racial/ethnic group (Ogden et al. 2014), Asians may have experienced greater constraints in relationship formation, satisfaction, and commitment than Whites. Similarly, because little is known about the social consequences of obesity among Native Americans and Multiracials, it is

unclear as to how race/ethnicity and obesity histories affect Native Americans and Multiracials' social outcomes. Future studies using data which oversamples Asians, Native Americans, and Multiracials could address this limitation.

A final point is to understand that romantic relationships are not equally beneficial or positive experiences. Romantic relationships are dynamic, and even though I sought to examine three specific aspects of romantic relationships, many relationship factors were not considered in this dissertation, such as but not limited to relationship stability, domestic violence, or the congruity of partners' perceptions of relationships. Some of these issues, such as domestic violence, were beyond the scope of the study at hand. Others, such as partners' perceptions of their relationships, could not be studied with the data used in this dissertation. As the body of research on obesity and interpersonal relationships grows, scholars ought to consider these issues further.

## **Future Research**

As this study was a secondary quantitative data analysis of how obesity histories influence romantic relationships, this dissertation is unable to capture how, in respondents' own voices, obesity shaped their romantic relationships. Future research using qualitative methods ought to examine how histories of obesity influence young adults' romantic relationship experiences. Second, given the relative dearth of literature on relationship satisfaction and commitment among young adults, further research using population-level data ought to be conducted in order to provide necessary backdrop to the discussions on how histories of obesity influence young people's perceptions of relationship quality.

# Conclusions

Both academic research and media reports strongly suggest that obesity is stigmatizing and something to be avoided, as it can carry both health and social consequences throughout the life course. As found in this dissertation, young adults with histories of obesity experience both disadvantages in their relationships and benefits, which are predicated on gender and racial/ethnic identities. Obesity alone does not hold much "weight" in understanding young adults' romantic relationship experiences, but the complex interplay between obesity histories, gender, and racial/ethnic identity do, and can, manifest in differential relationship experiences. The glimpse this dissertation offers in to the lives of both young adults with histories of obesity and those without obesity histories suggests that understandings of how romantic relationships are affected by obesity cannot be reduced to these two components alone, but rather, must take an intersectional approach to even attempt to grasp how obesity manifests in unique romantic relationship experiences.

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# Appendix 1: Add Health Variables and Original Coding

Table 20. And Treatment variables and Original Cours	Table 26: Add Health	Variables and	Original	Codin
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Name	Question Text	Valid Response Categories	Data Set
	Variables used to const.	ruct primary independent variables	
H1GH59A	What is your height in feet [and inches]?	Range: 4-6	Wave I, In-Home
H1GH59B	What is your height in [feet and] inches?	Range: 0-11	Wave I, In-Home
H1GH60	What is your weight [pounds]?	Range: 50-430	Wave I, In-Home
H3WGT	Measured weight [pounds].	Range: 78-330	Wave III
H3HGT_F	Measured height [feet].	Range: 4-7	Wave III
H3HGT_I	Measured height [inches].	Range: 0-11	Wave III
H3HGT_PI	Measured height [partial inch]	Range: 0-0.875	Wave III
	Variables used to	construct dependent variables	
		(1) marriage (2) cohabitation (3) pregnancy (4)	
H4TR13*	Type of relationship with partner	current dating, (5) most recent.	Wave IV
_H4TR14*	[Verbiage dependent on response to H4TR13]. Are you currently married to [initials]? OR Are you currently cohabiting with [initials]? OR Are you currently in a romantic or sexual relationship with [initials]?	(0) no, (1) yes	Wave IV
H4RD7A	How much do you agree or disagree with the following statements about your relationship with [initials]? We (enjoy/enjoyed) doing even ordinary, day-to-day things together.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD7B	I (am/was) satisfied with the way we handle our problems and disagreements.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD7C	I (am/was) satisfied with the way we handle family finances.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD7D	My partner (listens/listened) to me when I need someone to talk to.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD7E	My partner (expresses/expressed) love and affection to me.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD7F	I (am/was) satisfied with our sex life.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD7G	I (trust/trusted) my partner to be faithful to me.	(1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, (5) strongly disagree	Wave IV
H4RD10	How committed are you to your relationship with [initials]?	(1) completely committed, (2) very committed, (3) somewhat committed, (4) not at all committed	Wave IV
	Variables used to construct co	ontrol measures and exclusion categories	
H3OD2	Are you of Hispanic or Latino origin?	(0) no, (1) yes	Wave III
H3OD3A	What is your Hispanic or Latino background? You may give more than one answer. Mexican / Mexican American	(0) not marked. (1) marked. (7) legitimate skip	Wave III

Name	Question Text	Valid Response Categories	Data Set
	Variables used to construct co	ontrol measures and exclusion categories	
H3OD4A	What is your race? You may give more than one answer. White	(0) not marked, (1) marked	Wave III
H3OD4B	[preface H3OD4A] Black or African American	(0) not marked, (1) marked	Wave III
H3OD4C	[preface H3OD4A] American Indian or Native American	(0) not marked, (1) marked	Wave III
H3OD4D	[preface H3OD4A] Asian or Pacific Islander	(0) not marked, (1) marked	Wave III
BIO_SEX4	Respondent's gender	(1) male, (2) female	Wave IV
CALCAGE3	Calculated age at time of interview	Range: 18-28	Wave III
H3GH1	In general, how is your health?	(1) excellent, (2) very good, (3) good, (4) fair, (5) poor	Wave III
AURBAN	Urbanicity	(1) urban, (2) suburban, (3) rural	Wave I, School Administrator
H3LM7	Are you currently working for pay for at least 10 hours a week?	(0) no, (1) yes, (7) legitimate skip	Wave III
H3ED1	What is the highest grade or year of regular school you have completed [years]?	Range: 6-22	Wave III
H3ED23	Are you currently attending regular school? If you are enrolled but on school break or vacation, count this as attending.	(0) no, (1) yes	Wave III
H3HR2	Where do you live now? That is, where do you stay most often?	<ol> <li>your parents' home, (2) another person's home,</li> <li>your own place [apartment, house, trailer, etc.],</li> <li>group quarters [dormitory, barracks, group home, hospital, communal home, prison or penitentiary, etc.], (5) homeless - that is, you have no regular place to stay, (6) other</li> </ol>	Wave III
H3EC2	Including all the income sources you reported above, what was your total personal income before taxes in {2000/2001}? Please include all of the income sources you identified in the previous question.	Range: 0 - 500909.00; Missings constructed by the responses 999996, 999998, 999999, .	Wave III
H3TP1	Please indicate the outcome of this pregnancy by selecting the appropriate response.	<ul> <li>(1) miscarriage, (2) abortion, (3) single, stillbirth,</li> <li>(4) live birth, (5) pregnancy not yet ended, (6) multiple, no live birth, (7) multiple, involving both a live birth and another outcome.</li> </ul>	Wave III
H3LB1	Did the [baby / first baby / second baby] born on [birth month] of [birth year] eventually go home with you?	(0) no, (1) yes, (9) not applicable	Wave III
H3LB2	[preface H3LB1] Why not?	<ul> <li>(2) put up for adoption, (3) died in the hospital, (4) went to live with [partner], (5) went to live with another relative, (6) still in the hospital, (7) other, (9) legitimate skip</li> </ul>	Wave III

# Table 26: Add Health Variables and Original Coding (continued)

Name	Question Text	Valid Response Categories	Data Set
	Variables used to construct co	ontrol measures and exclusion categories	
H3LB11	Is [he/she {the child}] still living?	(0) no, (1) yes, (7) legitimate skip	Wave III
H3KK2	Does [child] live with you?	(0) no, (1) yes, (6) refused, (9) don't know, (9) not applicable, (.) missing retained because asked of all live births	Wave III
	Which description best fits [his/her] relationship	<ul> <li>(39) biological son, (40) adopted son, (41) step-son,</li> <li>(42) step-son whom you have adopted, (43) foster son, (44) biological daughter, (45) adopted daughter, (46) step-daughter, (47) step-daughter whom you have adopted, (49) full brother, (50) twin brother, (51) half-brother, (52) step-brother,</li> <li>(53) adoptive brother, (54) foster brother, (55) brother-in-law, (56) full sister, (57) twin sister, (58) half-sister, (59) step-sister, (60) adoptive sister, (61) foster sister, (62) sister-in-law, (63) biological father, (64) adopted father, (65) step-father who has adopted you, (66) step-father, (68) biological mother, (59) adopted mother, (70) step-mother who has adopted you, (71) step-mother, (73) same-sex partner of another household member, (97) legitimate skip; 48, 67, and 72 were not used and</li> </ul>	
H3HR11A	to you?	are not revealed in the codebook.	Wave III
H3HR11B	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11C	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11D	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
	Which description best fits [his/her] relationship		
H3HRITE	to you? Which description best fits [his/her] relationship	[same as H3HR11A]	Wave III
H3HR11F	to you?	[same as H3HR11A]	Wave III
H3HR11G	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11H	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11I	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11J	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11K	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11L	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11M	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11N	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III

# Table 26: Add Health Variables and Original Coding (continued)

Name	Question Text	Valid Response Categories	Data Set
	Variables used to construct co	ntrol measures and exclusion categories	
	Which description best fits [his/her] relationship		
H3HR11O	to you?	[same as H3HR11A]	Wave III
	Which description best fits [his/her] relationship		
H3HR11P	to you?	[same as H3HR11A]	Wave III
H3HR11Q	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11R	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
H3HR11S	Which description best fits [his/her] relationship to you?	[same as H3HR11A]	Wave III
TSDURATN	Duration (in months) of relationship segment.	Range: 0-224	Wave IV
	Waiahts Stratifica	tion and Clustering Variables	
	weignis, straujica	tion and Clustering Variables	
AREGION	Region	(1) west, (2) midwest, (3) south, (4) northeast	Wave I, School Administrator
PSUSCID	Cluster variable (school identifier at Wave I)	n/a	Multiple
	Sample weight, Participants from Wave I not		•
GSWGT4_2	interviewed at Wave IV excluded.	n/a	Wave IV
	Variables Used to N	lerge and Transpose Data Sets	
AID	Respondent identifier	n/a	Multiple
PSUSCID	School identifier at Wave I	n/a	Multiple
ASCHLCDE	School code	n/a	Wave I, School Administrator
	School which the respondent attended during		
SCID	the 1994-1995 school year.	n/a	Wave I, In-Home
RRELNO	Romantic relationship number	Range: 1-48	Wave III
PTNR_ID	Partner identifier	Range: 1-27	Wave IV
RPREGNO	Relationship pregnancy number	Range: 1-8	Wave III
PRGNO	Pregnancy number within relationship	Range: 1-17	Wave IV
BIRTHNO	Pregnancy birth number	Range: 1-2	Wave III
H3KK2	Does [child] live with you?	(0) no, (1) yes, (6) refused, (9) don't know, (9) not applicable, (.) missing retained because asked of all live births	Wave III
	· ·		

# Table 26: Add Health Variables and Original Coding (continued)

\*Note: In Chapters 5 and 6 these are considered controls.

#### **Appendix 2: Supporting Tables**

	Ν	Model 5	]	Model 6		Model 7
Measure	b	OR	b	OR	b	OR
Obesity History						
Chronic Obesity	-0.13	0.87	-0.29	0.75	-0.05	0.95
Recent Obesity	-0.05	0.95	-0.33	0.72 *	-0.04	0.96
Former Obesity	0.01	1.01	0.05	1.05	0.07	1.07
Non-obesity (ref.)	-	-	-	-	-	-
Individual Context						
Race and Ethnicity						
Black	-0.36	0.70 ***	-0.52	0.59 ***	-0.30	0.74
Mexican American	-0.15	0.86	-0.13	0.87	0.00	1.00
Other Latina/o	0.21	1.23	0.19	1.21	0.24	1.27
Other Race/Ethnicity	-0.20	0.82 +	-0.20	0.82 +	-0.20	0.82 +
White (ref.)	-	-	-	-	-	-
Female	0.36	1.43 ***	0.29	1.34 ***	0.45	1.58 ***
Interactions						
Chronic Obesity *Female	-0.24	0.79			-0.57	0.57 +
Recent Obesity*Female	-0.26	0.77			-0.59	0.55 *
Former Obesity*Female	0.02	1.02			0.04	1.05
Chronic Obesity *Black			0.60	1.83 +	0.60	1.82
Chronic Obesity *Mexican American			-0.46	0.63	-1.15	0.32 +
Chronic Obesity *Other Latina/o			-0.49	0.61	-1.04	0.35 *
Recent Obesity*Black			0.76	2.13 ***	0.76	2.14
Recent Obesity*Mexican American			0.02	1.02	-1.31	0.27 *
Recent Obesity*Other Latina/o			0.91	2.48	1.36	3.91
Former Obesity*Black			-0.18	0.83	-0.44	0.64
Former Obesity*Mexican American			1.14	3.11	1.59	4.90
Former Obesity*Other Latina/o			-1.24	0.29	-1.27	0.28
Black*Female					-0.50	0.61 +
Mexican American*Female					-0.30	0.74
Other Latina/o*Female					-0.11	0.90
Chronic Obesity*Black*Female					0.23	1.26
Chronic Obesity*Mexican American*Fem	nale				2.04	7.67 +
Chronic Obesity *Other Latina/o*Female					1.43	4.19
Recent Obesity*Black*Female					0.21	1.23
Recent Obesity *Mexican American*Fema	ıle				4.05	57.55 ***
Recent Obesity*Other Latina/o*Female					-0.50	0.61
Former Obesity*Black*Female					0.52	1.68
Former Obesity*Mexican American*Fema	ale				-1.73	0.18
Former Obesity*Other Latina/o*Female					0.64	1.90
Constant	-0.26		-0.26		-0.28	
F		8.41 ***		7.55 ***		6.48 ***
df		23, 66	4	29, 60	4	44, 45

#### Table 27: Supporting Documentation for Table 6

 $+ p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

Note: Due to clustering in the models, *F*-statistics are reported instead of pseudo-likelihood ratios. Individual context, transitions to adulthood, and household context measures were also held constant in each of the models.

		Female		Male		
	Ν	Model 3	Ν	I odel 6		
Measure	b	OR	b	OR		
Obesity History						
Chronic Obesity	-0.62	0.54 *	-0.07	0.93		
Recent Obesity	-0.61	0.54 **	-0.04	0.96		
Former Obesity	0.12	1.13	0.07	1.07		
Non-obesity (ref.)	-	-	-	-		
Individual Context						
Race and Ethnicity						
Black	-0.77	0.46 ***	-0.29	0.75		
Mexican American	-0.24	0.79	-0.03	0.97		
Other Latina/o	0.18	1.20	0.22	1.24 *		
Other Race/Ethnicity	-0.05	0.95	-0.32	0.72		
White (ref.)	-	-	-	-		
Interactions						
Chronic Obesity*Black	0.80	2.22 *	0.65	1.92		
Chronic Obesity*Mexican American	0.91	2.49	-1.19	0.30 *		
Chronic Obesity *Other Latina/o	0.39	1.48	-1.02	0.36 +		
Recent Obesity*Black	0.95	2.59 **	0.75	2.11		
Recent Obesity *Mexican American	2.74	15.51 ***	-1.36	0.26 **		
Recent Obesity *Other Latina/o	0.83	2.29	1.37	3.93		
Former Obesity*Black	0.08	1.08	-0.42	0.66		
Former Obesity*Mexican American	-0.20	0.82	1.55	4.73		
Former Obesity*Other Latina/o	-0.63	0.53	-1.36	0.26		
Constant	0.85		-1.06			
F		4.00 ***		6.58 ***		
df		28, 61		31, 58		

# Table 28: Supporting Documentation for Table 7

 $+ p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

Note: Due to clustering in the models, *F*- statistics are reported instead of pseudolikelihood ratios. Individual context, transitions to adulthood, and household context measures were also held constant in each of the models.

Table 29: Supporting Documentation for Table 11	
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	Mar	ried vs. Single	Cohabi	tation vs. Single	Dat	ing vs. Single
	]	Model 1	1	Model 2	]	Model 3
Measure	b	RRR	b	RRR	b	RRR
Obesity History						
Chronic Obesity	-0.03	0.97	-0.47	0.69	0.15	1.23
Recent Obesity	-0.01	1.00	-0.05	0.92	-0.25	0.74
Former Obesity	0.03	0.90	0.27	1.27	-0.34	0.62
Non-obesity (ref.)	-	-	-	-	-	-
Individual Context						
Race and Ethnicity						
Black	-1.19	0.30 ***	-0.37	0.70 **	0.18	1.20
Mexican American	-0.17	0.84	-0.31	0.74	0.14	1.15
Other Latina/o	-0.17	0.84	0.40	1.49 +	0.56	1.74 **
Other Race/Ethnicity	-0.41	0.64 **	-0.04	0.99	0.00	0.98
White (ref.)		-	-	-	-	-
Female	0.51	1.66 ***	0.32	1.38 **	0.10	1.11
Two-way Interactions						
Chronic Obesity*Black	0.44	1.56	1.52	4.59 *	0.27	1.32
Chronic Obesity*Mexican American	-0.54	0.58	-3.29	0.04 ***	-2.07	0.13 *
Chronic Obesity*Other Latina/o	-0.67	0.51	-1.25	0.29	-1.24	0.29
Chronic Obesity*Female	-0.49	0.62	-0.26	0.77	-0.67	0.51
Recent Obesity*Black	1.29	3.64 **	0.80	2.22	0.93	2.53 +
Recent Obesity*Mexican American	-1.05	0.35 +	-1.60	0.20 *	-1.07	0.34 *
Recent Obesity*Other Latina/o	0.93	2.54	1.69	5.41 +	1.46	4.30
Recent Obesity*Female	-0.55	0.58 *	-0.64	0.53 *	-0.23	0.79
Former Obesity *Black	-0.77	0.46	-0.46	0.63	0.09	1.09
Former Obesity *Mexican American	1.95	7.06 +	0.62	1.85	2.21	9.13 +
Former Obesity*Other Latina/o	-0.54	0.58	-1.45	0.23	-3.85	0.02 **
Former Obesity *Female	0.19	1.20	0.10	1.10	0.11	1.11
Three-way Interactions						
Chronic Obesity *Black*Female	0.45	1.57	-0.77	0.46	-0.15	0.86
Chronic Obesity *Mexican American*Female	0.34	1.41	3.25	25.86 +	3.93	50.88 **
Chronic Obesity *Other Latina/o*Female	0.44	1.55	1.88	6.58	2.00	7.37
Recent Obesity *Black*Female	-0.53	0.59	0.04	1.04	-0.24	0.79
Recent Obesity*Mexican American*Female	3.55	34.80 ***	4.04	57.02 ***	3.86	47.37 ***
Recent Obesity *Other Latina/o*Female	0.29	1.34	-0.84	0.43	-1.59	0.20
Former Obesity *Black*Female	0.23	1.25	0.68	1.98	-0.35	0.71
Former Obesity *Mexican American*Female	-2.13	0.12	-0.77	0.46	-4.32	0.01 *
Former Obesity *Other Latina/o*Female	~	~	~	~	~	~
Constant	-3.73		1.70		-0.31	

 $+ p \le 0.10, *p \le 0.05, **p \le 0.01.$ 

Note: See Appendix 1 for all main effects. The three-way interaction term between former obesity \*Other Latina/o\*female was forced out of the model due to there being too few valid cases. Individual context, transitions to adulthood, and household context measures were also held constant in each of the models.

		Model 6	N	Iodel 7	N	Iodel 8
Measure	b	OR	b	OR	b	OR
Obesity History						
Chronic Obesity	-0.49	0.61 *	-0.21	0.81	-0.59	0.55 *
Recent Obesity	0.14	1.14	0.10	1.10	0.21	1.23
Former Obesity	0.32	1.38	0.90	2.47 *	0.64	1.90
Non-obesity (ref.)	-	-	-	-	-	-
Individual Context						
Race and Ethnicity						
Black	-0.73	0.48 ***	-0.69	0.50 ***	-1.00	0.37 ***
Mexican American	-0.63	0.53 **	-0.47	0.63 *	-0.86	0.42 ***
Other Latina/o	-0.67	0.51 ***	-0.73	0.48 ***	-0.82	0.44 **
Other Race/Ethnicity	-0.50	0.61 **	-0.51	0.60 **	-0.50	0.61 **
White (ref.)	-	-	-	-	-	-
Female	0.61	1.84 ***	0.66	1.93 ***	0.48	1.61 ***
Interactions						
Chronic Obesity*Female	0.76	2.13 *			0.98	2.67 *
Recent Obesity*Female	-0.16	0.85			-0.20	0.82
Former Obesity*Female	0.82	2.28			0.94	2.57
Chronic Obesity*Black			-0.39	0.67	-0.38	0.68
Chronic Obesity*Mexican American			0.54	1.72	1.72	5.59 +
Chronic Obesity*Other Latina/o			1.98	7.21 *	1.74	5.68 *
Recent Obesity*Black			0.12	1.13	-0.22	0.80
Recent Obesity*Mexican American			-0.82	0.44	-0.61	0.54
Recent Obesity*Other Latina/o			-0.30	0.74	0.10	1.10
Former Obesity*Black			-0.22	0.80	-0.66	0.52
Former Obesity*Mexican American			-1.62	0.20 *	-0.66	0.52
Former Obesity*Other Latina/o			-0.93	0.39	-0.70	0.50
Black*Female					0.61	1.84 *
Mexican American*Female					0.91	2.49 *
Other Latina/o*Female					0.19	1.22
Chronic Obesity*Black*Female					-0.37	0.69
Chronic Obesity*Mexican American*Fema	ale				-2.67	0.07 *
Chronic Obesity*Other Latina/o*Female					0.31	1.36
Recent Obesity*Black*Female					0.46	1.58
Recent Obesity*Mexican American*Femal	e				-0.55	0.58
Recent Obesity*Other Latina/o*Female					-0.58	0.56
Former Obesity*Black*Female					0.58	1.79
Former Obesity*Mexican American*Fema	le				-3.70	0.02 **
Former Obesity*Other Latina/o*Female					~	~
Constant	-6.26		-6.24		-6.25	
df		29, 60		35, 54		49, 40
F		46.99 ***		34.22 ***		36.89 ***

Table 30: Supporting Documentation for Table 22

 $+p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

The three-way interaction term between former obesity\*Other Latina/o\*female was forced out of the model due to there being too few valid cases. Relationship context, individual context, transitions to adulthood, and household context measures were also held constant in each of the models.

	Female Male			
	Model 3		Ν	Iodel 6
Measure	b	OR	b	OR
Obesity History				
Chronic Obesity	0.43	1.53	-0.65	0.52 *
Recent Obesity	0.06	1.06	0.15	1.17
Former Obesity	1.66	5.28 *	0.63	1.88
Non-obesity (ref.)	-	-	-	-
Individual Context				
Race and Ethnicity				
Black	-0.44	0.64 **	-1.00	0.37 ***
Mexican American	0.00	1.00	-0.85	0.43 **
Other Latina/o	-0.71	0.49 ***	-0.82	0.44 **
Other Race/Ethnicity	-0.60	0.55 **	-0.41	0.66 +
White (ref.)	-	-	-	-
Interactions				
Chronic Obesity*Black	-0.71	0.49	-0.39	0.68
Chronic Obesity*Mexican American	-1.10	0.33 +	1.88	6.58 +
Chronic Obesity*Other Latina/o	1.84	6.27	1.73	5.66 *
Recent Obesity*Black	0.22	1.25	-0.22	0.80
Recent Obesity*Mexican American	-1.16	0.31	-0.62	0.54
Recent Obesity*Other Latina/o	-0.47	0.63	0.15	1.16
Former Obesity*Black	-0.16	0.85	-0.64	0.53
Former Obesity*Mexican American	-4.34	0.01 ***	-0.82	0.44
Former Obesity*Other Latina/o	~	~	-0.75	0.47
Constant	-6.47		-5.78	
df		33, 56		34, 55
F		24.84 ***		17.74 ***

#### Table 31: Supplemental Documentation for Table 23

 $+p \le 0.10, *p \le 0.05, **p \le 0.01, ***p \le 0.001.$ 

The three-way interaction term between former obesity\*Other Latina/o\*female was forced out of the model due to there being too few valid cases. Relationship context, individual context, transitions to adulthood, and household context measures were also held constant in each of the models.

#### **Appendix 3: Abbreviations and Acronyms**

Abbreviation/AcronymFull TitleAdd HealthNational Longitudinal Study of Adolescent HealthBMIBody mass indexNHANESNational Health and Nutrition Examination SurveyNSFGNational Survey of Family GrowthNSFHNational Survey of Families and Households

Table 32: Abbreviations and Acronyms