THE LONGITUDINAL INFLUENCE OF THE PSYCHOSOCIAL CONTEXT: SEXUALITY AND CONTRACEPTIVE USE IN THE TRANSITION TO ADULTHOOD

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The Psychosocial Context: Sexuality and Contraceptive Use in the Transition to Adulthood

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This dissertation research examines attitudes and social norms about sexuality and contraceptive use (herein called the "psychosocial context") in adolescence and emerging adulthood, using a life course perspective. Specifically, I use both quantitative and qualitative data to demonstrate how different psychosocial contexts in adolescence affect one's outcomes, behaviors, and adaptation to new psychosocial contexts in emerging adulthood. I show that adolescent psychosocial contexts can be used to predict reproductive health outcomes and behaviors in emerging adulthood. In addition, I show how components of the psychosocial context impact the reasons women give to justify their own contraceptive risk-taking. I use a large scale, nationally representative sample from the National Longitudinal Study of Adolescent to Adult Health (Add Health), and interviews with 45 undergraduate women on a university campus to explore these issues.

My findings demonstrate the power of early psychosocial contexts in influencing later behavior, and show that a life course perspective is important when examining the influence of psychosocial contexts on behavior and outcomes. Specifically, using Add Health, I show that Wave I norms and attitudes about sex and contraceptive use are predictive of later reproductive outcomes and behaviors in emerging adulthood, ages 18-24. I measure the psychosocial context in adolescence using factor analysis, by creating groupings of attitudes and norms at different levels of influence (i.e. individual, peer, family, community). I then use the identified factors in a latent class analysis to generate classes with similar psychosocial context profiles at Wave I. Wave I class membership (ages 15-18) is predictive of reproductive, sexual and contraceptive outcomes at Wave III (age 18-24). Classes are significantly predictive of outcomes controlling for socio-demographic factors such as socio-economic status, and race/ethnicity.

Qualitatively I use 45 women's narratives from interviews conducted on the "Mountain University"[1] campus to explore possible mechanisms connecting Wave I norms to Wave III outcomes. I find that women talk about different sources of attitudes and norms in adolescence and describe how the attitudes and norms coalesced into concrete views about their sexuality and contraceptive behaviors. Women's adolescent views of sexuality and contraceptive use in turn led to their enacting specific strategies to deal with transitions in normative environment, such as the transition to college and the predominant hookup, or causal sex, culture, although women were largely unaware of enacting these strategies. Finally, I look at how the elements of the psychosocial context influence (norms and attitudes) women to use "I just wasn't thinking" as an excuse for contraceptive risk taking within a cultural context that calls for women to be primarily responsible for pregnancy prevention, but also for their happiness and sexual satisfaction of their partner.

Overall, I use a life course framework to trace the development and impact of attitudes and social norms about sexuality on young women's future choices about sex, reproduction, and contraceptive use. I show that background psychosocial contexts have great influence on how young women deal their sexuality during college. My findings demonstrate the importance of viewing social norms from a life course perspective, so that one can understand the long term influence of one's normative context in adolescence on their perceptions of their own sexuality, and their risk-taking in sexual encounters.

[1] For purposes of anonymity I use the name "Mountain University" to refer to the school from which the data was collected, rather than the true name of the college.

This dissertation is dedicated to my family for their unwavering support and belief in me:

To Brian Parker Hawkins, my wonderful husband who always knew I could do it even when I didn't. Your support, your love, and your shoulder to cry on have made a difference in my life and have made me who I am today. I love you.

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TABLE OF CONTENTS

Tables

Figures

CHAPTER ONE: Introduction

This dissertation looks at how sexual attitudes and norms in adolescence impact later contraceptive risk-taking, explanations of contraceptive risk-taking, sexual behavior, and reproductive outcomes. Attitudes and norms have typically been explored separately, but in this dissertation I combine the attitudes and norms adolescents and emerging adults experience and call them the "psychosocial context." I define the psychosocial context as the collections of attitudes and norms present in a given environment. This research is specific to the United States. It draws on literature about sexual social norms and attitudes in adolescence and emerging adulthood, and contraceptive risk-taking across in the same life course stages. I argue that attitudes and social norms work in concert. In addition, they must also be viewed as cumulative, rather than looked at as specific and separate contexts in which humans function at any one point in time. I address four main questions:

1. A) How do adolescents responses to items about attitudes and social norms about sex, pregnancy, and contraceptive use group together (factor analysis); B) what are the psychosocial profiles among adolescents (latent class analysis); and C) is social disadvantage related to these psychosocial profiles (descriptive statistics)?
2. Can the psychosocial context in adolescence be used to predict later sexuality, reproductive health outcomes, and contraceptive use and risk-taking in emerging adulthood?
3. How do the often differing attitudes and norms about sexuality and contraceptive use individuals are exposed to in adolescence, from multiple levels of influence such as peers, family, and community, impact the strategies they use as emerging adults to deal with entering into new normative environments that also have differing attitudes and norms at multiple levels?
4. Does the psychosocial context shape how women perceive contraceptive risk-taking, how they account for it, and what they do to justify such risk-taking to themselves and to others?

I use two sets of data to address my research questions. First, I use The National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine the effects of a combination of attitudes and norms in high school on later reproductive health outcomes and behaviors in emerging adulthood (research question

1). For this analysis I use factor analysis to combine attitudes and norms and allow natural groupings of the items to arise from the data. I then use the results of the factor analysis to create latent class groups of women and of men at Wave I, when respondents were in high school. Respondents are grouped according to their differing psychosocial contexts, resulting from their different patterns of responses to items about sexual activity, contraceptive use, and teen pregnancy. I then use these latent class groups to predict who will experience a pregnancy, an unintended pregnancy, or an abortion, as well as the numbers of sexual partners they reported having up until data collection for Wave III of Add Health, and the types of contraceptives they reported using as of Wave III of Add Health (research question 2).[2] The latent classes I identify are significantly predictive of many outcomes in emerging adulthood. I argue that this is due to the influence of the adolescent psychosocial context on how emerging adults adapt to new psychosocial contexts as they enter adulthood.

Second, I use a qualitative sample I collected to explore the mechanisms by which the psychosocial context in high school influences contraceptive risk taking in emerging adulthood (research questions 3 and 4). Interviews with 45 undergraduate women on a university campus explore the subjects' psychosocial contexts during adolescence and emerging adulthood, as well as the psychosocial context they perceive to exist in the college setting. Women's narratives show how differing psychosocial contexts in adolescence - including sometimes conflicting messages about sex from their schools, parents, peers, and sexual partners - influence their sexual and contraceptive behavior in college. Specifically, using women's narratives about their sexual and contraceptive experiences I show how the constellation of attitudes and norms about sexuality and contraceptives they experienced in adolescence weave together to form specific strategies which dictate how they integrated into hookup cultures on campus. I argue that the degree to which they participate in hookup cultures, their use of contraceptives, and how they justify both their casual sexual encounters and their contraceptive risk-taking has roots within the psychosocial context they experienced in adolescence. The strategies they use to integrate into the psychosocial context at the university are influenced by their previous

[2] See Chapter Five, figure 5.1 for a table of outcomes.

psychosocial context, and in turn influence and shape how they approach sexuality within a hookup culture. The narratives of these 45 women demonstrate the importance of looking at sexuality through a life course lens, and of considering the multiple and competing attitudes and norms present in any psychosocial context. More importantly, women's narratives demonstrate the importance of the psychosocial context earlier in life on outcomes and behaviors later in life. The narratives of these women also demonstrate the concept of a contraceptive user identity and show how that identity can conflict with the identity of sexual partner. Women navigate this conflict using "strategic ambiguity" which allows them to have two conflicting identities active at the same time.

Theoretically, this research integrates across multiple disciplines including psychology, sociology, and public health. What's novel about my approach to this question is that I integrate multiple theories across disciplines. Thus, my understanding of contraceptive use as a health behavior comes from my multi-disciplinary approach using multiple lenses to examine what motivates women to take these kinds of risks. Contraceptive use is simply an example of how combining across theoretical perspectives and disciplines and integrating these perspectives using a life course framework can give us greater insight into health behaviors. As such, this type of an integrated framework should be tested and applied to other health behaviors. My findings also demonstrate that one must understand how people see their past in order to fully understand how they perceive their current identities and behaviors. Moreover, as a social psychologist, I argue that smaller micro level subjective contexts (such as the psychosocial context) are important in setting people on specific life course trajectories, and that without integration of these micro-contexts it is difficult if not impossible to understand the larger social environment.

Empirically, I contribute to specific literatures. First, I contribute to the contraceptive literature by looking at contraceptive risk taking in populations that consider themselves to be contraceptive users – an understudied population. Second, I contribute to the hookup literature in two ways: 1) I look at contraceptive use within hookup cultures, and 2) I interrogate how contraceptive use is affected within romantic relationships that take place within the hookup culture context. Third, I contribute to the identity literature by arguing that conflicting identities do not necessarily compete with one another, but instead can be used

together to help individuals make sense of why they behaved the way they did. Finally, fourth, I contribute to the gender literature by suggesting that our performance of gender is influenced by not only the current psychosocial context, but by past psychosocial contexts suggesting that we need to use a more nuanced, integrated, and specifically life course approach to studying gender.

Outline of Data Chapters

Chapter Two: Theoretical Framework and Literature Review

Chapter Two outlines my theoretical framework and discusses the literature most pertinent to my argument. In this chapter I show how life course theory provides an appropriate framework for this dissertation research. I then outline how I use the term "psychosocial context" in my research. I then review the current research about contraceptive use and risk-taking, contraceptive attitudes, and contraceptive norms. Finally, I review current literature about sexuality, attitudes about sexuality, and social norms about sexuality.

Chapter Three: Methodology

Chapter Three presents the methods I use, both quantitative and qualitative, in detail. I also present the rationale for my methodological decisions. I explain factor analysis, latent class analysis, OLS and logistic regression, and the qualitative methods I use. I provide justification for the use of mixed methods and self-report data in the study of sexuality and contraceptive risk-taking.

Chapter Four: The Adolescent Psychosocial Context

Chapter Four documents how social norms and attitudes about sexuality and contraceptive use group together. I use factor analysis and items related to social norms and attitudes about adolescent sex, contraceptive use and pregnancy from Wave I of Add Health to examine how these items group together. Natural groupings of these items arose from the data allowing me to identify the underlying constructs around which the responses are organized. These groupings are then used in a latent class analysis to identify classes of individuals. I conceptualize these class profiles as "psychosocial contexts" which represent a constellation of different concepts which are all believed to influence teenage sexuality and contraceptive use, but are often studied separately. This research contributes to the literature by finding that the items about

sexuality and contraceptive use group in different ways than researchers typically study them. I also identify differences in psychosocial context by age, suggesting that how a teenager at 15 thinks about sexuality and contraceptive use is very different than how teens who are 16 or 17 years of age think about sexuality and contraceptives.

Chapter Five: The Longitudinal Implications of the Adolescent Psychosocial Context

Chapter Five utilizes the psychosocial context profiles identified in Chapter Four to predict childbearing outcomes, sexual experiences, and contraceptive use and behaviors in emerging adulthood, ages 18-24. I find that the psychosocial context profiles identified at Wave I are predictive of pregnancy, unintended births, and abortions for some groups. The profiles are also predictive of the frequency of sexual activity in emerging adulthood, use of condoms and pregnancy prevention more generally, and of foregoing contraceptive use altogether. Psychosocial context overall is more predictive of outcomes for women as compared to men. This research contributes to the literature by showing that the psychosocial context in adolescence has a lasting impact on behaviors and outcomes in emerging adulthood. It also reinforces the call for examining sexuality and contraceptive risk taking using a life course perspective, and calls for the use of a cumulative life course perspective in social norms research.

Chapter Six: Adolescent Psychosocial Context and Integration into Hookup Cultures: Strategies, behaviors, and contraceptive risk-taking

Chapter Six draws on 45 qualitative interviews with young women on the Mountain University campus. I explore the psychosocial context they report experiencing in high school and in college, including sexual norms within their school, among their broader peer group, among their close friends, the messages they received from their families, and their experiences and communication with past sexual partners. Women's narratives show that the psychosocial context they experience in adolescence shapes the strategies they use to transition to a psychosocial contexts in college. This research contributes to the literature by explicating the strategies women use to navigate the transition to a new psychosocial context, and by linking different

strategies for integrating into hookup cultures[3] to the different kinds of contraceptive risk-taking they engage in when faced with a perceived normative casual sex environment.

Chapter Seven: "I just wasn't thinking": How women negotiate competing identities in sexual encounters

Chapter Seven explores how the psychosocial context influences contraceptive risk-taking. Specifically, I examine how women use the phrase "I just wasn't thinking" to navigate identity conflict. I argue that women have identities as contraceptive users and as sexual and romantic partners. These identities come into conflict when there are instances of partner desires and preferences that are in conflict with the use of common pregnancy prevention methods. Women use "strategic ambiguity" to navigate between these two identities in order to feel comfortable with their own risk-taking behavior. I also interrogate how women view other women's use of "I just wasn't thinking" as an excuse for contraceptive risk-taking. This research contributes to the literature by exploring how women excuse behavior which they feel fundamentally uncomfortable with, in themselves, and in other women.

Chapter Eight: Discussion and Conclusion

The eighth and final chapter brings my quantitative and qualitative findings together and emphasizes my theoretical and empirical contributions.

[3] Hookup culture is defined in Chapter Two.

CHAPTER TWO: Theoretical Framework and Literature Review

This dissertation uses a life course framework to explore women's and men's sexuality and contraceptive risk-taking in adolescence and emerging adulthood. Contraceptive risk-taking is defined as non-use of contraceptives, inconsistent or improper use of contraceptives, or use of ineffective contraceptive methods (e.g., withdrawal). Specifically, I quantitatively examine the longitudinal effects of different combinations of attitudes and norms on later behavior and outcomes related to contraceptive risk-taking. I then use in-depth interviews to explore college women's perceptions of how their adolescent attitudes and social norms influence their behavior in emerging adulthood. Some literature has addressed contraceptive risk-taking among adolescents, and other research has looked more closely at contraceptive risk-taking in emerging adults. For example, current research may ask how attitudes about contraceptives influence their use in adolescent romantic relationships (Vasilenko, Kreager and Lefkowitz 2015), or how norms in one's community may influence contraceptive use in emerging adulthood (Kraft et al. 2012). Rarely does a researcher explicitly examine both attitudes and social norms together,[4] and where this has been done, typically only one life stage has been included.[5] To my knowledge, the longitudinal effect of attitudes and norms on contraceptive risk-taking across two stages of the life course has not been explored.

Research on contraceptive use often focuses on access to contraceptives (Bessett et al. 2015; Daley 2011; Peipert et al. 2012) and knowledge about them (Craig et al. 2014; Eisenberg et al. 2012; Sokkary et al. 2013). While both access and knowledge are necessary conditions for use, they are not sufficient. Women and men must also have the motivation and contraceptive efficacy (defined as effectiveness of contraceptive with typical use; Trussell 2011) needed to consistently and correctly obtain and use contraceptives over a long period of time (Bumpass and Westoff 1969; Musick et al. 2009). Motivation and efficacy are influenced by: (1)

[4] For an exception see Barber, Jennifer S., Heather H. Gatny, and Yasamin Kusunoki. 2012. "The results of an experiment: effects of intensive longitudinal data collection on pregnancy and contraceptive use." PSC Research Report.
[5] For an exception see Payne Purvis, Caroline, Rosemary V. Barnett, and Larry Forthun. 2014. "Parental Involvement during Adolescence and Contraceptive Use in College." *Journal of Adolescent and Family Health* 6(2):3.

people's attitudes[6] toward contraceptives, (2) the attitudes and norms[7] of the people around them such as family members, close friends, or partners, and (3) broader norms within their schools, communities, or even the United States as a whole (Barber, Gatny and Kusunoki 2012; Campo et al. 2012; Frost, Lindberg and Finer 2012; Musick et al. 2009). The contraceptive risk literature does contain a number of studies that examine a wide variety of reasons for non-use beyond access and knowledge, but these studies have two shortcomings. The first is that they are almost always done in very specific populations--such as women attending a clinic for a pregnancy test (Nettleman, Brewer and Ayoola 2007; Nettleman, Brewer and Ayoola 2009; Sable, Libbus and Chiu 2000) – or girls experiencing a pregnancy during their teen years (Sheeder, Tocce and Stevens-Simon 2009; Stevens-Simon et al. 2005; Stevens-Simon, Sheeder and Harter 2005), rather than examining impacts among a nationally representative sample (as do Chapters Four and Five of this dissertation). Using a nationally representative sample would allow generalization to the broader population, and is therefore more useful in establishing policy to increase contraceptive use and reduce adolescent and unintended pregnancy. Second, as this literature is often published in public health or medical journals, it tends to be very brief, and includes simple lists of reasons for non-use with little explanation or exploration of what underlies the stated reasons (as do Chapters Six and Seven of this dissertation).

This approach to examining reasons behind contraceptive risk-taking does not fully take into account how an individual contraceptive user groups influences on his/her patterns of use. Research presented here shows that rather than neatly dividing into attitudes and norms, groupings were divided by topic (i.e. parents, friends, contraceptives, etc.). For example, an individual user may think about how his/her parent(s) would react to them having sex with or without contraceptives, but may not differentiate between the influences of things their parent(s) have said directly to them, the stories that they hear from their friends about their friends' parent(s), and the commonly perceived "normal" view of the parent(s) of the other people in their

[6] Attitudes are defined as individual evaluative judgments, see below in the "Contraceptive Attitudes" section for full definition.

[7] Norms are defined here are shared expectations of socially desirable behavior, see below in the "Social Norms About Contraceptive Use" for full definition.

school. All of these factors shape how adolescents expect their own parent(s) to respond to adolescent sexual activity and contraceptive use.

Studies of sexuality in adolescence often look at contraceptive use, but most often from either a population level demographic perspective (Centers for Disease Control and Prevention 2012; Finer and Philbin 2013), or in relation to adolescent pregnancy specifically (Barr et al. 2013; Sheeder, Tocce and Stevens-Simon 2009; Stevens-Simon, Sheeder and Harter 2005). Recent studies of sexuality in emerging adulthood have been focused to a large extent on casual sex hookup cultures and so have spent little time looking at how contraceptive use may be influenced by this relatively new normative environment of casual sex (for exceptions see recent publications such as Bearak 2014; Fantasia et al. 2014; Snapp, Ryu and Kerr 2014, all of which have some discussion of condom use in hookups). Hookups have been broadly defined as college cultures in which participation in casual sexual encounters is common (Armstrong and Hamilton, 2013; Bogle, 2007; Bogle, 2008; Epstein et al., 2009; Flack et al., 2007; Grello, Welsh, and Harper, 2006; Littleton et al., 2009; Paul, McManus, and Hayes, 2000; Reid, Elliott, and Webber, 2011; Stinson, 2010), especially in the first two years of college attendance (Armstrong and Hamilton, 2013; Bogle, 2008). Hookup is a deliberately vague term in that it can refer to any kind of sexual encounter, from kissing or "making out" to actual intercourse (England and Thomas, 2006; Paul and Hayes, 2002; Paul, McManus, and Hayes, 2000), and usually involve the consumption of alcohol (England and Thomas, 2006; Grello, Welsh, and Harper, 2006; Paul, McManus, and Hayes, 2000). Scholars have also argued that definitions may vary by gender (Owen and Fincham, 2011). Importantly, it has been found that hookup cultures exist on most college and university campuses (Hamilton and Armstrong, 2009) and that "hooking up" has become dominant over dating (Bogle, 2007; McClintock, 2010; Reid, Elliott, and Webber, 2011), although others have disagreed with this and have argued that dating is still dominant (Claxton and van Dulmen, 2013; Olmstead et al., 2013). Further, scholars have argued that hookup cultures are more visible and as such tend to be accepted as the dominant culture even if not all individuals are participating in hookup encounters (Armstrong and Hamilton, 2013; Stinson, 2010) and most are quite likely to have participated in a romantic relationship by their senior year of college (Hamilton and Armstrong, 2009).

It is particularly noteworthy that most studies of sexuality in emerging adulthood that focus on hooking up exclude anyone who is in a relationship from the study (Olmstead, Pasley and Fincham 2013). By doing this, the literature misses how sexuality more broadly, and contraceptive use specifically, may be influenced by hookup cultures even for those who *do not participate* in it. While literature has previously called for examining sexuality over the life course (Carpenter and DeLamater 2012; Rossi 1994), for the most part sexuality is studied at specific points in the life course such as adolescence or emerging adulthood without sufficient exploration of the lasting effect adolescent sexuality may have on later behavior and outcomes.

I fill these gaps using two approaches that address different aspects of the related issues of sexuality and contraceptive risk-taking. First, I use the National Longitudinal Survey of Adolescent to Adult Health (Add Health), a quantitative nationally representative data set, to explore how attitudes and social norms work in concert to shape both male and female adolescents' views of the appropriateness of sexual activity and contraceptive use in adolescence. I use factor analysis to allow sex and contraceptive related attitude and social norms items to group together independently of any pre-determined framework. Thus, the resulting factors include items that represent attitudes as well as items identified as social norms. I then use latent class analysis to form profiles of predominant "psychosocial contexts" that represent how different groups of adolescents view adolescent sexuality, pregnancy, and contraceptive use. Factor analysis is useful in identifying how adolescents perceive influences on their sexuality and contraceptive use and can provide information beyond that given by the individual items. In addition, combining the factors into latent class profiles can identify specific groups within the population who receive different messages about adolescent pregnancy and contraceptive use that then lead to different outcomes. Both the factors and the profiles have more explanatory power, and are more helpful in designing policy aimed at specific concepts or groups than the underlying items. In presenting the profiles, I use the term "psychosocial context" to refer to the different combinations of attitude and social norm factors that resulted from the latent class analysis. Following this, I use the different psychosocial context profiles to predict reproductive health outcomes and sexual and contraceptive behavior outcomes in emerging adulthood – when the respondents are between the ages of 18

and 24 – in order to demonstrate the longitudinal influence of psychosocial contexts (and thus of the underlying social norms and attitudes) from one life course stage to the next.

I then use 45 in-depth, semi-structured interviews with undergraduate women on the Mountain University campus (aged 18 to 24) to explore women's perceptions of the psychosocial context they experienced in adolescence and how they feel that psychosocial context influences their choices and behaviors in emerging adulthood in the new psychosocial context present on the university campus. The data from the women interviewed represent the views of middle class women identified primarily by one of the psychosocial profiles presented in Chapters Four and Five.[8] This allows me to explore how these particular groups of women account for contraceptive risk-taking within their current psychosocial context.[9] My goals for this research include:

1) Identifying how psychosocial context items about sexual behavior and contraceptive use in adolescence group together for men and for women (using factor analysis and latent class analysis);
2) Examining how psychosocial influences in adolescence affect later behavior in emerging adulthood (OLS and logistic regression);
3) Exploring how women perceive their psychosocial context and experiences in adolescence to influence their later behavior (In-depth interviews); and
4) How women account for contraceptive risk-taking (In-depth interviews).

Theoretical Framework

The Life Course

The life course perspective argues that we must look at events within life longitudinally, and that social norms guide when and how we approach specific transitions and changes in our lives. It suggests that the relationship between the lived lives of individual people and the predominant social structure that surrounds

[8] Class 3. Although there are some similarities to other classes which is discussed later on in this dissertation. It should be noted that the women interviewed were not recruited specifically on the basis of psychosocial class.
[9] I plan to conduct further interviews with groups of women recruited based on specific psychosocial profiles in the future.

them necessitates paying attention to how one stage of life may impact the next stage of life (Elder 1994). The current research focuses on the life course stages of adolescence and emerging adulthood. Adolescence is typically defined as consisting of ages 13 to 18 (Amaro et al. 2002), and more recently the term "emerging adulthood" has been used to identify the period following adolescence when young men and women are still in transition from adolescence to adulthood, generally thought of as the late teens and 20s (Arnett 2014; Ravert et al. 2009). Life course theory suggests there are culturally agreed upon orders and timing for the events in our lives, including entering into sexual activity, leaving the home, marriage, and childbearing (Macmillan 2005); however, scholars also argue that the life course is becoming increasingly destandardized, and thus more individualized (Macmillan 2005; Shanahan 2000), especially in the domain of family formation (Brückner and Mayer 2005). Important for this dissertation, the life course perspective examines the culturally normative expectations in regard to life trajectories and the types and timing of individual transitions (Macmillan 2005).

Recent work has called specifically for sexuality to be studied using a life course perspective, arguing that sexuality is inherently cumulative in nature with early sexual experiences affecting later ones (Amaro et al. 2002; Carpenter and DeLamater 2012). For example, some studies show that sexual abuse in early childhood leads to less satisfaction with sex and poorer selection of sexual partners (Browning and Laumann 1997; Carbone-Lopez 2012). This research also provides evidence for the compounded disadvantage that is conferred on people by early negative sexual experiences. However, examining norms longitudinally is not common, and is typically done only in the context of the evaluation of social marketing programs to change negative behaviors such as smoking (Ariza et al. 2008), or condom use to protect against sexually transmitted infections (Kapadia et al. 2011). In addition, in reference specifically to risk-taking, while folk wisdom and general cultural "knowledge" dictate that risk-taking peaks in adolescence, life course scholars have argued that sensation seeking, and therefore risky behavior, such as unprotected sex and contraceptive risk-taking, peak in emerging adulthood rather than adolescence (Arnett 2005).

The life course perspective provides a valuable framework for looking at social norms in particular because it highlights the importance of age norms in regulating the timing of events and related behaviors

(Settersten 2003). In this dissertation, life course fertility transitions are of primary interest. Fertility transitions are closely tied to age norms and virtually all societies are structured by age (James-Hawkins and Sennott, 2014). Societal age structuring is often formal and legally regulated, for example, laws governing the ages at which individuals should begin school or retire (Settersten 2003). However, the age structuring of society can also be informal or socially regulated (Settersten 2003), which is typically the case in terms of norms about consensual sex, pregnancy timing, and contraceptive use. Norms about the timing of childbearing are a good example of age norms in that they structure the appropriate ages at which individuals should and should not have children. Although childbearing timing norms are largely informal – in the sense that they are not legislated – they are strongly encoded in social institutions, such as schools, that assume the childlessness of teenagers (Harding 2007).

Despite recent research on sexuality across the life course and the focus on the life course perspective on culturally shared norms, overall social norms researchers typically do not look at norms from a longitudinal perspective, nor do they explicitly consider them as cumulative. To my knowledge, no one has examined the cumulative effects of social norms on contraceptive risk-taking across the life course. In this dissertation, I use the concept of the "psychosocial context," which encompasses social norms and attitudes about sexual behavior and contraceptive use and I demonstrate their life course influences.

The Age Structuring of Fertility

Past norms regulating the timing of childbearing dictate that women should finish high school – and often college as well – marry in their early 20s, and then have children in their mid to late 20s or early 30s (Bute and Jensen 2010; Cherlin et al. 2008); although, changes have occurred and ideal ages for childbearing may differ depending on socioeconomic status with higher status groups trending later in their ideal age of childbearing (James-Hawkins and Sennott 2014). Having children prior to the completion of school or marriage is considered off-time and at odds with norms dictating the appropriate timing and sequencing of life course events (Gregson 2009). This is often true even in subcultures within which early childbearing is a relatively common event and where high levels of external stigma for early childbearing are not typically experienced

(Harding 2007). Furthermore, individuals whose life events and transitions conform to the dominant norm generally experience less stress and receive more social support (Cherlin et al. 2008).

Scholars have noted that because "early" childbearing is socially defined, its definition may change over time; especially as the age at first birth has risen in most developed countries in recent decades (Furstenberg 2003; Gregson 2009). Hence, the definition of an appropriate age at first birth varies across cultures, time, and cohorts (Lawlor and Shaw 2002), and is related to culturally appropriate timing of entering sexuality and marriage (Arnett 2014). Teen sexuality and teen births have long been assumed to be extremely negative events in girls' lives; however, some literature suggests that teenage births may not disadvantage young women to the extent once thought (Geronimus and Korenman 1993; Lawlor and Shaw 2002). Much of the recent literature exploring adolescent sexuality argues that with proper contraceptive use, sexuality itself is not necessarily harmful when teenagers engage in it consensually (Elliott 2012), although gender differences in the stigma that may be attached to adolescent sexual activity can be problematic (Bay-Cheng 2012).

The literature on teen childbearing today strongly supports the notion that teenage parents, and teen mothers in particular, continue to experience high levels of stigmatization in the United States (Bute and Jensen 2010; Gregson 2009; Mollborn 2007; Mollborn 2010). Sexual activity among adolescents in the United States, while common, is also generally framed as a problem behavior (Elliott 2010; Elliott 2012; Luker 2006; Schalet 2011a). Given this, it is not surprising that many teenagers, although they do participate in sex, do not feel that doing so is appropriate (Schalet 2011a). Adolescent girls in particular often report regretting sexual activity (Schalet 2011a; Thompson 1996). Once individuals leave their teen years and enter emerging adulthood, sanctions and stigma regarding non-marital childbearing and sexuality generally lessen, and then disappear entirely, and the literature suggests that for emerging adults, there is often very little societal stigma associated with either non-marital childbearing (Edin and Kefalas 2007) or sexuality (Vrangalova and Savin-Williams 2011). Therefore, because social norms regarding sexuality, fertility, and the proper timing of childbearing may differ in adolescence and emerging adulthood, the influence of social norms on contraceptive use may also vary. Importantly, sets of norms are generally associated with specific points in

time (Hechter and Opp 2001). However, in examining norms researchers generally do not account for the fact that we are still influenced by norms from previous settings as we enter environments with new norms.

The "Psychosocial Context": Social Norms and Attitudes

The term "psychosocial" has been used in the literature to describe social factors that influence an individual's sexual and contraceptive behavior (Higgins, Popkin and Santelli 2012; Kaye, Suellentrop and Sloup 2009; Tsitsika et al. 2014; van Wersch, Eberhardt and Stringer 2012). I define psychosocial context as social norms, and the attitudes of the individual and others around him or her. I interrogate how the psychosocial context may influence different social groups differentially in determining one's overall disposition toward sexuality and contraceptive use. I argue that social norms and attitudes function together to create an overall perception of a particular domain of influence. For example, adolescents likely do not see the influence of social norms on their own perceptions of their parents' attitudes about adolescent sexuality. Rather, teens take the information that they receive from a multitude of different sources (i.e. directly from their parents, from their friends about their friends' parents, from the normative environment in their schools and communities, and so on) and combine it all together to produce the best estimate of what they believe their own parents truly think about their children engaging in sex. So, the definition of "psychosocial" used in this dissertation encompasses items traditionally thought of as norms, items which represent concern about how peers, parents, or others might interpret sexuality or pregnancy in adolescence or others' attitudes, and items which are more traditionally thought of as individual attitudes.

Literature Review

Below I present a review of the literature which outlines the importance of studying contraceptive risk-taking, and the domains pertinent to the psychosocial context (attitudes and norms) for both contraceptive use and risk-taking, and for sexuality in adolescence and emerging adulthood.

Contraceptive Use and Risk-Taking

Studying contraceptive risk-taking is important because it is, by nature, associated with unintended pregnancy (Pratt, Stephenson and Mann 2014), and unintended pregnancy has long been considered a major public

health problem in the United States (Brown and Eisenberg 1995; Mosher, Jones and Abma 2012). Despite decades of research, the rate of unintended pregnancy in the United States (currently at about 50%) remains the highest of all industrialized countries (Maxson and Miranda 2011). Unintended pregnancy is connected to delayed prenatal care (Mosher, Jones and Abma 2012), increased rates of maternal depression (Grussu, Quatraro and Nasta 2005), increased child abuse and neglect (Gazmararian et al. 1995), reduced mother-child bonding (Barber, Axinn and Thornton 1999), low rates of breastfeeding (Dye et al. 1997), low birth weight (Sable and Wilkinson 2000), and increased financial strain on the family (Logan et al. 2007). While some of these issues may be explained by the disadvantaged women who are likely to experience these negative outcomes, or that disadvantaged women have an increased likelihood of labeling a pregnancy as unintended, it is still true that a critical part of preventing unintended pregnancy is increasing consistent and correct contraceptive use (Brown and Eisenberg 1995; Finer and Zolna 2011; Jaccard 2009). Such an increase should have the result of decreasing unintended pregnancy, and thus negative outcomes, regardless of selection issues. Importantly, contraceptive risk-taking is especially high in adolescent and emerging adult populations (Hoggart and Phillips 2011; Jaccard 2009), making understanding contraceptive risk-taking in these populations of paramount importance. In contrast to the often casual attitude toward contraceptive risk-taking among younger individuals, broader social norms about contraceptive use generally dictate that using contraceptives consistently and correctly is best if one does not want to get pregnant (James-Hawkins and Sennott 2014). However, scholars also concede that social norms about gender teach women to place a higher value on their partner's happiness than their own, which may interfere with women seeking to protect themselves from unintended pregnancy or a sexually transmitted infection (Amaro et al. 2002; di Mauro and Joffe 2007).

Much of the current research on contraceptive use focuses on whether people have access to and can afford contraceptives (Finer and Zolna 2011; Peipert et al. 2012). While these are certainly necessary components to contraceptive use they are not sufficient, and many studies of reasons for non-use of contraceptives in the United States find that access to and knowledge of contraceptive methods are often not primary reasons for foregoing contraceptive use for the majority of women (Ayoola, Nettleman and Brewer

2007; Sable, Libbus and Chiu 2000). These studies suggest myriad other factors that impact consistent and correct use of contraceptive methods (Nettleman, Brewer and Ayoola 2007; Nettleman, Brewer and Ayoola 2009). The current literature identifies many reasons for foregoing contraceptive use that are related to my conception of the psychosocial context. For example, items such as: embarrassment (Moreau et al. 2005; Sable, Libbus and Chiu 2000); misperceptions of the risk of pregnancy - such as: women believing they simply wouldn't get pregnant or erroneously thinking that it was a safe time of month (Gilliam et al. 2009; Huber and Ersek 2009; Jaccard 2009); partner resistance or discomfort discussing contraceptives with partner (Homco et al. 2009; Roberts and Noyes 2009); and peer or family norms against use or no norms supporting use (Jaccard 2009). All of these reasons can be argued as factors that are influenced by the psychosocial context within which women make decisions about contraceptive use. An example of this, which is explored in detail in Chapter Seven, is the explanation of "I just wasn't thinking" or "it just happened" in reference to contraceptive risk-taking (Iuliano et al. 2006; Kendall et al. 2005). Examining how the psychosocial context impacts contraceptive risk-taking is critical if we want to reduce unintended pregnancy in the United States.

Contraceptive Risk-Taking in Adolescence and Emerging Adulthood

It is especially important to examine contraceptive risk-taking in adolescence and emerging adulthood when it is at its highest (Epstein et al. 2014; Jaccard 2009; Steinberg 2007). Some research has explicitly contrasted contraceptive use in adolescents with contraceptive use in emerging adults. Most of this research has found that adolescents, when compared to emerging adults, are more likely to correctly perceive the risk of pregnancy from unprotected sex (Boone et al. 2003; Goldberg, Halpern-Felsher and Millstein 2002; Johnson, McCaul and Klein 2002; Lapsley and Hill 2010; Quadrel, Fischhoff and Davis 1993; Ravert et al. 2009). One study found that age matters, with older teens being more concerned with the impact of contraceptives on pleasure while younger teens were more concerned about the future consequences of unprotected intercourse (Loewenstein and Furstenberg 1991). In another study, college students who were having sex without a condom rated their risks as lower than those who were using condoms or who were not having sex, in contrast to the high school students who rated their risk more accurately (Johnson, McCaul and Klein 2002). However, this study also found that college age women were more likely to accurately perceive pregnancy risk

than adolescents, and that adolescents were more likely to believe that pregnancy could not happen to them (Johnson, McCaul and Klein 2002).

Two studies specifically compared parents to their adolescent children. In one study, as the age of adolescents increased, their perceptions of HIV/AIDS vulnerability decreased, and their mothers perceived their children as less vulnerable to contracting HIV/AIDS than their children perceived themselves. Further, the mothers also perceived themselves as less vulnerable to HIV/AIDS than their children (Boone et al. 2003). In another study, adults showed more invulnerability than did their adolescent children when it came to unintended pregnancy (Quadrel, Fischhoff and Davis 1993). Taken together, these studies suggest that adolescent perceptions of the risk of unintended pregnancy are higher than the risk perceptions of adults (Whaley 2000).

According to health behavior models, such as the Theory of Reasoned Action (Ajzen and Fishbein 1980), people who perceive less vulnerability to health threats will take fewer precautions to protect themselves (Boone et al. 2003). Health behavior models also suggest that the more experience a person has with a threat the more likely they are to perceive themselves as vulnerable (Boone et al. 2003). If it is required that before people will protect themselves, they must believe that they are at risk (Thornton, Gibbons and Gerrard 2002), it then follows that the lower the perception of risk, the greater the risk taking behavior (Crosbie and Bitte 1982). Thus, those who perceive less risk of unintended pregnancy should be more likely to take contraceptive risks.

Younger adolescents are more likely to believe that engaging in risky behavior is dangerous because they have been taught that it is. However, over time, as they get older and engage in risky behavior themselves – as well as seeing others engaging in risky behavior – with no consequences, their perceptions of risk decrease (Kershaw et al. 2003; Millstein and Halpern-Felsher 2002). Early positive experiences with risk taking, then, may lead to increased willingness to engage in other risk taking behaviors later on (Goldberg, Halpern-Felsher and Millstein 2002). And most teens have engaged in risky behavior without experiencing any negative consequences (Johnson, McCaul and Klein 2002). It follows that, with increasing experience, adolescents often see benefits as more likely and risks less likely (Goldberg, Halpern-Felsher and Millstein

2002). Higher levels of optimistic bias and/or unique invulnerability in adults, then, may simply be demonstrating more experience with risky behavior (in themselves and those around them) with few negative outcomes (Goldberg, Halpern-Felsher and Millstein 2002). It is also important to note that the one-time risk of pregnancy with unprotected sexual activity is low. It is the cumulative effect of repeated risk-taking over time that tends to be underestimated. It is also possible that the reduction of perception of risk seen in emerging adulthood is in fact the result of adolescents overestimating their risks, and then with age, altering their risk perceptions so that they are more in line with the actual risk of pregnancy.

Contraceptive Attitudes

Attitudes have long been studied in relation to any number of concepts, including contraceptive use (Brückner, Martin and Bearman 2004). Attitudes can be defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken 1993, p. 1). However, others have argued that attitudes are not as stable as that definition suggests (Wilson and Hodges 2013). Still other have argued that while the underlying attitude construct is stable, people will sample from different parts of that construct depending on their social context, and so reports of attitudes may vary over time (Tourangeau 1992; Wilson and Hodges 2013). Research on attitudes has determined that new attitudes overlay older attitudes but do not necessarily replace those attitudes (Ajzen 2001) and thus people can and do sometimes hold more than one attitude toward the same object. In addition, research has suggested that attitudes are highly context dependent and thus subject to change (Schwarz and Bohner 2001). In this research, I define attitudes simply as "evaluative judgments" (Bem 1970, pg. 14) and suggest that they work in concert with social norms to create the psychosocial context.

In this dissertation I argue that men and women can and do hold more than one attitude, and indeed sometimes internally conflicting attitudes, toward contraceptives, and that these attitudes go hand in hand with their exposure to the differing sets of social norms about sexuality and contraceptive use that are held by different groups of people in their lives, such as parents, friends, school personnel, or the media portrayal of adolescent sex (Brown, Steele and Walsh-Childers 2001). In fact, I argue that attitudes about contraceptives and sex specifically are malleable and dependent on both the situation and the salience of particular sets of

often competing norms in an individual's environment. In reference to contraceptive use specifically, we have to consider that there are a number of attitudes, or evaluative tendencies, taking place at the same time – the evaluation of the sexual partner and the partner's attitude toward contraceptives, the individual's attitude and evaluation of the proposed contraceptive method itself, and even the individual's evaluation of the rightness or wrongness of engaging in sexual activity.

An individual's attitudes toward contraceptive use versus his/her attitudes toward the alternatives (such as abstinence, pregnancy, or abortion or adoption) are a better predictor of contraceptive use than comparing how favorable one person's contraceptive attitudes are in comparison to another person's attitudes (Forrest and Frost 1996). In addition, positive attitudes toward contraceptives are correlated with a higher likelihood of using contraceptives (Forrest and Frost 1996), while more positive attitudes toward non-marital childbearing decrease use (Frost, Lindberg and Finer 2012). Negative attitudes toward contraceptives are also related to an increased likelihood of having unprotected sex, inconsistent use of contraceptives among women, and non-use of contraceptives in men (Frost, Lindberg and Finer 2012). Guilt about sexual activity is also related to multiple reasons for contraceptive risk-taking including negative attitudes toward contraceptives (Herold 1981).

Research on adolescents finds that pregnant teens that held negative attitudes toward contraceptives prior to experiencing a pregnancy had more positive contraceptive attitudes after the pregnancy (Lemay et al. 2007). Negative attitudes toward specific contraceptive methods, such as emergency contraception, are also related to non-use among urban and minority youth (Gilliam et al. 2009; Mollen et al. 2008), and acculturation or adaptation to United States norms about contraceptive use is related to more negative attitudes toward contraceptives among immigrants (Unger and Molina 2000). Recently, Craig and colleagues (2014) have called for further elucidation of how racial and ethnic differences in contraceptive attitudes might influence use, although this study limited their definition of attitudes about contraceptives to knowledge of effectiveness, cost, and ease of use. Research also finds that an adolescent's perception of the attitudes of others influences his or her own contraceptive use (Moore and Rosenthal 1991).

Other research on attitudes toward contraceptive use in emerging adulthood has found marked gender differences regarding who should be involved in contraceptive choice (Fantasia et al. 2014; Pleck, Sonenstein and Ku 1993). Women report having the attitude that men should be equally involved in contraceptive choice and use, but also state that this is rarely what happens in sexual encounters (Fantasia et al. 2014), and research studying men's attitudes toward contraception confirm that they also perceive it to be more the woman's responsibility (Pleck, Sonenstein and Ku 1993). In addition, women in emerging adulthood, where access to contraceptives becomes ostensibly easier than it is in adolescence, report feeling that the burden for contraceptive use and pregnancy prevention falls more heavily on their shoulders (Fantasia et al. 2014; Fennell 2011; Raine et al. 2010). Among college women, researchers have found that attitudes about contraceptive use are related to contraceptive use behavior (Kelley et al. 1987), and that the positive perceptions of parents' and friends' attitudes toward pregnancy also influence contraceptive use and pregnancy outcomes (Barber et al. 2010).

Social Norms about Contraceptive Use

Research on norms about contraceptive use has examined how they influence behavior at the societal, community, and peer levels. Norms essentially serve as evaluations of conduct and are often structured around differential power (Liefbroer and Billari 2010). In other words, those with greater power in society have the ability to create and enforce social norms in ways that the relatively lesser-powered do not. Various origins of social norms are identified in the literature with proposed sources such as the media (Yanovitzky and Stryker 2001), religion (Harding 2007), families (Lamont and Small 2008), neighborhoods (Harding 2007), and communities (Lamont and Small 2008), as well as other cultural institutions. Life course theory in particular has defined social norms as group-level expectations for appropriate behavior (Settersten 2003). Norms in our culture dictate specific ordering and timing of events (Marini 1984a; Marini 1984b) such as beginning sexual activity (Schalet 2011a), childbearing (Wu and Wolfe 2001), and marriage (Schmidt 2008). Norms have been examined as external: involving sanctions (Mollborn 2009; Rimal and Real 2003b), and internal: involving self-monitoring once we have accepted external norms as our own (Horne 2003). People also may choose to conform to norms or to not conform (Bicchieri 2005). As in Settersten (2003), this

dissertation defines social norms as group-level expectations for appropriate behavior. Group-level expectations may refer to romantic dyads, parental, peer, school, community, or societal level expectations.

Many definitions of social norms include the requirement that non-normative behavior result in negative sanctions for the norm violator(s) (Marini 1984a; Mollborn 2009). Some debate exists about whether something can be called a norm if no external sanctions will be faced if it is violated, with some scholars arguing that external sanctions are a necessary condition (Bendor and Swistak 2001; Rimal and Real 2003b), and others arguing that individuals can internalize norms and provide themselves with internal sanctions even in situations where they do not fear external sanctions (Horne 2003; Liefbroer and Billari 2010). Norms about sexuality and the use of contraceptives, specifically, come from those around us in adolescence and these expectations guide how we think about our own behavior and the choices we make (Rimal and Real 2003b). Importantly, norms are associated with the setting in which we are at any one time (Hechter and Opp 2001). However, social norms researchers generally do not account for the fact that we carry norms from previous settings with us as we enter new normative environments.

Literature in the area of adolescent contraceptive norms tends to focus primarily on girls, without explicitly focusing on gender and gendered power dynamics. This is largely because much of the literature focuses on the individual, decision-making level rather than at the societal or structural level. However, several studies have examined peer contraceptive social norms and their influence on decision making. In large part, these studies find that peers' social norms have large effects on adolescent girls; sometimes increasing contraceptive use (Oddens and Lehert 1997; Rogel et al. 1980), and sometimes decreasing it (Scholly et al. 2005).

Researchers have also studied the impact of the community on the individual. Brewster, Billy, and Grady (1993) looked at the impact of neighborhood norms on young women regarding future prospects and the normative behavior of the adults around them about contraceptive use. They argue that normative proscriptions against non-marital sexual activity may decrease the likelihood of the use of contraceptives. They further argue that if adolescents have internalized norms against sex, then preparing for it by using contraceptives would be unlikely at best. Their results show that "the life experience and values of the adults

in the immediate community define acceptable patterns of behavior and delimit the social, economic, and psychic costs of various courses of action" (p. 726) including that of protecting oneself from unintended pregnancy by using contraceptives. In addition, they found that norms regarding future life opportunities beyond marriage and childbearing lead to increased contraceptive use among young girls (Brewster, Billy and Grady 1993).

Gender Norms and Contraceptive Use

Gendered power dynamics are especially important in contraceptive negotiation and use because women are normatively supposed to take care of contraception (Hynie et al. 1998; Masters et al. 2013), and as such, are also supposed to bear the responsibility for the consequences of not doing so (Fennell 2011). Women are the gatekeepers of the private sphere (Okin 1998), including responsibility for relationship maintenance (Bowleg, Lucas and Tschann 2004), and making sure that sexuality is happening in the "right" way (Bowleg, Lucas and Tschann 2004), thereby acting as sexual gatekeepers (Cowley 2014; Risman and Schwartz 2002). While men's desire and biological drive for sex is culturally supposed to direct sexual encounters (Cowley 2014; Sanchez, Fetterolf and Rudman 2012; Sanchez, Kiefer and Ybarra 2006; Schilt and Westbrook 2009), women are supposed to control fertility and bear the responsibility for ensuring contraception is used (Fennell 2011). Thus, women are given responsibility for pregnancy prevention in a cultural context that gives men more power in contraceptive use and negotiation (Pearson 2006). In addition, women's contraceptive responsibility occurs in a culture where women are not supposed to feel desire, as desire is the domain of men (Costa, Nogueira and Lopez 2009; Tolman 1991; Tolman 2002); although, some research suggests that explanations for desire as the domain of men may differ by class position (Higgins and Browne 2008). In addition, Banker, Kaestle and Allen (2010) found that young women often talk about desire in relation to the needs of their male partners rather than in relation to their own needs. Women are also supposed to be more passive in the sexual encounter and allow the male to instigate it (Campbell 1995; Laws and Schwartz 1977; Pearson 2006; Pearson 2008; Sprecher 2013). These norms about women's responsibility for contraceptives require the enacting of agency in order to successfully use contraceptives; that agency is in direct opposition to the gendered sexual script that says men should initiate sex and control when and how sex occurs (Campbell

1995; Laws and Schwartz 1977; Masters et al. 2013; Pearson 2006; Pearson 2008; Sprecher 2013). Scholars also cite the importance of social norms in framing contraceptive trust, claiming that people learn contraceptive expectations through learning social norms about contraceptive use and trust between sexual and romantic partners (Campo-Engelstein 2012).

Other research has specifically addressed the role of gendered power differentials in romantic relationships and how those differentials affect contraceptive use (Armstrong, England and Fogarty 2012). Pearson (2006) finds that "strong cultural norms about 'appropriate' sexual behavior for women may restrict girls' ability to express sexual agency and power" (p. 622). In addition, men in her study felt more in command in a sexual situation and were better able to express their wishes regarding contraceptives. Men also expected their wishes to take precedence over those of their sexual partner, thereby putting women in a much riskier sexual position and reducing the likelihood of contraceptive use (Pearson 2006).

Researchers have also examined sexual risk-taking in unmarried adults. Billy, Grady, and Sill (2009) called for using a couple-based perspective in researching sexual risk-taking explicitly because gender relations and gender norms must be taken into account. They noted that a traditional gender role orientation gives the male much more power in sexual situations and tends to increase the risk for the women involved with them. Billy and colleagues (2009) also differentiated between the effects of structural power, which is still held by men, according to today's social norms, and individual level factors such as relationship commitment. In this work, men reported more traditional gender role ideology than did women. Interestingly, women reported having more control over sex, but less control over contraception (Billy, Grady and Sill 2009). Other research has questioned this idea, claiming that the "range of sexual behavior acceptable for women has also widened considerably and the sexual 'double standard' is now a matter for debate, rather than a certainty" (, p. 273-274). However, literature looking at the effect traditional gender norms have on what is and is not acceptable sexually for women has found that traditional gender norms dictate that casual and less cautious sexual behavior is stigmatized when women engage in it, but not when men do so (Seal and Agostinelli 1996). This perspective has been reinforced in recent literature on hookup cultures (Banker, Kaestle and Allen 2010; Berntson, Hoffman and Luff 2014). In addition, expectations of women for men to be the aggressor in sexual

situations may also make it easier for women to accept men's preferences regarding the sexual encounter, including foregoing the use of a condom (Seal and Agostinelli 1996).

Research on sexually transmitted infection (STI) prevention, specifically HIV/AIDS, has incorporated gender roles and norms in regard to condom use to a much larger extent than studies of other contraceptive methods. Given the necessity of successful condom use negotiation for women to protect themselves from HIV/AIDS and other sexually transmitted diseases, the resurgence of attention to gender roles and norms in this area is understandable. Scholars in the last 20 years addressed the HIV/AIDS epidemic by looking at social norms regarding condom use and how societal gender power differentials may affect use. In 2006-2008, approximately 16% of the sexually active population in the United States used condoms as their primary form of contraceptive (Mosher and Jones 2010). Some advocates have called for the development of female contraceptive methods which also protect against STIs (Amaro 1995). This view is tied to the idea that gender roles influence men and women - both in relationships and outside of them - and in their sexual behavior, with gender roles existing as important modifiers in the negotiation of sexual practices and in whose wishes will prevail – the man or the woman's (Ehrhardt and Wasserheit 1991).

The STI/condom use literature points out that condom use is qualitatively different for men and women: for men it is putting a condom on, while for women it is convincing men to use one (Carter et al. 1999); therefore, condom use is firmly under the control of men. Thus, leaving gender out of the equation significantly reduces the validity of findings on this topic. One study found that among female-only focus groups, nearly 75% identified power and gender as a central issue when discussing HIV/AIDS risk reduction, but that in mixed gender focus groups the issue rarely came up (Amaro and Gornemann 1992). The researchers concluded that the impact of the unequal status on women in HIV/AIDS prevention is substantial, that women are at a disadvantage in protecting themselves in sexual encounters due to power differentials, and that some women have difficulty engaging in non-gender norm conforming behavior such as requesting the use of a condom in a sexual situation (Amaro and Gornemann 1992).

Finally, some researchers have examined the effect of community and peer level social norms regarding condom use and how those norms have affected both intention to use condoms and actual condom

use behavior (Richard, Bell and Montoya 2000). This research concluded that women are very likely to comply with their partners' wishes regarding condoms because of the social norms dictating women's behaviors with partners in sexual situations and men's inherent power over the actual use of the condom (Richard, Bell and Montoya 2000). In this dissertation I find gender differences in psychosocial contexts for men and women, and I also find that gender plays a role in contraceptive risk-taking for women (see Chapters Six and Seven).

Sexuality

Attitudes about Sexuality

Research on attitudes toward sexuality among adolescents and emerging adults has generally found that individuals typically hold positive attitudes toward premarital sex but only when it takes place within a relationship (de Visser et al. 2014). Other research has found that attitudes (as well as norms) are predictive of actual sexual behavior (White, Terry and Hogg 1994), making the inclusion of attitudes critical to any theories about the influence of psychosocial contexts on sexual behavior and contraceptive use.

Researchers also find that an adolescent's attitude toward adolescent sexual behavior in general was the strongest predictor of engaging in sexual behavior (Akers et al. 2011); however, the attitudes of parents and friends also had an influence on adolescents (Akers et al. 2011), making the inclusion of adolescents' perceptions of other's attitudes important to investigate. Other research has linked delayed sexual initiation to one's attitudes about refusal of sex in adolescence (O'Donnell et al. 2003), one's positive attitudes toward future prospects, and one's positive attitudes toward abstinence (Silver and Bauman 2006). Gender differences have also been noted, with boys having less positive attitudes toward abstinence overall than girls (Silver and Bauman 2006). Finally, Jaccard, Dodge and Dittus (2003), found that the mother's negative attitudes toward sexuality influenced their adolescent daughters development of negative attitudes toward sexuality.

Gendered attitudes have also been found among college students, who report feeling that women should have fewer sexual partners than men (Lefkowitz et al. 2014). Other research suggests that gender differences in terms of perceptions of the appropriateness of sexual behavior may be smaller than previously

suggested (Petersen and Hyde 2011). Emerging adults' attitudes toward and conceptions of love are highly linked to their attitudes about sex (Katz and Schneider 2013). Finally, college students who have more permissive attitudes toward sex are more likely to have multiple sexual partners and to engage in casual sex (Katz and Schneider 2013; Townsend and Wasserman 2011). Importantly, some research suggests that attitudes toward sex that are developed in adolescence may have some influence on sexual behavior in emerging adulthood (Katz and Schneider 2013). These findings call for an examination of how attitudes formed in adolescence may impact both behaviors in emerging adulthood, and the formation of new or different attitudes about sexuality – all of which may coexist with previously developed attitudes.

Social Norms and Sexuality

In adolescence, perceptions of norms about sexuality are often highly contradictory. Almost everyone finds themselves in a situation, as an adolescent, where they identify competing messages coming from different sources which provide the adolescents with differing expectations about what behavior is expected of them (Brown, Steele and Walsh-Childers 2001; Sennott and Mollborn 2011). For example, parents generally have some expectation that their children not participate in sexual relationships until they are in later high school or college, and sometimes not until marriage (Brown, Steele and Walsh-Childers 2001; Elliott 2010), and these norms are generally perceived by the adolescent even if they are not directly communicated by the parent (Jaccard, Dittus and Gordon 1998). In contrast, peer groups are often perceived as expecting adolescents to participate in sex earlier in the life course (Buhi and Goodson 2007; Kinsman et al. 1998). Because of the conflicting social environment usually present in adolescence about sexuality and contraceptive use, the transition between the adolescent sexual psychosocial context and that of emerging adults represents a unique and powerful circumstance to examine the cumulative effect of attitudes and norms at a primary life course transition point.

In addition to considering the often contradictory nature of social norms about sex and contraceptive use, it is important to consider that when we move to new settings with new sets of norms, we carry the norms from older settings with us; however, this view is generally not taken in the literature. In my dissertation, I fill this gap by using social norms items (in conjunction with other items), as part of the

psychosocial context, to predict later behavior within likely different psychosocial contexts. In addition, I fill this gap by exploring women's perceptions of their psychosocial context in adolescence and interrogating how they adapted to the new psychosocial context of hookup cultures present on the university campus where the interviews were held. Thus, I argue that older norms and attitudes guide how we adapt to the new (and often competing) norms we face.

Some scholars have recently argued that sexuality in particular should be viewed with a life course lens (Carpenter and DeLamater 2012; Carpenter 2010); however, this work does not explicitly integrate the influence of changing social norms about sexuality at different points in the life course. Past research tends to examine influences on adolescent sexual norms and emerging adult sexual norms separately. The literature, then, has focused on how norms are perceived in specific life course stages such as adolescence (Castronova 2004; Kinsman et al. 1998), emerging adulthood (Barriger and Velez-Blasini 2013; Scholly et al. 2005), or, in one case, transitions between the two (Mollborn and Sennott 2014). Researchers have examined various levels of norms as they are conceived in this research (i.e. peer, school, community) but most often these levels are also examined separately – or on occasion, two levels may be combined together (Cox et al. 2014; Santelli et al. 2004b).

Previous research has often focused on the effect of social norms at the individual psychological level examining what psychological factors influence initiation into sexual activity and contraceptive risk-taking. This research is typically looking at *perceived* norms, or what the individual thinks is occurring in his or her social world, regardless of what is actually occurring. Researcher's generally find that a perceived norm of risk-taking increases risk-taking among adolescents (Adams and Rust 2006; Santelli et al. 2004b). Research has also been done looking at the influence of peer norms on sexuality, generally finding a large influence of *perceived* peer norms on the timing of entry into sex and contraceptive use, among other sexual behaviors (Bauermeister et al. 2009; Busse et al. 2010; Cox et al. 2014; Kinsman et al. 1998; Lim et al. 2009; Messer et al. 2011; O'Donnell et al. 2003; Santelli et al. 2004a; Sieving et al. 2006; Silver and Bauman 2006). Other research examines the school level and finds that broader norms about sex within a school also impact adolescent sexual decisions (Barriger and Velez-Blasini 2013; Castronova 2004; Scholly et al. 2005). Still other research

looks at the influence of parents on adolescent sexual behavior, generally concluding that *perceived* parental norms do have some influence on adolescent behavior (Akers et al. 2011; Bakken and Winter 2002; Cox et al. 2014; Manlove et al. 2012; Schuster, Mermelstein and Wakschlag 2013).

At the cultural level, research has looked at assumed broader norms within the United States (Cotton et al. 2004). Researchers examining the normative effect of media generally find that media depictions of what is normative within the culture did impact adolescent participation in sexual activity (Chia 2006; Eggermont 2005; Ward 2002). However, these depictions were often not reflective of what was actually occurring (Chia and Lee 2008). Research also finds that adolescents often engage in "hookups" or short-term casual sexual relationships (Manning, Longmore and Giordano 2005). One should note that "hooking up" is not new (Berntson, Hoffman and Luff 2013; Schalet 2011b). Rather, casual sex has been practiced over time, but has had different meanings to different cohorts and in different periods of history (Crawford and Popp 2003; Schalet 2011b). Thus, the concept of "hooking up" is a new formulation of an old behavior.

The focus of the hookup literature is largely on emerging adults (Bogle 2008; Stepp 2007). This literature has looked at how actual descriptive norms in college settings may differ from the *perceived* norm (Rimal and Real 2003a). Wilkins (2014) found that while casual sex may be the *perceived* normative influence in college settings, it is not the only form sexuality that takes place. While the majority of women on a given college campus may not be participating in hookups, often the most visible pathway for integration into the college setting is that of attending parties, drinking, and engaging in casual hookups, and this is especially true of large state universities (Armstrong and Hamilton, 2013).

Researchers examining the impact of hookup cultures on students have found them to be more beneficial for men (England and Thomas 2009), and have argued that women sometimes stay in relationships they do not want to be in because perceived norms suggest that it is difficult to find a relationship in a normative environment of casual sex (Hamilton and Armstrong 2009). Other researchers argue that both men and women participate in hookups with the intention of forming a romantic relationship, with hooking up being the new normative pathway to relationship formation (England and Thomas 2009; Heldman and Wade 2010; Kalish and Kimmel 2011; McClintock 2010; Reid, Elliott and Webber 2011). However, research

has also suggested that there may be gender variations in normative differences in intention when engaging in hookups with women hoping that hookups will lead to romantic relationships more often than men (England and Thomas 2009; Grello, Welsh and Harper 2006; Owen and Fincham 2011). In addition, while some scholars argue that hookups are a new pathway to relationship formation (England and Thomas 2009; Heldman and Wade 2010; Kalish and Kimmel 2011; McClintock 2010; Reid, Elliott and Webber 2011), other scholars argue that hookups *are not* a good path to relationship formation (Brimeyer and Smith 2012; Owen and Fincham 2011), and that people are less satisfied with relationships that begin with hooking up (Owen and Fincham 2011; Paik 2010). Finally, some literature suggests that young men are more likely to participate in hookups than are young women (Grello, Welsh and Harper 2006; Owen et al. 2010).

Researchers have also examined changes in the "double standard" of sexuality, in which "men are evaluated more positively or less negatively than women who have similar sexual histories" (Jonason and Marks 2009, p. 357). The idea of a double standard has been around since before the sexual revolution of the 1960s when it primarily related to women having sex before marriage (Allison and Risman 2013; England and Thomas 2006; Reiss 1956; Reiss 1960; Reiss 1967; Smigel and Seiden 1968). However, scholars argue that with the current wide acceptance of premarital sex for both sexes (Allison and Risman 2013; Bordini and Sperb 2013; Crawford and Popp 2003; England and Bearak 2014), the sexual double standard has shifted and now represents stigmatization for women on the basis of having too much casual sex (Armstrong et al. 2014; Bordini and Sperb 2013; Kreager and Staff 2009; Lyons et al. 2011; Milnes 2010), or engaging in casual sexual encounters (Allison and Risman 2013; Bogle 2008; England and Bearak 2014). The sexual double standard also relates to prohibitions against women expressing desire (Armstrong et al. 2014; Morrison et al. 2014; Tolman 1994; Tolman 2002), whereas men are expected to both experience and act on desire (Bailey 1989; Morrison et al. 2014; Tolman 1994; Tolman 2002). The sexual double standard also extends to contraceptive use, with women believing that they will be stigmatized for providing condoms (Hillier, Harrison and Warr 1998); however, one scholar found that this was not the case, with men in the study rating women just as positively when she provided condoms as when she did not (Kelly and Bazzini 2001).

As part of the stigma applied to women for engaging in casual sex, or for having too many sexual partners, scholars argue that the term "slut" is used as a tool to regulate sexual behavior in women (Flood 2013; Morrison et al. 2014). This has been found to be particularly prevalent among women themselves who may call other women "sluts" in order to label their own behavior as morally superior – which some have argued is a sign of internalized gender oppression (Ringrose and Renold 2012). Other scholars argue that use of the term "slut" is a way to reinforce class differences, thereby providing a benefit to women who designate other women as "sluts" as part of a class-based status performance on college campuses (Armstrong et al. 2014). The Madonna/whore dichotomy is an intrinsic part of the slut discourse (Morrison et al. 2014). This requires women to be both virginal and sexual at the same time (Attwood 2007; Crawford and Popp 2003) with female sexuality designated as inherently either good or bad (Bryant 2006; Ussher 1994).

Conclusion

This chapter presented the theoretical framework and review of literature relevant to this dissertation. The theoretical framework uses the life course perspective to suggest that both sexual activity and contraceptive use must be looked at cumulatively across the life course so that the influence of previous life course stage norms and attitudes on later life stages can be examined. As outlined in this chapter, previous research on adolescent and emerging adulthood sexuality and contraceptive use suggests that there may be a long lasting influence of norms and attitudes experienced and developed in adolescence on one's later sexual and contraceptive behavior and outcomes. However, current research tends to focus primarily on either adolescence or emerging adulthood, norms or attitudes, and sexuality or contraceptive use, suggesting the need for research that looks at how attitudes and norms function together to influence both sexuality and contraceptive use from one life course stage to the next. I argue that understanding how people deal with attitudes and norms in their current environment is dependent on understanding what norms they were previously exposed to and how they dealt with those. Importantly, transitions between sets of attitudes and norms are critical in understanding behavior. Investigating how attitudes and norms from past environments influence our decision-making and behavior within our current social environment will contribute to our understanding of people's responses to current norms. Therefore, I believe we should apply the life course

perspective explicitly to attitudes and norms research. Some researchers have examined how networks of differing and competing norms about sexuality are navigated (Mollborn, Domingue and Boardman 2014a; Mollborn and Sennott 2014) but to my knowledge, the lasting influence of those norms on later behavior within different normative environments has not been examined. Further, using data from the National Survey of Adolescent to Adult Health, and qualitative interview data from female college students, I argue that identifying how adolescents perceive the influences on their own sexual activity and contraceptive use is worthwhile, as it allows identification of different profiles of individuals with differing backgrounds and thus differing subsequent approaches to dealing with their sexuality and contraceptive use in emerging adulthood.

CHAPTER THREE: Data and Methods

When I started graduate school, I was given the task of looking through the National Survey of Adolescent to Adult Health[10] (Add Health) dataset and deciding on a project to pursue. Although it took three years, eventually I did publish a paper based on that research. In the process I learned how to use Add Health which is an incredibly difficult dataset to manage. I also learned a tremendous amount about using secondary datasets which I had never before dealt with. When it came time to decide what to do for my dissertation, Add Health was the only dataset that had information on social norms, the respondent's perceptions of others' attitudes, the respondent's own attitudes, and that was also longitudinal, which was necessary given my focus on looking at the influences of psychosocial context across the life course. Add Health would allow me to analyze social norms and later reproductive health outcomes, but it did not have the detailed measures in emerging adulthood that I would have needed to investigate quantitatively my question of *how* people saw norms in adolescence affecting their later behavior. In fact, given the data's quantitative nature, even the inclusion of more detailed measures would not have allowed me to explore women's lived experiences of their transitions between psychosocial contexts. In order to address this concept, I turned to qualitative interviews, with which I had some previous experience. This led me to think about and investigate how mixed methods can enrich a project by allowing examination of population demographic questions, and for exploration into the ways in which people perceive how their lives are shaped by the social context surrounding them.

I have long had an interest in social norms, attitudes, and also in contraceptive risk-taking. While working at a non-profit prior to entering my Ph.D. program in sociology I began to examine contraceptive risk-taking among women. I also attended a social marketing conference during my time there and I came to graduate school wanting to pursue research on contraceptive risk-taking from a social psychological perspective. I designed my dissertation project to get the most from the quantitative data available in Add

[10] This survey was initially called the National Survey of Adolescent Health, but the name was changed to the National Survey of Adolescent to Adult Health to more accurately reflect on-going data collection waves which currently includes information on participants in their early 30s with additional waves of data collection underway.

Health, and to flesh out the perceptions of lived experiences through qualitative interviews. These experiences underlie the connection I suspected existed in attitudes and social norms across the life course (psychosocial context), with the psychosocial context in one stage of the life course explicitly influencing the psychosocial context at later stages. The end result of this inquiry is this mixed methods dissertation. I use quantitative data to address the predictive ability of the psychosocial context in adolescence for reproductive behaviors and outcomes in emerging adulthood. I then use qualitative data to explore how the psychosocial context from adolescence works to influence later behavior, as well as how women justify contraceptive risk-taking to themselves within their emerging adult psychosocial contexts.

The rest of this chapter is devoted to explaining the methodologies I used in conducting my research. I combined approaches from my background in psychology and my training in sociology to look across concepts which are commonly studied separately (e.g. norms, attitudes, behaviors). I also utilized my experience with qualitative methods, which can explicate processes in ways that quantitative methods cannot. I will proceed to explain why my research questions lent themselves to – and indeed called for – a mixed methods dissertation. I included a detailed description and justification for the quantitative methods I employed. I explained how I conducted and analyzed my qualitative interviews, and what I learned in the process.

Research Questions

My dissertation addresses four research objectives, each of which has its own empirical chapter:

1. A) How do adolescents' responses to items about attitudes and social norms about sex, pregnancy, and contraceptive use group together (factor analysis); B) what are the psychosocial profiles among adolescents (latent class analysis); and C) is social disadvantage related to these psychosocial profiles (descriptive statistics)?
2. Do the attitudes and norms about sexuality and contraceptive risk-taking that adolescents perceive in high school shape later reproductive health outcomes and risk-taking in emerging adulthood?

3. How do the often differing attitudes and norms about sexuality and contraceptive use individuals are exposed to in adolescence from multiple levels of influence such as peers, family, and community, impact the strategies they use as emerging adults to deal with entering into new normative environments that also have differing attitudes and norms at multiple levels?
4. How does the psychosocial context (attitudes and norms) in adolescence and young adulthood shape how women perceive contraceptive risk-taking, how they account for it, and what they do to justify such risk-taking to themselves and to others?

Questions one and two are addressed in Chapter Four and Chapter Five of this dissertation using Add Health quantitative data, while questions three and four are addressed in Chapter Six and Chapter Seven with qualitative interview data I collected myself on Mountain University campus.

Methodology

This study is a mixed methods approach to investigating the life course influence of social norms on contraceptive risk-taking in adolescence and emerging adulthood. I draw on quantitative, longitudinal data from the National Survey of Adolescent to Adult Health (Add Health) (Harris 2009). Add Health is a nationally representative sample of United States adolescents with initial data collection in high school, and three subsequent follow-up waves, with a fourth follow-up wave currently in the planning stages. In addition, I look in depth at perceptions of the longitudinal influence of social norms by interviewing college undergraduate women, a group with the highest abortion rates and among the most frequent users of ineffective methods of contraception, including natural family planning, the rhythm method, and withdrawal (Jaccard 2009). College students on the Mountain University (MU) campus are subject to college hookup cultures which ostensibly preferences freely available sex. The transition to a hookup culture is ideal for looking at the longitudinal effect of norms and attitudes as, in the vast majority of cases the norms about sexual activity on the MU campus are considerably different from those women experienced in high school. This (in most cases) stark change in psychosocial context is useful in identifying how previous norms influence later behavior within a new psychosocial context. To closely examine this group and the narratives

they construct regarding contraceptive risk taking, I collected 45 in-depth semi-structured qualitative interviews with women on the Mountain University (MU) campus who were between the ages of 18 and 24 and self-identified as having taken a contraceptive risk at some point since they became sexually active. I selected this group because one of my primary interests was in identifying why women take contraceptive risks, (research question 4). This means that my qualitative sample is made up entirely of risk-takers. It should be noted that it is possible that women who admit to contraceptive risk-taking navigate transitions from one psychosocial context to the next differently than women who do not self-identified as having taken contraceptive risks. By limiting the sample to risk takers, I was able to gain information about a wider variety of adolescent psychosocial contexts within the risk-taking group than if I tried to sample both risk takers and non-risk takers.

I use qualitative interviews with women only in this dissertation. Although I collected 44 interviews with undergraduate men, I was unable to transcribe them in time to include the data here. In my quantitative analysis, however, I use data from both women and men. I include men in the quantitative portion of my analysis for two reasons:

1) I feel that the inclusion of men where possible is important because typically men are underrepresented in research on contraceptive risk-taking given that most available contraceptive methods are designed primarily for female use. However, it is important to note that it is possible that men's information, particularly in regards to the emerging adulthood outcomes, may be limited as to reported sexual and contraceptive risk-taking since many forms of contraceptives do not need men's participation, and women may or may not communicate the truth about what contraceptive methods they are employing during sex (Landry and Camelo 1994). In addition, a woman can become pregnant, deliver a baby, or have an abortion without a man's knowledge, although studies show that this is not common (Joyner et al. 2012; Montgomery 1996); and
2) Add Health includes data on men, so that quantitative data on men is easily available.

Quantitative analyses were used to identify how social norms and attitude items clustered together. Using factor analysis, I gave each item equal weight and allowed a structure to emerge from the data so that

concepts which have typically been studied separately were able to cluster together according to patterns in the data and without regard to my disciplinary perspective. I identified these factors as making up the psychosocial context. I then used latent class analysis to determine if there are distinct groups of people with specific and unique psychosocial contexts. I quantitatively examined how these different group-based psychosocial contexts were associated with the respondent's pregnancy outcomes between the ages of 18 and 24, and to their sexual and contraceptive experiences and choices in the same age range. As separate structures emerged for men and women in the first stage of this analysis, all subsequent analyses were run separately for men and women.

I also examined qualitatively how social norms and attitudes about pregnancy, sex, and contraceptive risk-taking are perceived in adolescence within a broad range of psychosocial contexts, and in emerging adulthood within the ostensibly normative casual sex environment on the MU campus. I talked with respondents about the thoughts and feelings related to sexuality, contraceptive use, and pregnancy of their friends, families, and communities in high school, how they perceived the same norms within the college setting, how women thought about risk-taking, and how they justified risk-taking to themselves.

In sum, the quantitative analyses I conducted establish the link between psychosocial context in adolescence and reproductive health outcomes and behaviors in emerging adulthood, while the qualitative interviews explore women's narratives and examine how they perceived psychosocial contexts in adolescence to have influenced their behavior in emerging adulthood. Qualitative narrative data, while not generalizable like the quantitative data, was useful for looking at variation within a specific group – in this case, college women who self-identified as contraceptive risk-takers. It also allowed explication of why women think the way they do by allowing them to elaborate on their responses, and allowing the interviewer to ask for further clarification if they are uncertain as to what motivates a specific response. Below, I first describe the quantitative sample and methods used and my rationale for each analysis technique used. I then describe the qualitative methods used.

Mixed Methods

I use mixed methods in this dissertation in order to explore two perspectives of the same phenomenon – contraceptive risk-taking. Mixed methods is defined as mixing or combining quantitative and qualitative research design either within one study (Johnson and Onwuegbuzie 2004), or across studies in a research program (Lingard, Albert and Levinson 2008). Mixed methods allow researchers to address both the demographic patterns, as well as the "why" and "how" of those patterns (Berger et al. 2013). My research is fundamentally about contraceptive risk-taking and a mixed methods design is useful in this instance as it allows me to study both outcomes and the processes that help contribute to those outcomes (Clark 2010). I am utilizing a complementarity design in my mixed methods research which is defined as "elaboration, enhancement, illustration, clarification of the results from one method with the results from another" (Bryman 2006; Greene, Caracelli and Graham 1989, p. 259; Johnson, Onwuegbuzie and Turner 2007). Although mixed methods has been underutilized in population research (Bernardi, Keim and von der Lippe 2007), scholars have called for the utilization of mixed methods in health research (Sale, Lohfeld and Brazil 2002), and some studies have demonstrated the utility of mixed methods designs in sexual health research specifically (Berger et al. 2013; Mustanski, Lyons and Garcia 2011; Olmstead et al. 2013).

The interviews were conducted as complementary to my quantitative analysis and were given equal weight in the dissertation and in my thought processes (Creswell et al. 2011). While the quantitative data demonstrated the effect of psychosocial context in adolescence on outcomes and behavior in emerging adulthood, it did not provide any information about how women perceived this transition, nor why adolescent psychosocial context in adolescence affects later behavior. The quantitative data also was not able to delve into the underlying reasons women have for taking contraceptive risks. The interviews I conducted allowed me to explore women's lived experiences in order to provide some depth and context to my quantitative findings.

Quantitative Methods

Data

The quantitative analyses used data from Waves I, III, and IV of the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative survey beginning with middle and high school students surveyed in 1994-1995 (Harris 2009). Researchers sampled 52 middle schools and 80 high schools in the United States. More than 70% of the originally sampled schools participated in the study, and those which refused were replaced with schools from the same community. A subsample of students at each school completed an in-home interview at Wave I that was followed up at one, six, and twelve years later. The primary parent (usually the mother) also completed an interview. The Add Health sample was representative of U.S. schools with respect to urbanicity, region of country, school type, ethnicity, and school size. Oversampling of some populations was conducted, and dropouts were not interviewed. Probability weights allow researchers to represent the national population of adolescents in grades 7 to 12 in 1994-1995. Response rates for the four waves varied from 77 to 88 percent. Wave IV retrospective reproductive histories were used in all analyses, as recommended by Add Health (Cheng 2010).

Research Question 1: A) How do adolescents' responses to items about attitudes and social norms about sex, pregnancy, and contraceptive use group together (factor analysis); B) what are the psychosocial profiles among adolescents (latent class analysis); and C) is social disadvantage related to these psychosocial profiles (descriptive statistics)?

Analysis Plan: Factor Analysis

Factor analysis was used to allow items to vary and group together with no disciplinary framework imposed on them. Specifically, a principal components factor analysis with a varimax rotation (Dunteman 1989) was used to determine the structure of underlying factors of attitudes and norms about sex, contraceptive-use, and pregnancy. This technique uses joint variations in the observed variables to identify underlying latent factors, thus allowing the variables to be grouped together into items that represent the same underlying constructs (Suhr 2006).

Three steps were taken in order to determine how many factors to retain. Initially, eigenvalues[11] were examined. Next, a screeplot was examined and the point at which the plotted line visually appeared to flatten was identified. Screeplots display the eigenvalues from each identified factor in descending order and are generally used to visually determine which factors explain the most variance in an analysis, and the number of factors to retain (Cattell 1966; Song and Belin 2008). This result was compared with the number of factors identified using the eigenvalue method. Finally, a parallel analysis was performed. Parallel analysis is regarded as the best way to determine the appropriate number of factors to retain in a factor analysis (Hayton, Allen and Scarpello 2004; Ledesma and Valero-Mora 2007). A parallel analysis constructs correlation matrices of random variables, using the sample size and number of variables in the actual dataset being analyzed (Hayton, Allen and Scarpello 2004). It then compares eigenvalues generated from the random set to the eigenvalues generated from the real dataset and determines how many eigenvalues are higher than you would obtain with random chance (Hayton, Allen and Scarpello 2004). Where the three methods diverged, I preferenced the parallel analysis over the eigenvalues and screeplots, however, as with any factor process, analyst determination of theoretical match is the final decisive element of the number of factors retained in the analysis (Hayton, Allen and Scarpello 2004).

Varimax rotation was used to yield a result which makes it possible to identify each variable observed with a specific underlying factor.[12] This technique generates a loading for each variable on each identified factor. Variables loading with a 0.4 or higher on only one factor and below 0.4 on all other factors were assigned to the factor on which it loaded at or above 0.4. One variable which did not load at 0.4 or higher on any factor was dropped from the analysis.[13] Identified factors are described in Chapter Four.

Thirty-two Wave I continuous variables (described below in the section titled: "Wave I attitude and social norms variables") were used in the factor analysis to identify how norms and attitudes related to sexual activity, contraceptive use, and teen pregnancy in adolescence clustered together. If responses were missing at

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[11] Typically factors with an eigenvalue of one or higher are retained, although this varies based on the theoretical match of the factors.
[12] A varimax rotation assumes independence of the identified factors.
[13] The removed factor was "It is easy for me to get birth control."

Wave I because the respondent was under the age of 15 at the time of Wave I data collection, the same questions were filled in using Wave II for those who turned 15 after Wave I and before Wave II. This use of exploratory principal components factor analysis allowed the items to arrange themselves in groups which were representative of the underlying structure respondents used to organize their perceptions of the expectations of their social environment, rather than placing them in disciplinary silos as research currently tends to do (Carpenter and DeLamater 2012). I then created a summative scale for each factor which resulted in one overall value for each identified factor for each respondent.

Each summative factor score was then used to create a three level categorical variable for use in a later latent class analysis (described below).[14] The three levels were split according to cut point values. As each item was answered on a 1-5 Likert scale, the high cut point delineating the line between the topmost category and the middle category was determined by using the summative value if each question included in the factor had been answered with a 4 or above. The cut point delineating the bottommost category was similarly determined by using the summative value if each question included in the factor was answered with a 2 or below. All other combinations of responses were included in the middle category. I used these cut points because I was primarily interested in those who scored very high or very low on each factor. However, standardized means of the summative factors are reported for comparison purposes in Chapter Four.

Factor Analysis Sample

At Wave I there were a total of 20,745 in-home interview respondents. Of these, 15,223 were aged 15 or older at Wave I. Only those aged 15 and over were administered questions pertaining to sexual activity. As Wave II was administered only one year later and respondents were asked the same questions as in Wave I, an additional 2,112 people who turned 15 between wave I and II were added to the sample by filling in the responses to the sex related questions with Wave II data, resulting in a sample size of 17,335. Those respondents (both male and female) reporting an abortion at Wave I or a pregnancy or birth within ten months of the Wave I interview date were dropped so that the experience of pregnancy or birth would not

[14] Latent Class Analysis requires the use of categorical variables.

influence their responses to the social norms and attitude items (N=489 births/pregnancies, 253 abortions). For respondents who were under 15 at Wave I but over 15 at Wave II necessitating use of the Wave II items, respondents were dropped if they reported a pregnancy or birth within ten months of the Wave II interview date, or an abortion prior to Wave II were dropped (N=279 births/pregnancies, 40 abortions). This provided a final sample size of 16,274 respondents who answered at least one of the items included in the factor analysis. Because Exploratory Factor Analysis drops cases with missing items on any of the factored variables, a total of 5,809 cases were dropped from the factor analysis, leaving a total of 10,465 cases for use in the factor analysis.[15] Cases omitted from the analysis were more likely to be minority, low-income, and male (See Appendix A). Both combined and separate analyses were run by gender, with 5,028 women, and 5,437 men in the factor analysis. Gender differences were found, and thus results reported in chapter 4 and 5 are split by gender.

Factor Analysis Dropped Cases

Missing data analysis was conducted on the cases dropped from the factor analysis due to missing item-responses (N=9,371) compared to cases retained for the factor analysis due to complete data on all underlying items (N=10,465). Demographically, missing cases were more likely to be male, Black, born in the United States, and slightly older at Wave I. Cases with data missing on one or more of the underlying factor items were also more likely to be below 200% of the federal poverty line, to report no religion or report being Baptist, and to report grade point averages below 2.5. In terms of outcomes, those missing data on any of the underlying items were more likely to report a birth or abortion between the ages of 18 and 24, to report using a condom all the time in the last twelve months at Wave III, and to report using a condom at most recent sex. Despite these differences, the factors were quite consistent regardless of which items were included or excluded. Factor scores were computed for anyone who had all of the items on that specific factor regardless of if they had been excluded from the factor analysis due to missing data on other variables (See Appendix A

[15] Use of SAS was also explored for the factor analysis. However it also drops cases with missing values (Suhr, Diana D. 2006. *Exploratory or confirmatory factor analysis?*: SAS Institute Cary.)

for tables showing means and significance for major demographic and outcome variables comparing those complete on all underlying factor items versus those missing one of more items.)

Factor Analysis Wave I Attitude and Social Norms Variables

For the first 23 items described below respondents were asked to agree or disagree with a number of statements regarding pregnancy, sex, and contraceptive use at Wave I and at Wave II while they were in high school.[16] Wave I reports were preferenced, and where missing, were filled in with Wave II reports. Respondents answered each question using a 1-5 Likert scale as follows: 1=strongly agree, 2=agree, 3 neither agree nor disagree, 4=disagree, and 5=strongly disagree. Variables that were reverse coded are identified with an asterisk. Items used were:

1) Getting (someone) pregnant at this time in your life is one of the worst things that could happen to you.
2) It wouldn't be all that bad if you got (someone) pregnant at this time in your life.*
3) If you had sexual intercourse, your friends would respect you more.*
4) If you had sexual intercourse, your partner would lose respect for you.
5) If you had sexual intercourse, afterward, you would feel guilty.
6) If you had sexual intercourse, it would upset your mother.
7) If you had sexual intercourse, it would give you a great deal of pleasure.*
8) If you had sexual intercourse, it would relax you.*
9) If you had sexual intercourse, it would make you more attractive to women (men).*
10) If you had sexual intercourse, you would feel less lonely.*
11) If you got (someone) pregnant, it would be embarrassing for your family.
12) If you got (someone) pregnant, it would be embarrassing for you.
13) If you got (someone) pregnant, you would have to quit school.
14) If you got (someone) pregnant, you might marry the wrong person, just to get married.
15) If you got (someone) pregnant, you would be forced to grow up too fast.

[16] The item "It is easy for you to get birth control" was originally included but was dropped for non-loading on any factor in both the female and male factor analyses.

16) If you got (someone) pregnant, you would have to (help her) decide whether or not to have the baby, and that would be stressful and difficult.
17) In general, birth control is too much of a hassle to use.*
18) In general, birth control is too expensive to buy.*
19) It takes too much planning ahead of time to have birth control on hand when you're going to have sex.*
20) It is too hard to get a (girl/boy) to use birth control with you.*
21) For you, using birth control interferes with sexual enjoyment.*
22) Using birth control is morally wrong.*
23) If you used birth control, your friends might think that you were looking for sex.*

For the next six items, respondents were asked to indicate if a parent would approve or disapprove with a number of statements regarding pregnancy, sex, and contraceptive use at Wave I while they were in high school. Respondents answered each question using a 1-5 Likert scale as follows: 1=strongly disapprove, 2=disapprove, 3 neither approve nor disapprove, 4=disapprove, and 5=strongly disapprove.

24) How would your mother feel about you having sex at this time in your life?
25) How would your mother feel about you having sexual intercourse with someone who was special to you and whom you knew well – like a steady girl/boyfriend?
26) How would your mother feel about you using birth control at this time in your life?
27) How would your father feel about you having sex at this time in your life?
28) How would your father feel about you having sexual intercourse with someone who was special to you and whom you knew well – like a steady girl/boyfriend?
29) How would your father feel about you using birth control at this time in your life?

For the three items below, respondents were asked how much they were sure they could engage in specific behaviors using the following scale: 1=very sure, 2=moderately sure, 3=neither sure nor unsure, 4=moderately unsure, and 5=very unsure.

30) If you wanted to use birth control, how sure are you that you could stop yourself and use birth control once you were highly aroused or turned on?
31) How sure are you that you could plan ahead to have some form of birth control available?
32) How sure are you that you could resist sexual intercourse if your partner did not want to use some form of birth control?

Analysis Plan: Latent Class Analysis

Latent class analysis allows identification of different groups with different conceptual profiles within a dataset. I conducted latent class analysis using three level categorical variables which I constructed from the factors identified in the factor analysis (six factors for women and seven factors for men, described in Chapter Four). These categorical variables were then used in the latent class analysis, along with a dichotomous yes/no variable representing the acceptability of childbirth outside of marriage. The continuous factors from the factor analysis were categorized into three levels so that latent class analysis could be used and the existing categorical variable could be included. Respondents were included in the latent class analysis if they had responded to all items on at least one of the factors, thus very few cases were dropped from the latent class analysis as the latent class analysis used data from the calculated factors for all respondents, even if they were missing factor items. Latent class analysis has been used this way to "impute" missing data for categorical items (Vermunt et al. 2008). Thus all participants with at least one complete factor (no missing responses from the items included in any one of the calculated factor variables) were included in the latent class analysis, and a best class fit was determined even if an individual was missing data on some factors.

Latent class analysis works on a similar principle to a factor analysis; however it differs from factor analysis in that it uses categorical, not continuous, indicators and assumes that there are underlying groups, or classes, of respondents rather than grouping the items themselves as factor analysis does. Thirty iterations of the latent class analysis were run, each producing a Bayesian Information Criterion (BIC) and an Akaike Information Criteria (AIC). The BIC is a relatively better measure because it favors more parsimonious models. Identified factor categorical variables were transferred to the "R" statistical package (R Core Team

2015), due to statistical computing limitations within STATA. "R" was then used to compute classes for use in later analysis.

In "R" the "lca" command performs a latent class analysis by using randomly generated starting values, which determine the maximization process (Linzer and Lewis 2006). The average BIC and AIC for 30 different trials was computed to ensure that results were not determined entirely by the starting values. These averages were graphed (see Chapter Four) and the graphs suggest a range of potential appropriate class solutions. Once a small range of appropriate classes is determined, the analyst identifies the number of classes that make the most theoretical sense given the dataset and research questions. Each case is then assigned a probability of membership in each specific class (similar to a factor loading), and population shares are calculated for each class to provide an idea of the prevalence of the class within the population. The class with the highest probability of membership is then assigned to each individual case. The categorized factors identified in the factor analysis described above were used along with one additional pre-existing categorical variable in the latent class analysis to identify classes or groups of respondents with different combinations of attitudes and social norms factors – herein after referred to as "psychosocial contexts." As described in Chapter Two, this dissertation uses the phrase psychosocial context to refer to items commonly seen as "norms" but also includes items traditionally labeled as individual attitudes, but which I argue are internalized moral norms. The best fitting class was identified and then the dataset containing the latent class identification variable was transferred back to STATA for further analyses, again separately by gender.

Latent Class Analysis Sample

As described above, categorical factors were transferred from STATA to "R" and used in the latent class analysis. The full sample for analysis by gender was transferred to "R" for the latent class analysis (N=19,836). Because gender differences were established in the factor analysis, separate data files for men (N=10,013) and women (N=9,823) were used. Latent class analysis incorporated cases with missing data into the calculations as long as the respondent has data for at least one of the items, and then assigned a class to every case regardless of whether they had responses on all included variables or not. All women and men with valid Wave III weights had at least one factor score and so latent class assignment was generated for the full

eligible sample for each gender.

Research Question 2: Can the psychosocial context in adolescence be used to predict later sexuality, reproductive health outcomes, and contraceptive use and risk-taking in emerging adulthood?

Analysis Plan: Regression Models

I used OLS and logistic regression models, using the assigned latent classes and socio-demographic control factors and run separately for women and for men, to predict the following outcomes:

1) Having had sex by Wave III;
2) Frequency of sex in the last twelve months;
3) If female pregnancy prevention was used in the last twelve months – none versus any of the time;
4) If condoms were used in the last twelve months - none vs. any of the time;
5) If a female forms of pregnancy prevention was used at last sex; if a condom was used at last sex;
6) If no form of contraceptive was used in the last twelve months ever;
7) Birth status between the ages of 18 and 24;
8) Unintended birth status between the ages of 18 and 24; and
9) Abortion status between the ages of 18 and 24.

Missing Data and Multiple Imputation

Missing data was reviewed and due to large amounts of missing data on the Wave I and Wave III income measure among others, I decided to use multiple imputation. Multiple imputation was performed using the MI MVN command in STATA 13 (STATA Corp. 2013b) with 20 iterations. All independent variables and dependent variables were included in the imputation (STATA Corp. 2013a).

Wave III Outcomes

Had Sex by Wave III

Both men and women were asked if they had had vaginal intercourse at their Wave III interview. This was answered with either yes or no. Men and women who did not report having sex by Wave III were then not asked pregnancy and sex related questions and so are not included in models using pregnancy and sexual outcome data from Wave III.

Frequency of Sex in Last 12 Months

At Wave III, respondents were asked to report the number of times in the 12 months prior to the Wave III interview that they had sexual intercourse.

Use of Female Forms of Pregnancy Prevention in Last Twelve Months

A dummy variable was created from the question: "On how many of these occasions of vaginal intercourse in the past 12 months did you or your partner use some form of birth control or pregnancy protection?" This was coded as 1 if pregnancy prevention used none of the time and as 0 if pregnancy prevention used at all. Specific forms of contraceptives were not asked about. In the relationship section, they asked more detailed questions about a wide variety of contraceptive methods, but these questions were only asked of those in a subsample of couples and thus were missing too much data to be included here.[17]

Use of Condoms in Last Twelve Months

A dummy variable was created from the question: "On how many of these occasions did (you/your partner) use a condom?" This was coded as 1=condom used all the time, 0=condom not used all the time).

If a Female Form of Pregnancy Prevention Was Used During Last Sexual Encounter

A dummy variable was created from the question: "The most recent time you had vaginal intercourse, did (you/your partner) use some form of birth control?" This was coded as 1=yes, 0=no.

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[17] Please note that questions about the last 12 months and about most recent sex are included as research has found that answers about past contraceptive use can vary depending on how the questions is worded. (See Brauner-Otto, Sarah, Jennifer Yarger, and Joyce Abma. 2012. "Does it matter how you ask? Question wording and males' reporting of contraceptive use at last sex." *Social science research* 41(5):1028-36. Also see Petersen, Nicole, Lawrence Patihis, and Shawn E. Nielsen. 2014. "Decreased susceptibility to false memories from misinformation in hormonal contraception users." *Memory* (ahead-of-print):1-10.)

If a Condom Was Used During Last Sexual Encounter

A dummy variable was created from the question: "The most recent time you had vaginal intercourse, did (you /your partner) use a condom?" This was coded as 1=yes, 0=no.

No Use of Any Pregnancy Prevention in Last Twelve Months

Dummy variables were created for each type of contraceptive reported. If no method of contraceptive was marked and the respondent also reported never using a condom in the last 12 months the respondent received a 1, and if any method was marked, the respondent received a 0. Methods listed which were used to create this variable were: birth control pills, implants, birth control shots, or diaphragms. Information about other possible methods used was not included in the survey questions asked.

Wave IV Outcomes

Birth Status Between The Ages of 18 and 24

This outcome was taken from Wave IV fertility histories, as instructed by Add Health (Cheng, 2010). Any birth taking place between the ages of 18 and 24 was identified. To maximize the available sample size, Wave III birth records were used to fill in where Wave IV reports were absent and Wave III reports were available.[18] Wave III weights were then used for subsequent analysis to correct for complex sampling design. The final variable was coded as 0=no birth between 18 and 24, 1=birth between 18 and 24. For this analysis, respondents reporting a birth prior to the age of 18 were dropped, leaving a sample size of 5,904.

Abortion Between The Ages of 18 and 24

A dummy variable was coded as 1 if an abortion was indicated for any reported pregnancy between the ages of 18 and 24, and as 0 if no abortion was indicated for any reported pregnancy.

[18] There is a documented 10% undercount of births in Wave III of Add Health, and so there could potentially still be a few pregnancies which were missed at both Wave IV and Wave III. See Booth, Alan, Elisa Rustenbach, and Susan McHale. 2008. "Early family transitions and depressive symptom changes from adolescence to early adulthood." *Journal of Marriage and Family* 70(1):3-14. See also Mollborn, S, and E Morningstar. 2009. "Investigating the Relationship between Teenage Childbearing and Psychological Distress Using Longitudinal Evidence." *Journal of Health and Social Behavior* 50(3):310-26.)

Sample

Women

Assigned class information for both men and women was merged back into the full file with 20,745 cases. Those few respondents who experienced a live birth or pregnancy within ten months of their Wave I interview date (or their Wave II interview date if their data was filled in using Wave II) were dropped (N=751) along with a small number of respondents who reported having had an abortion prior to Wave I (N=158), resulting in an initial dataset of 19,836. A dataset with only women was then created by dropping 10,013 cases that were male, leaving 9,823 female cases. Those without Wave III weights were then dropped from each dataset leaving an analysis sample of 7,040 for the female sample. Initial regression models were then run using the assigned latent class variable to predict whether or not the respondent reported having sex by wave III. Because those who reported that they had not had sex by Wave III were not asked any contraceptive or pregnancy related questions, the rest of the analyses were conducted on the subsample of women who did report having had sex by Wave III and therefore had information on the outcomes of interest. In total, 879 cases were removed who had not had sex and therefore had none of the outcome information available, leaving a sample size of 6,161 of women for subsequent models looking at sexual behavior, and contraceptive use outcomes. For models with Wave IV birth and abortion outcomes, 344 were dropped from the full female sample of 9,823 because they had a birth prior to the age of 18. Another 2,704 were dropped due to missing weights, and 871 were dropped because they had not had sex by Wave III, leaving a final sample size for the birth and abortion outcomes of 5,904. Women who reported being married at Wave III (22.6%) were retained in the analysis as the focus of the analysis was on the adolescent psychosocial context. However, it should be noted that responses to some outcomes may vary depending on the marital status of women at Wave III given that women who are married are more likely to have children (Shelton and John, 1993; Sneed et al., 2012; Treas and Giesen, 2000), less likely to categorize a child as unintended (Kost, Finer, and Singh, 2012; Zolna and Lindberg. 2012), and more likely to rely entirely on female forms of contraceptives and not use condoms (Eisenberg et al., 2012; Kong et al., 2012).

Men

There were 10,013 cases who report their gender as male. From this sample, 3,436 cases were dropped due to missing Wave III weights, leaving 6,581 cases for analysis. A subsample was created by removing 941 cases in which the men reported not having had sex by Wave III and thus were not asked the other outcome questions. This left 5,638 men for the rest of the analyses. For models with Wave IV birth and abortion outcomes, 100 were dropped from the full male sample of 9,823 because they had a birth prior to the age of 18. Another 3,417 were dropped due to missing weights, and 938 were dropped because they had not had sex by Wave III, leaving a final sample size for the birth and abortion outcomes of 5,558.

Analytic Techniques

Logistic Regression

The identified latent classes were used to predict the likelihood of: experiencing a birth between the ages of 18 and 24 versus not, having always used pregnancy prevention in the twelve months prior to Wave III versus not, having always used a condom in the twelve months prior to wave III versus not, having used some form of pregnancy prevention at last sex versus not, having used a condom at last sex versus not, and having used no contraceptive in the twelve months prior to the study versus not. Complex survey design was accounted for in all logistic regression analyses.

Ordinary Least Squares (OLS) Regression

Identified latent classes were next used to predict the self-reported frequency of sexual activity in the twelve months prior to wave III data collection.[19] Complex survey design was accounted for in all OLS regression analyses.

Variable Names and Descriptions

[19] While the variance exceeds the mean in both of these variables, which called for a negative binomial regression, it was not possible to do a negative binomial regression with the imputation. The MVN imputation gives negative values to the outcomes and so the negative binomial regression will not run. Using the chained imputation you can specify a truncated regression, however you cannot use the chained imputation command with the svyset command which corrects for survey design. I decided to use regular regression rather than either omit the outcomes, or run them with substantially reduced samples.

Wave I Control Variables

The following variables were included as control variables:

1) Gender, coded 0=male, 1=female;
2) Age at Wave I interview date was constructed from date variables indicating the month and year of their birthdate and the month and year of their interview date;
3) A dichotomous yes/no variable coded 1 if the respondent was born in the United States, and 0 if they were not born in the United States;
4) Race and ethnicity dummy variables were created as follows: White, Black, Hispanic, and Other Race. Respondents were first asked to identify their ethnicity as Hispanic or Not Hispanic. This variable was used to categorize all respondents indicating "yes" as Hispanic. Race variables which asked individuals to indicate yes or no for White, Black, Asian/Pacific Islander, Native American/Alaskan Native, and Other. If this set of questions was not answered, respondents were asked to choose a "primary racial category" from a list. Responses to this list were used to fill in for any participant without data from the other questions. Any respondent indicating two or more categories or marking "other race" on the list of primary racial identification variable was considered multi-racial and in this case categorized as "other" due to small sample sizes. Asian/Pacific Islander, and Native American/Alaskan Native were also included in "other" due to small sample sizes. This resulted in four categories for analysis: White, Black, Hispanic, and Other Race.
5) Parental percent of federal poverty level at Wave I was constructed using the parent-reported household income and adjusting for household size using the household roster. Poverty threshold levels by household size from the year of data collection for Wave I (1994) were then used to create a categorical variable as follows: 100% of the poverty line or below, 101%-200% of the poverty line, 201-300% of the poverty line, 301-400% of the poverty line, 400+% of the poverty line.
6) Religious affiliation was coded using the 29 different options for religious affiliation that Add Health provides. These options were combined into 5 broad categories as follows based on similarities

between religions and adequate sample size: no religion, Baptist, other Christian, Catholic, other Religion.[20]

7) Self-reported grades for four core high school courses were averaged to produce reported GPA at Wave I.[21]
8) Depression at Wave I was coded using a subset of nineteen variables from the Center for Epidemiological Studies Depression Scale (CES-D) collected at Wave I. Average depression was calculated using the individual item scale which ranged from 0 (no depressive symptoms) to 3 (high depressive symptoms levels). Calculation of the average depression score allowed comparison between Wave I depression reports and Wave III depression reports which utilized only nine items from the CES-D Scale.
9) Respondents were asked at their Wave I interview if they had already had sexual intercourse. This was coded a 1 if they responded "yes," and a 0 if they responded "no."
10) Respondents were asked at Wave I if they had ever in their lives taken a pledge of abstinence from sex until marriage. This was coded as yes=1, 0=no.

Qualitative Methods

Qualitative Data & Sample

Qualitative data was used to address research questions 3 and 4. Semi-structured in-person interviews were conducted over an approximately nine month period, between March and November of 2013. These were used to address research questions 3 and 4. Women were recruited from the undergraduate population primarily on the MU campus on an availability basis, and 45 were interviewed. Each participant was

[20] Religion was categorized as 0 if they answered "none" when asked what their religion was. Respondents were categorized as 1 for "Other Christian" if they marked Adventist, AME, A<E Zion, CME, Assemblies of God, Christian Church, Christian Science, Congregational, Episcopal, Friends/Quaker, Holiness, Jehovah's Witness, Mormon, National Baptist, Pentecostal, Presbyterian, United Church of Christ, or other Protestant. Respondents were categorized as 2 for "Baptist" if they marked Baptist, and 3 for "Catholic" if they marked Catholic in response to the religion question. Finally, they were marked as 4 "Other Religion" if they indicated any of the following as their religion: Baha'i, Buddhist, Eastern Orthodox, Hindu, Islam, Muslim, Jewish, Unitarian, or "other religion." Other Christian, Baptist and Catholic were categorized separately because of their large sample sizes. Those categorized as "Other Religion" were grouped due to the low sample sizes for each separate religion.

[21] Self-reported grades were used from English, math, history, and science.

compensated $30.00 for their time, and each interview ranged from 45 minutes to two hours long. I initially conducted ten interviews. These were then used to revise the interview guide and then an additional 35 interviews were done. Each interview was audio recorded and then professionally transcribed by a third party. Files sent to the transcriptionist were de-identified. The transcriptionist deleted the files after transcription was complete and had been successfully provided to the primary investigator. Per IRB requirements, audio recordings and transcriptions will be retained for five years past the publication of any of papers based on the interview data collected. .

Subjects were drawn primarily from the MU undergraduate population; however one subject from a nearby community college heard about the study and was interviewed. Subjects were recruited via flyers around campus as well as through announcements and flyers in various classes during the spring and fall semesters of 2013. Interested women voluntarily contacted the researcher to request inclusion in the study. When a potential subject contacted the researcher, a short set of screening questions was administered (See Appendix A). Flyers were posted on common areas around the CU campus. Announcements were also placed in a campus produced student bulletin with the same information as the flyer. All subjects interviewed were between the ages of 18 and 24. Qualified women were included in the study regardless of race or ethnicity. The final sample closely matched the racial and ethnic distribution of the broader university and as such was primarily White. No third party or secondary information was requested from interviewees and any questions referring to other people, such as the sexual or romantic partner of the subject, were phrased to elicit general non-identifying information only. The names of any individuals referenced by the interviewee were changed in the final transcripts. In addition, each respondent was assigned a pseudonym which is used in any reports written from this set of interviews.

To meet inclusion criteria for the interviews, respondents had to report that they: were between the ages of 18-24, were currently sexually active, were not currently pregnant, were not medically or voluntarily sterile (i.e. they are at risk of pregnancy), and that they had taken a contraceptive risk at least once when pregnancy was not desired. Because this research focuses on reasons for contraceptive risk-taking, it was important to recruit participants who report engaging in this behavior and those not meeting the above

inclusion criteria were excluded. However, in the final sample, there were numerous women who had not taken any real contraceptive chances in that they did not appear to have been at risk of pregnancy. However, the women truly believed that they had taken a chance, and their inclusion in the sample allowed me to investigate what risk-taking means to different women.

Consent was obtained from each participant when they arrived to participate in the interview. The study was explained and they signed a written consent document approved by the IRB at Mountain University. Consent documents are stored separately from the interview recordings and transcripts, and consent forms were not in associated with specific interview data. In addition, each participant filled out a short demographic survey, linked to them by interview number, which provided information on their family background and sexual history (See Appendix B for the demographics of the qualitative sample and for the questionnaire used to gather the demographic information).

In order to do my best to obtain honest answers from women interviewed, as suggested by (Schwalbe and Wolkomir 2001), I used the following techniques:

1) Allowing "symbolic expressions of control" (p. 93) such as allowing the participant to choose the time of the interview, and perhaps the place;
2) Letting the participant begin by asking if they would like to know more about what I am doing;
3) Giving the participant credit as the expert on their own behavior and emotions;
4) Circling back to revisit topics and questions which elicited minimal answers initially;
5) Bringing up things that other women have said in interviews to normalize discussion of the topic at hand;
6) Asking about thoughts not emotions and then using thoughts to lead to emotion;
7) Asking the individual being interviewed to give advice to her younger self; and
8) Shifting the focus to what was going on around her or with other people at the time of any event being discussed. These techniques helped to ensure that I was able to address

the sensitive topics of sexual relationships and contraceptive use and risk-taking while eliciting both the underlying meanings and emotional aspects of these experiences.

Pilot Interviews

I conducted ten pilot interviews in spring of 2013. While these pilot interviews did provide me with usable data, I determined that I needed to somewhat restructure the interview guide itself for the remaining interviews. I initially used a picture exercise where I showed a picture to participants with a caption and asked them to tell me about the person represented in the picture. Respondents were not able to effectively provide responses based on the picture and so this was eliminated for primary data collection. In addition, I determined that more questions were needed about the social norms and environment they experienced in both high school and college and so questions investigate this specifically. Data from the pilot interviews were included in the final analysis sample. Both interview question sets and the original picture used in the pilot can be found in Appendix D.

In-depth Interviews

Thirty-five additional interviews were conducted in fall 2013. These used the revised interview guide (See Appendix D) which followed a specific time line in eliciting information from participants as to their normative experiences in regards to sexuality and contraceptive use in high school and then in college. The interviews began with questions about general topics such as their major and year in college, their parents' marital status, and their own romantic partner status. Women were then asked to provide a detailed historical timeline of all romantic relationships and contraceptive activity and risk-taking. This timeline was also used to explore their personal norms and attitudes about pregnancy, sexuality and contraceptives as an adolescent. Following this, they were asked the same questions about the time since they left high school. Finally, questions about general partner influence (e.g. Do you think power in a relationship influences contraceptive decisions?), and general norms (e.g. Do you think men and women view birth control differently?) were asked. All questions on the interview guide were asked of all participants, although multiple additional

questions were used to clarify responses and elicit additional information. IRB and ethical considerations are described at the end of this chapter.

Qualitative Plan of Analysis

Both research questions 3 and 4 were addressed using qualitative interview data. The questions were tentatively identified up front to guide the questions I asked when initially designing the interview guide. Although several other broad questions were also included in the guide, thematic analysis showed that these two initial broad questions were major themes that arose from the data, and many of the responses arose through in-depth questioning and drilling down from the initial broad questions.

Research Question 3: How do the often differing attitudes and norms about sexuality and contraceptive use individuals are exposed to in adolescence from multiple levels of influence such as peers, family, and community, impact the strategies they use as emerging adults to deal with entering into new normative environments that also have differing attitudes and norms at multiple levels?

Research Question 4: How does the psychosocial context (attitudes and norms) in adolescence and young adulthood shape how women perceive contraceptive risk-taking, how they account for it, and what they do to justify such risk-taking to themselves and to others?

The interview guide included questions to address meanings behind commonly stated reasons for contraceptive risk-taking as well as to explore women's ideas regarding different psychosocial contexts they experienced in adolescence and emerging adulthood. Interviews were coded by hand once all interviewing was complete. I used a qualitative descriptive design (Merriam 2014) which is a combination of inductive and deductive thematic analysis (Fereday and Muir-Cochrane 2008). My analysis really began with my interview questionnaire design which focused on broad questions about norms in adolescence and contraceptive risk-taking (deductive) and used an inductive grounded theory method (Glaser and Strauss 1967) which allow for a researcher to follow scientific protocol while engaging in a creative process that allows for both skepticism and gives the researcher room to simply think about what is going on in the data (Babbie 2004; Strauss and Corbin 1990). This approach precludes the researcher from entering the field with theories in mind and is not driven by hypotheses or hypothesis testing, but does allow for some framing of the researchers' general areas of interest for exploration. Consequently, women's explanations of the perceived influence of adolescent psychosocial context on their current behavior, and of their contraceptive risk-taking and underlying

meanings and conceptual roots, were generated based on cumulative observation through the interviewing process (Babbie 2004).

I first read each transcript for overall themes and content. I next wrote my thoughts about the major themes that appeared in the data. I re-read the transcripts and pulled in quotes from the interviews to support major themes identified. Themes changed over the course of my analysis, which took approximately five months. As I continued to pull data out of the interviews and write about the various themes I identified, I began to narrow down my focus and determine what was to be included in this dissertation. This decision was to some degree driven by identifying emergent themes that explicated domains in my quantitative data. My final primary themes examined changes in psychosocial context from adolescence to emerging adulthood and the effect of that transition on contraceptive risk-taking, and also accounts given for contraceptive risk-taking. These themes are explored in Chapters Six and Seven respectively.

Methodological Limitations

There are several limitations to this research. First, all data in both the quantitative and qualitative part of this dissertation is self-reported. There has been some debate about the accuracy of self-report data with some scholars finding inconsistencies in verifiable self-report data (Alexander et al. 1993; Koss and Gidycz 1985; McFarlane and St Lawrence 1999) and others finding self-report data to be accurate (Durant and Carey 2000), especially at the aggregate level (Siegel, Aten and Roghmann 1998). The accuracy of self-report data collected from adolescents specifically has been suggested to be somewhat prone to social desirability bias (Clark et al. 1997; Turner et al. 1998), although others have found that for the most part self-report data about sexuality collected under anonymous conditions is accurate (Meston et al. 1998). Results of studies comparing audio-enhanced computer-assisted self-interviewing have shown that it is useful in collecting accurate self-report data (Turner et al. 1998), although when compared with face-to-face interviewing, others have found little difference (Dolezal et al. 2012). While this is a limitation of any research about sexual behavior and while self-report data has some inherent flaws, it is the only way one can collect data about sexual activity (Baldwin 2000; Turkkan 2000).

Another limitation to this research is sample selection bias (Heckman 1979). First, let me address this in my quantitative data. As my primary interest is contraceptive risk-taking, and my primary outcomes are therefore related to sexual activity, most of the models I run exclude those individuals who report not having had sex by Wave III of Add Health. While it is inappropriate to include these individuals in analyses which require sex for the outcomes to occur, it is an issue that must be dealt with. There is likely some unobserved variable not included in the analysis that accounts for this group delaying sexual activity well past when most of their peers have begun to engage in sexual relationships (N=889). Thus, I include in my analysis a separate model which uses the psychosocial context classes I have developed to estimate to which classes the individual who have not had sex by Wave III belong. This analysis in and of itself is an interesting one as the reference class is more likely to have had sex by Wave III than three of the four remaining classes. These results are reported in Chapter Five, along with the models for sexual and contraceptive outcomes which are run for those who report having had sex by Wave III only.

In my qualitative data, I recruited based on contraceptive risk-taking having occurred. However, I discovered very quickly that women's definitions of what constitutes contraceptive risk-taking are not always the same. Therefore, the sample is of women who *perceive* that they have taken contraceptive risks. However, based on my definition of risk-taking as putting oneself at risk of pregnancy, many of the women interviewed in fact were protected from pregnancy, although they may have forgone a condom on one occasion, or only used two forms of contraceptive rather than three. Thus, the study sample is of women who perceive they have taken contraceptive risks. This still eliminates women who feel that they are very good contraceptive users. Given the context of the study and the purpose of looking at how psychosocial contexts affect risk-taking behavior (and in this case also perceptions), recruiting women who had never taken a risk was not appropriate. In addition, the purpose of qualitative interview sampling is not to provide a sample that is representative of a specific group, but rather to examine people's lived experiences and as such the concept of sample selection bias does not apply to qualitative sampling (Baker and Edwards 2012; Small 2009).

Ethical Approval and Confidentiality

All participants who participated in interviews provided written informed consent. Data used in the quantitative analysis is restricted de-identified data, which I signed a confidentiality form to access. All potentially identifying information such as names mentioned in the interviews and other such personal details were changed for use in analysis and in the reporting of results in this dissertation. Respondents interviewed were assigned pseudonyms in addition to being assigned an alphabetic code and their names within the transcripts use the pseudonyms assigned. The transcripts are stored in my personal computer and backed-up on a cloud drive but no identifying information is included with the transcripts. The list of real first names of participants and their pseudonyms are stored on my personal computer in a password protected file. This project was approved by a local university Institutional Review Board (IRB) and was granted exempt status.

Conclusion

My intent was to understand: the quantitatively measured effects of adolescent psychosocial contexts on later outcomes and behaviors in emerging adulthood, individuals' lived experiences of these contexts, and perceptions of their past psychosocial contexts as influencing their present experiences. These research goals necessitated a mixed models approach in which I both used quantitative data from a national dataset, and also talked to women about their experiences.

CHAPTER FOUR: The Adolescent Psychosocial Context

It is important to understand both what motivates teen sexual activity and contraceptive use, and how motivations in adolescence may influence later contraceptive behavior. This provides a foundation for understanding negative outcomes such as inconsistent use or non-use of contraceptives when pregnancy is not desired, or early births (in one's teens or early 20s). In addition to access to contraceptives (Finer and Zolna 2011) and being able to afford contraceptives (Peipert et al. 2012), women and men must also have motivation to avoid pregnancy (Kirby 2002) and the self-efficacy to obtain and correctly use contraceptives over a long period of time (Bumpass and Westoff 1969; Kirby 2002; Musick et al. 2009). Motivation and efficacy are influenced by: (1) people's attitudes toward contraceptives, (2) the attitudes and norms of the people around them such as family members, close friends, or partners, and (3) broader norms within their schools, communities, or even the United States as a whole (Barber, Gatny and Kusunoki 2012; Campo et al. 2012; Frost, Lindberg and Finer 2012; Musick et al. 2009).

Little research has looked at how perceived norms and individual attitudes may present barriers to contraceptive use, particularly in adolescence, when susceptibility to peer and normative pressures is especially high (Allen et al. 2012; Brechwald and Prinstein 2011; Jackson et al. 2014; Stautz and Cooper 2014). In this dissertation, social norms have been operationalized as group-level expectations for what constitutes appropriate behavior (Settersten 2003); attitudes are operationalized as a positive or negative evaluation of an object (Eagly and Chaiken 1993). In this chapter I identify distinct combinations of attitudes and norms that were present in reference to adolescent views of sex, contraceptive use, and pregnancy. Current research has looked at either specific attitudes or norms (Altshuler, Storey and Prager 2014; Grindlay, Foster and Grossman 2014; Lau, Lin and Flores 2014; Mollborn, Domingue and Boardman 2014a; Mollborn, Domingue and Boardman 2014b; Uecker 2015), but few researchers have examined both attitudes and social norms together. I argue that social norms and attitudes are closely intertwined and that they should be examined together in order to capture their full effect.

In this chapter I used a nationally representative quantitative data set to explore how concepts such as social norms and attitudes cluster together. Specifically I used factor analysis to identify the underlying

response patterns to teen sex, pregnancy, and contraceptive use items and then allow them to covary into groups based on the patterns in the responses from individual respondents. These factors were then used in a latent class analysis to identify psychosocial profiles[22] (described in chapter 2) of different groups of adolescents. The best-fitting factor solutions for women and men used response patterns to underlying items to identify six major factors for female adolescents (parents, contraceptive barriers, pregnancy norms and consequences, sex positivity, contraceptive self-efficacy and sex negativity) and seven major factors for male adolescents (parents, contraceptive barriers, sex positivity, pregnancy norms, contraceptive self-efficacy, pregnancy consequences, and sex negativity). While the factors identified for men and women were largely the same, a factor identifying pregnancy norms and consequences for women split into two separate factors for men, one for pregnancy norms and a second for the consequences of pregnancy. I ran latent classes separately for the male and female samples using the identified factors. These latent classes are presented as psychosocial context profiles for each class of females and males. It is these psychosocial classes that I argue adolescents use to make decisions about sex, pregnancy, and contraceptive use.

Methodology

This chapter used principal components factor analysis techniques to determine how 32 items from Wave I of the National Longitudinal Study of Adolescent to Adult Health (Add Health, described in detail in Chapter 3) group together empirically. Using principal components factor analysis, multiple responses to items representing both attitudes and norms grouped together empirically based on underlying response patterns. Factors differed somewhat for men and women, thus a separate factor analysis was run for each gender.

I used these factor groupings, transformed into three-level categorical variables, to separately identify latent classes of females and males with distinct psychosocial context profiles about sex, pregnancy, and contraceptive use in adolescence. The number of classes appropriate for each sample was identified using the average of the Akaike Information Criterion (AIC) and the average of the Bayesian Information Criterion

[22] Psychosocial context defined in detail in chapter 2, however, in brief, it is the combination of norms and attitudes that represent how different groups of adolescents see adolescent sexuality, pregnancy, and contraceptive use.

(BIC) across 30 trials. Both the AIC and BIC examine model fit compared to other models, but the BIC also rewards parsimony in the chosen model. Both AIC and BIC provided similar suggestions regarding the appropriate number of classes, and where they differed more weight was given to the BIC.

After evaluating the AIC and BIC for each sex, I made a final decision about the number of classes to use based on differentiation and interpretability of the classes. For women, six classes were selected, and for men seven classes were selected. Once the predominant classes were identified, I ran descriptive statistics for each class stratified by gender. For both the male and female sample the descriptive statistics showed that the latent class fell along demographic lines. Results are presented below first for women and then for men, followed by a discussion bringing together the women's and men's results and discussing the similarities and differences. Implications for future research on adolescent sexuality and contraceptive use, as well as policy recommendations regarding reduction of teen pregnancy are discussed.

Results

In the results section, I first present the mixed gender factor analysis which demonstrates the necessity of breaking the sample into female and male samples. Following this, I present all the results for the female sample. The primary questions used to motivate this analysis are: 1) How do adolescents' responses to items about attitudes and social norms about sex, pregnancy, and contraceptive use group together (factor analysis); 2) what are the predominant psychosocial profiles associated with these groups (latent class analysis), and 3) how are demographic characteristics related to these psychosocial profiles (descriptive statistics)?

Mixed Gender Factor Analysis

As described in Chapter Three, 32 items were included in the factor analysis. These items were taken from Wave I of Add Health and represent a variety of attitudes, norms, and prospective behavioral evaluations related to teen pregnancy, sex, and contraceptive use. I used factor analysis to identify underlying concepts (or factors) that the chosen items represented. Initial outcomes from a principal components factor analysis indicated that results were the same for men and women in terms of the number of factors that were ideal. However, when I examined the content of the factors in detail, I determined that separate models were

needed for men and women. It should be noted that cases with incomplete data on the items included in the factor analysis were omitted. This led to a somewhat more white, slightly older, and high socioeconomic status sample. Once the factor analysis was run, the factors were created and each individual that had all the items for a specific factor was assigned a factor score for that factor and so was able to be retained in later analyses. Differences by missingness of data are presented in Appendix A.

My first examination of the eigenvalues, screeplot, and parallel analysis graphs suggested that six, seven, or eight factors would be appropriate for both men and women (See figure 2). In each case, I first examined the eigenvalues. The first eight factors had eigenvalues over 1.0, which suggested that 8 factors were appropriate for both the male sample and the female sample using eigenvalues as the primary measure for factor retention. I next examined the screeplot for women and for men. The screeplot is presented below (it is the same as the Parallel Analysis plot but does not have the cut off line present). Examination of the screeplot visually suggested that six factors would be appropriate for both men and women as the clear break in the descending line between six factors, and seven factors, where the line appears to flatten out considerably. So for both men and for women, the eigenvalues suggested eight factors and the screeplot examination suggested six factors. However, when I conducted a parallel analysis, the current gold standard for factor retention selection, seven or eight classes were the ideal number of factors suggested for both men and women. In light of these results and the different number of factors suggested by different factor evaluation methods, I ran the six, seven and eight factor solutions for men and for women. Determining the final factor solution that made the most sense was then up to me as the data analyst since any of the three factor solutions were supportable by the parallel analysis.

After running the factor analysis I examined the six and seven factor solutions for both women and men. For women, the six factor solution was preferable. The six factor solution provided six well grouped and interpretable factors, and only required one item to be dropped due to non-loading.[23] The seven factor solution, in comparison, required dropping three items. In addition, the seventh factor consisted of only two

[23] The item dropped was "Birth Control is easy to get."

items for which I could see no interpretable pattern. In contrast, for men the six factor solution required dropping two items as non-loading. The seven factor solution, however, broke-up one of the previous factors from the six factor solution into two factors, then only requiring one item to be dropped for non-loading. I determined that the factors in the seven factor solution made more sense in that they used more of the data, and also in that the separation of the one factor which was previously a combination of pregnancy norms and consequences into two factors – one for norms and one for consequences, and were justifiable theoretically in light of research suggesting that consequences of pregnancy for men are in fact less severe (Sathiparsad 2010). Results of the factor analysis stratified by gender are presented below, first for women, and then for men.

WOMEN MEN

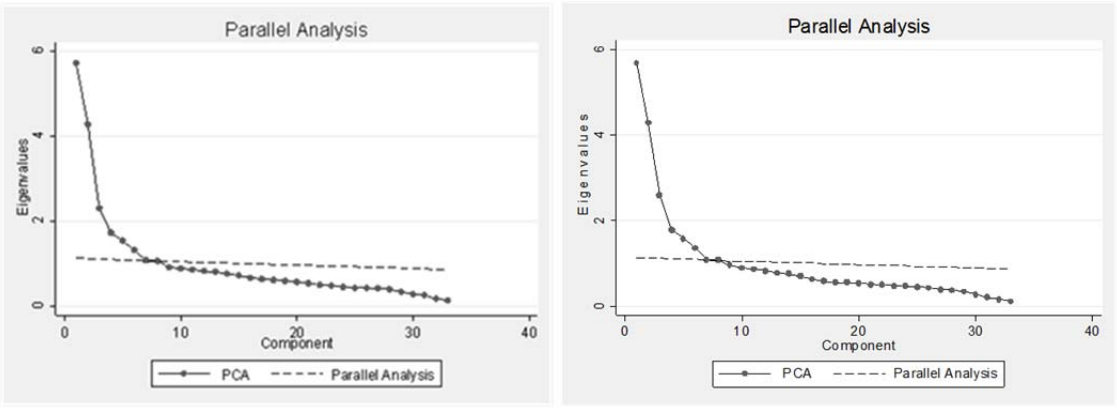

Figure 4.1: parallel analysis plot for women only and parallel analysis plot for men only.

Female Data Reduction Results

A. How do adolescents' responses to items about attitudes and social norms about sex, pregnancy, and contraceptive use group together for females?

Factor Analysis

A principal components factor analysis was run on the sample of women using STATA 13 (STATA Corp. 2013b). Examination of the eigenvalues, screeplots, and parallel analysis graphs suggested that six, seven or eight factors would be appropriate for women. The varimax rotation loadings were examined for the female sample to determine the best factor fit (See table 1 for factor loadings). I chose the solution in which the groupings of items made the most theoretical sense, within the parameters of the solutions suggested by the AIC and BIC. For women, I decided on a six factor solution. In order to think about which resulting factors were most important in explaining the variance in women's responses to the items included in the factor

analysis, I examined the eigenvalues. The most variance in women's responses was "parents" (eigenvalue=4.33; alpha=0.88), followed by "contraceptive barriers" (eigenvalue=3.53; alpha=0.83). The third factor was a combination of "pregnancy norms and consequences" (eigenvalue=2.98; alpha=0.77).[24] Fourth for women was the factor including items about positive views about having sex or "sex positive" (eigenvalue=2.46; alpha=0.75). Finally, the last two factors for women were "contraceptive self-efficacy" (eigenvalue=2.11; alpha=0.69), and negative views about having sex or "sex negative" (eigenvalue=1.85; alpha=0.63). In sum, the factor related to parents explained the most variance in women's responses to the items included in the factor analysis, followed by the contraceptive barriers, then pregnancy norms and consequences, sex positive, contraceptive self-efficacy, and finally, sex negative items.

Items in factor one, labeled "parents," consisted of every item included in the original factor analysis that referenced parents. Those underlying items addressed what respondents believed parents thought about adolescents having sex and using contraceptives. There was no difference in adolescent response patterns between how a parent would react to sexual activity, versus how a parent would react to contraceptive use if sexual activity was engaged in. This lack of difference is interesting given messages to many adolescents that suggest they should not have sex – but that if they do they should use contraceptives.

Items in factor two, labeled "contraceptive barriers," is a combination of items asking about potential barriers to contraceptive use. Some of the items represent more instrumental barriers, such as cost, while some represent psychological barriers, such as feeling contraception is morally wrong, and others represent more normative barriers, such as suggesting that having birth control means one is looking for sex.

The third factor for females, "pregnancy norms and consequences", includes items representing norms about teen pregnancy and items that represent consequences that one might experience if a teen pregnancy were to occur. For girls, there was no distinction between norms and consequences. Interestingly, male participants did see a difference between these two concepts. This is discussed below in the male factor analysis section.

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[24] This factor was split into two for male respondents. Discussed in the section "Male Factor Analysis" below.

The next factor consists of all five of the items that suggest there would be benefits to engaging in sexual activity, such as gaining the respect of others, or experiencing pleasure. These items grouped together separately from the two items in the next factor, which represent the negative consequences one might expect to experience if they engaged in sex as a teenager such as feeling guilty or losing the respect of a partner. These two factors are labeled "sex positive" and "sex negative" respectively. Finally, three items that referred to being able to use contraceptives effectively grouped together in a separate factor. These items are labeled "contraceptive self-efficacy."

Table 4.1: Factors and factor loadings for female sample.

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Proportion of Variance Accounted For:	13.54%	11.02%	9.32%	7.69%	6.60%	5.80%
PARENTS						
sex now would upset mom	**0.58**	0.02	0.18	0.04	-0.03	0.33
mom would be ok with sex now	**0.80**	-0.01	0.12	0.06	0.01	0.11
mom ok if sex with someone special	**0.81**	0.01	0.10	0.08	0.02	0.13
mom ok with me using birth control	**0.69**	0.17	0.05	0.05	0.20	0.12
dad would be ok with sex now	**0.79**	-0.05	0.12	0.03	-0.01	-0.03
dad ok if sex with someone special	**0.84**	-0.04	0.09	0.05	0.00	-0.02
dad ok with me using birth control	**0.69**	0.13	0.02	0.02	0.17	0.03
CONTRACEPTIVE BARRIERS						
birth control is a hassle	-0.01	**0.74**	-0.07	-0.01	0.17	-0.01
birth control is too expensive	0.02	**0.74**	-0.01	-0.04	0.07	0.02
birth control takes too much planning	0.01	**0.81**	-0.04	-0.05	0.18	-0.02
it's hard to get a partner to use birth control	0.01	**0.73**	0.00	-0.01	0.09	0.11
birth control means no pleasure in sex	-0.01	**0.72**	-0.03	-0.14	0.07	0.00
birth control is morally wrong	0.13	**0.54**	-0.10	0.02	0.12	0.17
birth control means I'm looking for sex	0.17	**0.46**	0.06	0.01	0.08	0.31
PREGNANCY NORMS AND CONSEQUENCES						
pregnancy right now would be the worst thing	0.15	-0.07	**0.63**	0.11	-0.07	-0.10
pregnancy right now would not be that bad	0.15	-0.14	**0.63**	0.17	-0.03	-0.14
pregnancy would embarrass my family	0.26	-0.01	**0.65**	-0.06	-0.01	0.16
pregnancy would embarrass me	0.21	-0.06	**0.75**	0.06	-0.03	0.19
pregnancy means quitting school	0.05	0.08	**0.43**	-0.08	0.12	0.26
pregnancy means marrying wrong person	0.08	0.11	**0.44**	-0.04	0.10	0.38
pregnacy means growing up	0.13	-0.07	**0.60**	-0.01	-0.06	0.16
pregnancy means deciding about abortion	-0.06	0.03	**0.53**	-0.12	-0.02	-0.06
SEX POSITIVE						
sex would make my friends respect me	0.06	-0.02	0.15	**0.40**	-0.16	-0.37
sex would give me pleasure	0.04	0.04	-0.02	**0.69**	0.06	0.30
sex would relax me	0.11	-0.01	0.04	**0.78**	0.11	0.21
sex would make me more attractive	0.07	-0.10	0.01	**0.75**	-0.05	-0.12
sex would make me less lonely	0.06	-0.15	0.04	**0.69**	-0.08	-0.17
CONTRACEPTIVE SELF-EFFICACY						
I could stop sex for birth control	0.09	0.15	-0.02	0.04	**0.78**	0.03
I could plan ahead for birth control	0.10	0.18	-0.02	0.04	**0.82**	0.00
I could resist sex if no birth control	-0.03	0.15	-0.04	-0.07	**0.77**	0.00
SEX NEGATIVE						
sex would make my partner lose respect for me	0.15	0.07	0.09	0.05	0.02	**0.73**
sex would make me feel guilty	0.33	0.05	0.22	0.20	-0.03	**0.62**

B. What are the predominant psychosocial profiles associated with these groups for females?

Latent Class Analysis

Once the factor analysis was completed and the appropriate factors were identified for women each factor was recoded into three categories. The continuous summative factors were categorized for two reasons: 1) I am primarily interested in individuals who fall in the tails of these factors, either very positive or very negative, and 2) inclusion of the already categorical item asking about the respondent's willingness to have an out of wedlock birth was theoretically important, and in order to include this already categorical item, the other items have to be categorical as well.[25] Each factor had the same response options, and they were all split in the same way. If responses to all items in the factor were four or five out of five, a respondent was classified as high/positive. Items were recoded to fit this pattern if the original response options were labeled in the reverse order. If responses to all items were two or one, she was classified as low/negative. All other response patterns were middle of the road. These categorized factors were then used along with one additional item (whether the respondent would consider having a baby when unmarried), and the data was transferred to "R" for Latent Class analysis. The latent class analysis then identified different combinations of the six factors and the one additional item for different groups of women. I label these different combinations as the "psychosocial profile" for each group. Six classes with distinct psychosocial profiles were identified for women. The class that was middle of the road on every factor was selected as the reference class, and all other classes were named based on their deviation from the middle of the road on each factor.

Female Psychosocial Profiles

I was interested in identifying the predominant psychosocial context profiles in adolescence. In order to do this I used Latent Class Analysis (LCA) and examined class fit from one to ten classes. Thirty iterations were run and the AIC and BIC were averaged across the 30 trials. Graphs were generated showing the average AIC and BIC. The AIC and BIC graphs for the female sample suggested that 5, 6, or 7 classes would be appropriate (see figure 3). The AIC showed substantial improvement until five classes, at which point the

[25] As described in chapter 3, MPlus can run a latent class analysis where both continuous and categorical items can be included but it was not possible to get access to MPlus on the Add Health server, and the Add Health data cannot be moved off of the server to be analyzed elsewhere.

graph flattened out considerably. The BIC, which rewards more parsimonious models, indicated six classes as the best fit, although classes five through seven were not substantially different from six.

AIC **BIC**

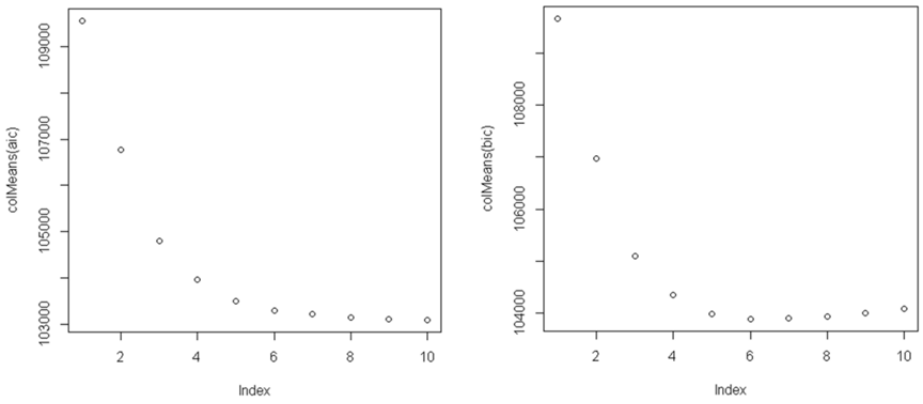

Figure 4.2 AIC and BIC graphs from the female latent class analysis sample, average of 30 trials.

After careful review of the AIC and BIC graphs and a close examination of the content of the classes for the indicated solutions of five, six, and seven classes, I determined that for the female sample, the six class solution was the most differentiated and interpretable.[26] Each class was examined relative to the other classes and was labeled according to its predominant psychosocial profile.

The six classes identified for adolescent females each had a unique psychosocial context profile. In particular, large differences were found among the classes in responses to the items about parents' attitudes and norms about teen sexual activity. There was also significant variation between the classes in their responses about the sex positive and sex negative factors. No class saw teen sex as all positive or all negative, and, in fact, the most common profile was middle of the road on the sex factors. Interestingly there was a lot of variation among the different classes of women in attitudes and norms about teen pregnancy. Unlike the male sample (discussed below), women did not differentiate between the embarrassment they might feel over a pregnancy occurring in their teen years and the instrumental consequences they might experience such as having to drop out of school or marry the wrong person. For women these concepts covaried, combining

[26] Classes are considered differentiated if there are clear differences between how the items included in the latent class analysis cluster, for example, if one class has the majority of respondents in the pro out of wedlock childbearing category, while another class has the majority in the anti out of wedlock childbearing category. Interpretability refers to the degree to which the combinations of items make theoretical sense to the data analyst.

into a single factor including items that were representative of the impact of teen pregnancy at a normative, emotional, and instrumental level. There was significant variation among the classes, with some perceiving teen pregnancy as negative, some as positive, some as in the middle, and some split among the three options. Some differences were evident in terms of contraceptive barriers and self-efficacy. Three of the classes clearly saw contraceptive barriers as low, while the other three were *comparatively* higher in their perceptions of barriers to contraceptive use. Below I describe each female class in detail. I start with the two classes that were on average younger at Wave I (~15), presenting the class with higher socioeconomic resources first followed by the less privileged class. These two classes are made up of those respondents who were closer to 15 when they responded to the underlying items (at either Wave I or Wave II). Interestingly this is also the case within the classes of men identified.

Next I present the four classes with respondents who were older when they answered the underlying items used in this analysis (>=16 years old). These are also presented in order of socioeconomic status, beginning with the most privileged of these four classes. Each class is named based on their attitudes toward teen sex and teen pregnancy/childbearing. Overall, respondents were generally positive about contraceptives, so I focused on discussing any differences between classes in contraceptive attitudes and norms, but do not label the classes with this information.

Table 4.2: Item Response Probabilities for Latent Class Analysis for Female Sample (N=6,161)

	Young Negative (18%; N=1,748)	Young Positive (7%; N=695)	Older Middle (Ref.) (27%; N=2,634)	Older Negative (14%; N=1,417)	Older Mixed (18%; N=1,733)	Older Positive (16%; N=1,597)
Average Age of Class, Wave I	**14.8**	**14.8**	**16.5**	**16.3**	**16.2**	**16.4**
Parent's Disapprove of Teen Sex	**78.7%**	4.2%	18.7%	**48.1%**	**65.0%**	**15.8%**
Parent's Neutral on Teen Sex	6.0%	1.6%	**39.5%**	**28.3%**	7.4%	**29.5%**
Parent's Approve of Teen Sex	15.3%	**94.2%**	**41.8%**	**23.7%**	27.6%	**54.7%**
Disagree that Sex has Benefits	**45.3%**	8.5%	30.9%	4.2%	**50.3%**	14.2%
Neutral about Sex having Benefits	**51.5%**	0.0%	**68.4%**	**95.7%**	**45.8%**	**82.7%**
Agree that Sex has Benefits	3.2%	**91.5%**	0.7%	0.1%	3.9%	3.2%
Disagree that Sex has Negative Consequences	**45.9%**	**25.3%**	7.4%	12.7%	**58.8%**	5.7%
Neutral about Sex having Negative Consequences	**45.5%**	**35.8%**	**44.0%**	**79.2%**	**32.4%**	**55.8%**
Agree that Sex has Negative Consequences	8.6%	**38.9%**	**48.6%**	8.1%	8.8%	38.5%
Negative Pregnancy Norms, Hi Pregnancy Consequences	**34.8%**	2.5%	24.6%	**47.1%**	**57.5%**	2.3%
Neutral Pregnancy Norms and Conseuqences	**13.4%**	1.5%	**62.4%**	**52.9%**	**42.5%**	**85.3%**
Positive Pregnancy Norms, Lo Pregnancy Consequences	**51.8%**	**96.0%**	13.0%	0.0%	0.0%	12.5%
Not Willing to Have a Child when Unwed	**91.0%**	**84.0%**	**67.1%**	**82.8%**	**86.9%**	**42.9%**
Willing to Have a Child when Unwed	9.0%	16.0%	32.9%	17.2%	13.1%	**57.1%**
Hi Contraceptive Barriers	0.1%	2.9%	0.3%	0.5%	3.9%	1.9%
Medium Contraceptive Barriers	3.3%	9.9%	9.7%	**63.5%**	**65.5%**	**67.5%**
Lo Contraceptive Barriers	**96.5%**	**87.3%**	**90.0%**	36.0%	30.6%	30.6%
Lo Contraceptive Self-Efficacy	0.0%	0.0%	0.6%	0.0%	6.0%	3.5%
Medium Contraceptive Self-Efficacy	0.0%	1.3%	0.7%	**11.2%**	**18.3%**	**14.0%**
High Contraceptive Self-Efficacy	**100.0%**	**98.8%**	**98.8%**	**88.8%**	**75.8%**	**82.5%**

Class One: Class one is labeled "Young Negative" and was negative about teen sex, and unmarried childbearing. The Young Negatives comprised 18% of the sample; it was a younger class and had the highest socioeconomic status relative to the other identified classes. Young Negative girls, overall, held strongly negative perceptions of the views of their parents about teen sex and contraception, compared to the other

classes, and girls in this class were also negative about sex. The Young Negatives were divided on how they felt about teen pregnancy. A slight majority of Young Negatives indicated that they felt positively toward teen pregnancy and the also perceived low instrumental costs for pregnancy in adolescence. On the other hand, just over one third of the Young Negative girls had negative norms about teen pregnancy, and consequently perceived high instrumental costs to pregnancy in adolescence. The adolescent girls in the Young Negative class indicated more strongly than any other group that they would not want to have a child when unmarried. The Young Negatives negative views about teen pregnancy and sex suggest possible reasons for their strongly positive views about contraceptives and their high contraceptive self-efficacy. In short, these teens appeared highly motivated to avoid a teen pregnancy, communicated few barriers to contraceptive use, and indicated that they would be able to use a contraceptive if necessary.

As mentioned earlier, demographically the Young Negatives class is one of two classes with a younger average age at Wave I. Analyses showed that girls who were near the age of 15 when they responded to the underlying factor items were more likely to be in the Young Negative class. This age distribution may indicate that there is something substantively different about how teens respond to items about sexual psychosocial context when they are younger teens (i.e. 15) than when they are older teens (16 or 17). It may be that the classes in which respondents were younger on average at Wave I were representative of all teens at 15 and that the psychosocial context profiles of girls in younger classes would become more differentiated as they get older. This would suggest that teens in younger classes would move into one of the older classes if asked the same questions when they were 16 or 17 rather than 15. However, as the data have do not include the measures used to assess psychosocial context in later waves, when participants were at older ages, it is not possible to see if or how individuals in the younger classes change in their psychosocial profiles over the life course.

The Young Negatives perceived positive attitudes from their parents about using contraceptives if engaging in sex and had high contraceptive self-efficacy and low contraceptive barriers. However, it also appears that they may have received messages from their parents discouraging sexual activity, as the Young Negatives have relatively high levels of abstinence pledges. I cannot directly disentangle exactly what the

parental messages were - given that no differences between parental views about sex and parental views about contraceptives were evident in any class, either female or male. Across all classes, the patterns in the data combined teen's views of their parent's ideas about sexuality and contraceptive use together in one factor. As one of three middle class groups, the Young Negatives appear to have subscribed to the predominant messages of our culture which indicates that sexual activity is not approved of for adolescent girls, but that contraceptives should be used if you do have sex.

Class Two: Class two was labeled as "Young Positive" and girls in this class were positive about both teen sex and teen pregnancy. The Young Positive class represented 7% of the female sample. In general girls in the Young Positive class were positive on almost every factor. They were the only class of girls that indicated approval from their parents in terms of sex and contraceptive use (94.2%). The next highest level of parental approval for any other was only 54.7%. Young Positive girls were also positive about sex themselves, possibly because of their parents' positive feelings. Interestingly, while the Young Positives generally viewed teen pregnancy positively, they were fairly negative about having a child outside of marriage. As with the Young Negatives, the Young Positive girls expressed few barriers to contraceptive use and had high contraceptive self-efficacy.

Class Three: Class three is labeled "Older Middle" and comprised 27% of the female sample. This class was used as the reference class for the regression analyses described in chapter five. Older Middle teens were in the middle on almost all factors. Older Middle teens differed from strictly middle of the road on the parent factor, and were instead divided between the middle and positive perceptions of parental attitudes regarding sex and contraceptive use. This may have been due to the fact that the parent factor represents both adolescents' responses to items about their parents' feelings about their children having sex, and items about their children using contraceptives. The split between middle of the road and positive shown among Older Middle teen girls may also represent differing messages being received by adolescents. In some of these homes there may have been positive messages about sex, and positive messages about contraceptives, whereas in other homes there may have been negative messages about sex combined with positive messages about contraceptives - if the teens did plan to have sex. In the case of the later, teens would have had to try to

disentangle messages that discouraged sex, but encouraged contraceptive use, should they decide to have sex despite their parent's disapproval. The large percentage in the middle of the road category may also represent parental silence on the topics of sex and contraceptives, resulting in teens not having a clear idea what their parents think. Older Middle teens were middle of the road on the sex positive and sex negative items and the majority were also middle of the road in terms of pregnancy norms and consequences, indicating that they did not have strong positive or negative perceptions of teen sex or pregnancy. Older Middle Girls were also the second most split class on feelings about having a child out of wedlock. About two-thirds of Older Middle girls said that they didn't want to have a child outside of marriage, but the other third indicated that they would be fine with having a child when unmarried. Although the psychosocial context related to sex and pregnancy was in the middle for this class, Older Middles are positive on both contraceptive norms and contraceptive self-efficacy.

Class Four: Girls in class four are labeled "Older Negative." Representing 14% of the female sample, girls in this class were negative about teen pregnancy and had some contraceptive barriers. Older Negative girls leaned negatively in terms of the respondents' perceptions of their parents' views about their children having sex and using contraceptives. Older Negative girls were not inherently negative on the factors but they were quite negative in comparison to the other five classes. These girls were distributed relatively evenly among all three categories on the parents' factor however and had the largest percentage in the parental disapproval category (48.1%). Older Negative girls were in the middle on both sex positive and sex negative items and were negative about pregnancy norms and consequences. Older Negative teen girls were also in the middle on contraceptive barriers, indicating that they perceived some barriers to contraceptive use, although they had fairly high contraceptive self-efficacy.

Class Five: Class five is labeled "Older Mixed." Representing 18% of the total female sample, girls in this class were negative about teen sex, positive about teen pregnancy, and reported some contraceptive barriers. Two thirds of Older Mixed girls indicated that their parents would disapprove of them having sex, plus the majority disagreed that sex had benefits. However, Older Mixed girls tended to disagree with both the sex negative items and sex positive items, indicating a potential conflict between their views about the benefits of

sex as compared to the consequences of sex. Older Mixed girls were negative about teen pregnancy norms and saw high consequences for teen pregnancy. Like most other classes, Older Mixed girls were not in favor of out of wedlock childbearing. Girls in the Older Mixed class indicated that they perceived some barriers to contraceptive use and were less sure than other classes of girls that they would be able to use contraceptives if they did have sex. In fact, Older Mixed girls were the lowest in contraceptive self-efficacy, with only three quarters of them indicating high self-efficacy (as compared to 98-100% in the highest self-efficacy category in some of the other classes).

Class Six: Teens in class six were labeled as "Older Positive." Comprising 16% of the female sample, Older Positive girls felt that they had a high level of parental approval about teen sex, were positive about unmarried childbearing, and had some contraceptive barriers. One noteworthy fact about the Older Positive class was that it was the only group of girls in which the majority said they would consider having a child outside of marriage (57.1%). The majority of Older Positive girls also perceived that their parents approve of them engaging in sexual activity (54.7%), but they were primarily in the middle on both the sex positive and sex negative factors as well as on the pregnancy norms and consequences factor. Finally, while they had fairly high contraceptive self-efficacy, Older Positive girls were primarily in the middle of the road category on contraceptive barriers, indicating that they perceived at least some barriers to contraceptive use.

C. How are demographics characteristics related to these psychosocial profiles?

For each class I then used descriptive statistics to examine the demographic makeup of the classes. I found that classes differed along age lines, with separate classes for females that consisted primarily of those respondents who were about age 15 when they responded to the underlying items included in the factor analysis (regardless of whether they responded to those questions in Wave I or in Wave II) as opposed to age 16 or older. Classes also differ substantially along socio-economic status lines, tending to break out into middle-income groups and low-income groups. Details on the demographics associated with each class of women are provided below.

Table 4.3: Descriptives for female sample by latent class (N=6,161).

Wave I		Young Negative (18%; N=1,748)	Young Positive (7%; N=695)	Older Middle (Ref.) (27%; N=2,634)	Older Negative (14%; N=1,417)	Older Mixed (18%; N=1,733)	Older Positive (16%; N=1,597)
	Overall Mean	**Class 1**	**Class 2**	**Class 3**	**Class 4**	**Class 5**	**Class 6**
Age, Wave I	15.89	14.75 ***	14.78 **	16.50 **	16.26 ***	16.19 **	16.37 ***
Race/Ethnicity (White, Ref.)	68.84%	75.86% ***	58.54% *	73.41% **	73.93% *	55.23% ***	56.70% ***
Latina	11.27%	9.16% +	13.70%	7.86% ***	11.98%	20.33% ***	14.19% *
Black	15.56%	9.71% ***	26.59% **	15.76%	6.96% ***	18.35%	25.60% ***
Other Race/Mixed Race	4.35%	5.27%	1.17% **	3.03% **	7.18% **	6.10% +	3.50%
Born in the United States	94.43%	93.81%	96.92% +	96.82% ***	92.74%	90.25% **	93.41%
Wave I Household Poverty Status (0-100 ref.), Wave I	18.25%	12.14% ***	27.97% **	15.72% *	14.49% +	23.75% *	29.51% ***
Household Poverty Status 101-200%	23.26%	20.55% +	29.99% *	22.08%	23.89%	26.94%	24.26%
Household Poverty Status 201-300%	21.59%	23.94%	17.89%	21.08%	22.89%	20.15%	20.44%
Household Poverty Status 301-400%	14.55%	17.92% **	12.95%	14.41%	14.91%	14.10%	9.78% **
Household Poverty Status 401% plus	23.12%	25.53%	11.18% **	27.05% **	24.43%	16.04% **	18.58% +
Religious Affiliation (None, ref.)	12.16%	7.22% ***	11.68%	16.82% ***	10.52%	5.59% ***	16.58% **
Other Christian	35.18%	38.77% *	29.65%	34.36%	35.78%	39.23% +	29.57% **
Baptist	23.95%	23.13%	31.90% *	20.92% *	20.54%	28.27% +	28.54% *
Catholic	24.06%	25.55%	23.01%	22.30% +	29.32% **	22.96%	22.45%
Other Religion	4.53%	5.29%	3.21%	5.48% +	3.73%	3.86%	2.72% *
Rural Residence	29.20%	30.71%	26.53%	28.17%	32.22%	30.12%	26.88%
Suburban Residence	37.75%	40.55%	32.42%	39.63%	40.77%	29.14% **	35.02%
Urban Residence	33.05%	28.76% *	41.01%	32.19%	27.08% **	40.65% *	38.06% *
<2.9, Grade Point Average	41.09%	28.38% ***	44.67%	41.83%	39.98%	44.48%	58.23% ***
3.0-3.49, Grade Point Average	27.40%	29.34%	27.49%	26.03%	27.42%	26.54%	27.93%
3.5 or Greater, Grade Point Average (ref.)	34.10%	43.60% ***	30.36%	34.54%	35.59%	31.13%	16.48% ***
Average Depression (0-3), Wave I	62.69%	48.16% ***	60.19%	62.38%	65.74%	70.59% **	81.19% ***
Had Sex by Wave I	37.35%	11.02% ***	20.67% ***	54.41% ***	36.48%	21.74% ***	63.36% ***
Abstinence Pledge by Wave I	15.30%	24.97% ***	14.55%	6.77% ***	11.77% *	32.69% ***	8.34% ***

WAVE III		Young Negative (18%; N=1,748)	Young Positive (7%; N=695)	Older Middle (Ref.) (27%; N=2,634)	Older Negative (14%; N=1,417)	Older Mixed (18%; N=1,733)	Older Positive (16%; N=1,597)
	Overall Mean	**Class 1**	**Class 2**	**Class 3**	**Class 4**	**Class 5**	**Class 6**
Age, Wave III	22.2	21.1 ***	21.2 **	22.9 ***	22.6 ***	22.6 **	22.7 ***
Married, Wave III	22.58%	17.29% ***	13.84% **	24.09%	23.39%	27.23% *	27.76% **
Employed Full-Time, Wave III	45.01%	37.27% ***	28.16% ***	53.06% ***	50.06% *	42.96%	44.09%
Employed Part-Time, Wave III	17.41%	20.66% **	22.92% +	14.38% ***	17.18%	16.44%	17.47%
Unemployed, Wave III (ref.)	37.59%	42.07% **	49.05% *	32.56% ***	32.76% *	40.61%	38.44%
Household Poverty Status 0-100% (ref.)	26.96%	22.24% **	32.93%	26.41%	22.87% +	30.35%	34.72% **
Household Poverty Status 101-200%	19.26%	15.97% *	25.36% *	18.37%	20.72%	20.12%	22.43%
Household Poverty Status 201-300%	11.85%	12.04%	12.09%	11.67%	12.67%	10.29%	12.37%
Household Poverty Status 301-400%	17.35%	20.25% +	12.56%	16.89%	16.86%	17.60%	15.85%
Household Poverty Status 401% plus	24.00%	29.44% **	19.90%	25.35%	27.15%	20.58%	13.32% ***
Live with Parents	37.48%	44.47% ***	54.49% **	30.25% ***	35.07%	39.97%	34.97%
Democrat	20.98%	18.04% *	17.15%	24.81% **	21.28%	16.79% +	21.74%
Republican	11.63%	16.64% ***	6.43% +	8.03% ***	12.78%	19.93% ***	6.22% ***
Other Political Party	1.01%	0.66%	1.11%	1.21%	1.19%	0.77%	1.16%
No Political Party	66.27%	64.68%	75.05% **	65.91%	64.59%	62.42%	70.85% *
Average Depression (0-3)	0.55	0.50 **	0.61 +	0.53 +	0.53	0.60 *	0.62 ***
Importance of Religion (higher=more important)	1.52	1.59 *	1.40 +	1.42 ***	1.52	1.76 ***	1.49
Total Years Schooling, Wave III	13.24	13.35	12.40 ***	13.49 ***	13.59 ***	13.31	12.45 ***
Currently In School, Wave III	37.96%	53.26% ***	39.77%	32.27% ***	38.01% *	37.25%	24.60% ***
Impulsivity Scale (std)	-0.14	-0.14	-0.02 *	-0.17	-0.13	-0.17	-0.08 +
Self Esteem Scale (std)	-0.05	-0.08	-0.07	-0.03 +	-0.11 *	-0.02	-0.03

WAVE III Outcomes	Overall Mean	Young Negative (18%; N=1,748) Class 1	Young Positive (7%; N=695) Class 2	Older Middle (Ref.) (27%; N=2,634) Class 3	Older Negative (14%; N=1,417) Class 4	Older Mixed (18%; N=1,733) Class 5	Older Positive (16%; N=1,597) Class 6
Birth Between Age 18-24	34.80%	27.33% ***	24.64% *	37.17% +	30.70% *	34.84%	50.48% ***
Abortion Between Age 18-24	7.90%	7.61%	7.06%	9.31% *	6.52%	4.86% *	9.06% ***
Unintended Birth Age 18-24	21.22%	17.63% *	14.35% *	21.67%	17.82% +	23.07%	31.07% ***
No. Sex Partners/Last 12 Months	1.52	1.47	1.64	1.57	1.65	1.29 ***	1.53
No. Times Had Sex/Last 12 Months	71.17	59.53 **	63.25	81.59 **	72.49	61.39 +	76.77
Pregnancy Prevention /Most Recent Sex	68.13%	73.42% ***	63.25%	69.45%	68.47%	66.10%	59.24% ***
Condom Used/Most Recent Sex	36.25%	43.39% ***	45.08% *	31.83% **	32.35% +	37.45%	32.78%
No Contraceptive/Last 12 Months	15.84%	11.51% ***	15.47%	14.54%	18.25%	20.61% *	20.83% **

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

*** p<0.001; ** p<0.01; * p<0.05; + p<0.10; all significance tests are for the class result compared to the average of all other classes

Female Descriptives

"Young Negatives"

The Young Negatives were the most White of all the classes at about 76%. It was also one of two classes (along with the Older Middle reference class) with large percentages falling into the 400-plus percent of the federal poverty line category at Wave I. Young Negative female teens were fairly religious compared to other classes, having among the highest percentage of Christians of any class. These girls also had the highest grade point averages and the lowest depression levels at Wave I. While only 11% of them reported having had sex by Wave I, that may be related at least partially to their relatively younger age at Wave I (14.8 years on average). However, the Young Positives reported a similar age at Wave I (14.2 years), yet almost twice the percentage of Young Positives reported having had sex before Wave I as in the Young Negative class, so it appears that other factors besides age may also be at play. At Wave III, Young Negative women were less likely to be married than women in other classes (except the Young Positive's which were about the same). This may be related to the fact that more than half of them were still in school at Wave III (another possible artifact of their relatively younger ages at Wave I). Young Negative Girls were also more likely to still live with their parents, which may also be related to their higher than average school enrollment (53%).

The relatively high incomes of Young Negative teen girls at both Wave I and Wave III may mean that obtaining contraceptives was easier for them then it potentially was for teens in other classes with fewer resources. Correspondingly, their high level of school enrollment at Wave III and higher number of years of schooling completed at Wave III suggests they may have had clearer goals for their futures, which has been associated with better use of contraceptives (Beutel, 2000; Kalil and Kunz, 1999; Wolfe et al., 2007; Mollborn, 2010). One or more of these factors may help explain why they had one of the lowest percentages of births between the ages of 18 and 24 (27.3%). The lower birth rates may also be connected to lower levels of sexual activity in emerging adulthood for the Young Negative class, suggesting that they may simply have had fewer chances to get pregnant. However, Young Negatives also reported very good contraceptive use, had among the highest percentage of women who reported having used a condom the most recent time they had sex

(43.4%), and had the smallest percentage of women who reported using no contraceptive over the twelve months prior to Wave III (11.51%). While the psychosocial profile for the Young Negatives taken as a whole across all the factors is negative, it is important to recognize that they were largely positive about contraceptives, and had relatively more positive outcomes in emerging adulthood then did many other classes.

"Young Positives"

Demographically, members of the Young Positive class were younger on average and more likely to be low-income and minority women compared to the Young Negative class. The Young Positive class was only 59% White, with just over a quarter Black and 14% Latina. Almost 30% of Young Positive girls were below 100% of the federal poverty line, and close to 60% were under 200% of the federal poverty line. While the Young Positives were about average in terms of their religious affiliations, they had a significantly higher percentage of Baptist's when compared to other classes. Young Positives also had low grade point averages and were fairly close to the full sample average on depression levels at Wave I. As stated above, the Young Positives had about twice the percentage of girls reporting having had sex by Wave I than did girls in the Young Negative class, which was a largely White and middle class group as compared to this high minority, lower-income class.

At Wave III, Young Positive women had very low levels of marriage. In fact they had the smallest percentage of women married at Wave III of any class (13.8%). Young Positives also had the highest levels of unemployment and were the most likely to still live with their parents - although all of these factors may be related to their relatively younger age. Women in the Young Positive class were the most likely to be in poverty at Wave III, which may be related to the high level of unemployment in emerging adulthood in this class. These women also reported the lowest importance of religion at Wave III, and the lowest number of years of school completed at Wave III. Interestingly, Young Positives had the lowest percentage of women with a birth between the ages of 18 and 24. While this is not surprising in terms of their generally low contraceptive barriers and high contraceptive self-efficacy, it *is* surprising given their generally positive sex and pregnancy psychosocial context. However, Young Positive women reported the highest percentage of

condom use at last sex (45.1%) and a relatively low level of non-use of contraceptives within the last twelve months (15.5%) compared to most other classes, and both of these things may contribute to their lower birth rates between the ages of 18 and 24. Finally, Young Positive women reported fairly low levels of sexual activity in emerging adulthood compared to other classes, which combined with their low contraceptive barriers and high contraceptive self-efficacy, may also explain why they had relatively positive birth outcomes in emerging adulthood.

"Older Middles"

Demographically, Older Middle girls can be considered privileged teenagers in United States culture. Older Middle girls were predominately White and their parents were relatively well off at Wave I. They were about average in their religious affiliation when compared to the mean of all the other classes. At the same time, the Older Middle girls had one of the largest percentages of non-religious women at Wave I, and the fewest of any class (7%) who had signed a pledge to be abstinent until marriage. Girls in the Older Middle class did fairly well in school, with about 60% of them having a 3.0 or above. At Wave III about a quarter of these women were married, about half worked full time, and only a third were still living with their parents - the lowest percentage of any class. While about a third of the Older Middle were still in school at Wave III, most had moved into adult life - just under one third reported living with their parents (30%), and about two-thirds reported some sort of part or full time employment (67%). Older Middle women were not impulsive and had one of the highest levels of self-esteem (although *all* the classes of women had lower levels of self-esteem than *any* of the classes of men). Overall, Older Middle women were distinctly advantaged in terms of socioeconomic status, including having higher incomes at both Wave I and Wave III, performing better in school at Wave I, and having completed more years of schooling at Wave III.

While demographically these women were relatively privileged, in terms of outcomes they were neither the most, nor the least advantaged. These women reported average levels of both births and unintended births between the ages of 18 and 24 (compared to the overall mean of all the classes). These women also had average numbers of sexual partners, although they did report higher levels of sexual activity than any other classes. Older Middle women were average in their reports of pregnancy prevention used at

last sex and somewhat low on condom use at last sex. However, lower levels of condom use may be related to relationship status as about a quarter of these women reported being married at Wave III. While their reports of pregnancy prevention being used at last sex are average, and their condom use is low, Older Negative women were the least likely class to have reported using no contraceptive in the 12 months prior to Wave III.

"Older Negatives"

Demographically, the Older Negative girls were very similar to the Older Middle girls. However, in terms of their racial and ethnic distribution, the Older Middle class had a higher percentage of Latinas (12%) whereas the Older Negative class had a higher percentage of Blacks (17%). Girls in the Older Negative class also reported somewhat higher levels of religious affiliation than did the Older Middle girls, and more Older Negative girls reporting having taken a pledge of abstinence until marriage than did Older Middle girls (12% versus 7% respectively). At Wave III, women who were Older Negative at Wave I also reported a higher importance of religion than the Older Middle girls. Interestingly, although Older Negative women saw more barriers to contraceptive use and had lower contraceptive self-efficacy than the Older Middle women, demographically the Older Negative women had somewhat lower percentages of both births and abortions between the ages of 18 and 24. Given their worse contraceptive outcomes at Wave III this seems counterintuitive. However, they also reported lower levels of sexual activity which may help to at least partially explain the lower levels of births and abortions.

"Older Mixed"

Demographically, the Older Mixed girls were one of three classes with a relatively high proportion of low-income women (the Young Negative and Older Mixed classes were also primarily low-income). While half of the Older Mixed class was White, it had a high minority population compared to the Young Negatives, Older Middles, and the Older Negatives. In addition, the Older Mixed girls had the largest percentage of Latina women of any class (20%). Older Mixed girls reported higher levels of religious affiliation at Wave I then did other classes. Interestingly, the Older Mixed class was the only class of respondents where girls with directly conflicting norms clustered together. In other words, girls in Older Mixed class were split between

two categories on almost every factor (although the majority was clearly on either the positive or negative side for each factor). This split may be due to the large population of Latinas in the Older Mixed class, relative to other classes, and the relatively high percentage (compared to other classes) of women who were not born in the United States (10%). Girls in the Older Mixed class may well be a combination of individuals who were attempting to integrate norms from other cultures with American mainstream attitudes and norms. Older Mixed girls who were not born in the U.S., or whose parents were not born in the U.S. may have been exposed to different cultural norms about teen sex, pregnancy, and contraceptive use in the home environment

The Older Mixed class had a full one third of women (33%) who reported having taken an abstinence pledge by Wave I, the highest of any class. Women in the Older Mixed class also had among the highest percentage of unemployed at Wave III (41%) and many of them were still living with their parents - which may also be related to cultural differences.[27] Older Mixed women had low levels of impulsivity and relatively higher self-esteem when compared to the other classes of women. Older Mixed women also had average outcomes in terms of births between the ages of 18 and 24. However, they had the lowest percentage of any class who reported having had an abortion, reported the lowest number of sexual partners within the 12 months prior to Wave III, and reported relatively lower levels of sexual activity. These outcomes may be related to the higher levels of perceived parental disapproval of sex and contraceptives Older Mixed girls experienced as adolescents, their negative psychosocial context about teen pregnancy (57.5% negative), and their strong disapproval of unmarried child-bearing (86.9%). The Older Mixed class was one of the highest classes in terms of levels of non-use of contraceptives in the 12 months prior to Wave III (21%) which is interesting in the context of the average number of those reporting a birth between 18 and 24 among Older Mixed women (34.8%), which was comparatively low. It is possible, however, that individuals fitting this demographic profile were more likely to report births under 18 years of age and thus were dropped from the sample.

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[27] Class one has more women living at home, but this class is relatively younger and has a high percentage of women still in school which suggests that remaining in their parents' home may be due to school enrollment rather than financial hardship, unemployment or differing cultural norms.

"Older Positive"

Demographically, Older Positive girls had the highest percentage of Blacks (25.6%) and the second highest percentage of Latina women (14%, second only to the Mixed Positive class which had 20%). The Older Positive class was a very low-income class with almost 30% below 100% of the federal poverty line and over 50% below 200% of the federal poverty line. As teens, Older Positive girls had the lowest grade point averages of any class at Wave I, and they also had the fewest years of school completed at Wave III (tied with Young Positives at 12.4 years), and the smallest percentage of women enrolled in school at Wave III of any class (25%). Older Positive women had both the highest percentage of births between the ages of 18-24 (51%), and the second highest percentage of women reporting abortion in that same age range (9%). This is not surprising as they also reported the lowest percentage of use of any pregnancy prevention at most recent sex (59.2%), and among the lowest percentages of condom use at most recent sex (32.8%). The high number of births and low use of contraceptives at Wave III may be connected to their relatively positive childbearing stance in adolescence represented by their willingness to have a child out of wedlock.

Male Data Reduction Results

A. How do adolescents' responses to items about attitudes and social norms about sex, pregnancy, and contraceptive use group together for males?

Factor Analysis

I ran a separate principal components factor analysis for men and determined that seven factors were indicated. The factors identified for males are largely the same in content as those identified for females, with the primary distinctions between the male and female respondents being the difference in variance explained for each of the factors. For men, the "sex positive" factor explained more variance in responses than did the "pregnancy norms" factor. Men also split pregnancy norms and pregnancy consequences into two factors (they were combined as one factor for women).

The factor that explained the most variance in the men's responses to the included items was the parent factor (eigenvalue=4.54; alpha=0.90). Following behind the parent factor was the factor representing contraceptive barriers (eigenvalue=3.71; alpha=0.83). The factor explaining the third most variance consisted

of positive views about having sex (eigenvalue=2.39; alpha=0.70). The fourth factor was norms about teen pregnancy (eigenvalue=2.30; alpha=0.75), followed by contraceptive self-efficacy (eigenvalue=1.94; alpha=0.69). For male participants, the pregnancy consequences factor explained less of the variance than almost all of the other factors (eigenvalue=1.80; alpha=0.61). Negative views about sex explained the least variance of any factor (eigenvalue 1.67; alpha=0.62). As is the case for female participants, all items referring to parents grouped together, as did all the items referring to barriers to contraceptive use, the benefits of sex, the possible negative consequences to sex, and the items referring to actual use of contraceptives.

Table 4.4: Factors and factor loadings for male sample.

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Proportion of Variance Accounted For:	14.19%	11.59%	7.45%	7.17%	6.06%	5.63%	5.20%
PARENTS							
sex now would upset mom	**0.63**	-0.04	-0.01	0.23	-0.05	0.08	0.24
mom would be ok with sex now	**0.81**	-0.04	0.01	0.19	-0.03	0.02	0.03
mom ok if sex with someone special	**0.85**	-0.03	0.06	0.13	-0.01	0.02	0.04
mom ok with me using birth control	**0.66**	0.18	0.11	-0.22	0.17	0.16	0.10
dad would be ok with sex now	**0.84**	-0.07	0.08	0.13	-0.01	0.02	0.05
dad ok if sex with someone special	**0.87**	-0.06	0.09	0.11	0.00	0.02	0.05
dad ok with me using birth control	**0.66**	0.18	0.12	-0.22	0.17	0.15	0.11
CONTRACEPTIVE BARRIERS							
birth control is a hassle	-0.05	**0.74**	-0.02	-0.07	0.10	-0.04	-0.02
birth control is too expensive	-0.03	**0.77**	-0.05	-0.03	0.06	-0.03	0.00
birth control takes too much planning	-0.04	**0.80**	-0.02	-0.05	0.14	-0.02	0.02
it's hard to get a partner to use birth control	0.00	**0.78**	-0.01	-0.04	0.12	0.01	0.04
birth control means no pleasure in sex	-0.06	**0.69**	-0.16	0.00	0.07	0.03	-0.07
birth control is morally wrong	0.13	**0.61**	0.05	-0.13	0.08	0.05	0.14
birth control means I'm looking for sex	0.09	**0.52**	-0.12	-0.01	0.03	0.10	0.12
SEX POSITIVE							
sex would make my friends respect me	0.15	-0.06	**0.53**	0.01	-0.03	0.08	-0.33
sex would give me pleasure	0.07	0.04	**0.63**	-0.12	0.08	-0.04	0.30
sex would relax me	0.15	-0.04	**0.74**	0.00	0.13	-0.04	0.26
sex would make me more attractive	0.08	-0.10	**0.72**	0.07	-0.09	0.02	-0.10
sex would make me less lonely	0.11	-0.09	**0.68**	0.07	-0.09	-0.02	-0.12
PREGNANCY NORMS							
pregnancy right now would be the worst thing	0.12	-0.07	0.06	**0.68**	-0.08	0.06	-0.06
pregnancy right now would not be that bad	0.10	-0.14	0.10	**0.71**	-0.02	0.02	-0.06
pregnancy would embarrass my family	0.30	-0.01	-0.08	**0.62**	-0.01	0.26	0.24
pregnancy would embarrass me	0.25	-0.04	-0.01	**0.66**	-0.01	0.26	0.27
CONTRACEPTIVE SELF-EFFICACY							
I could stop sex for birth control	0.05	0.14	0.02	0.01	**0.79**	0.01	0.05
I could plan ahead for birth control	0.09	0.15	0.08	-0.05	**0.80**	0.00	0.05
I could resist sex if no birth control	-0.08	0.14	-0.14	-0.03	**0.71**	-0.01	-0.10
PREGNANCY CONSEQUENCES							
pregnancy means quitting school	0.08	0.05	0.01	0.06	0.05	**0.61**	0.19
pregnancy means marrying wrong person	0.11	0.03	0.03	0.08	-0.02	**0.74**	0.13
pregnacy means growing up	0.10	-0.06	-0.08	0.31	-0.01	**0.64**	-0.04
pregnancy means deciding about abortion	0.05	-0.09	-0.04	0.27	-0.01	**0.47**	-0.10
SEX NEGATIVE							
partner lose respect	0.14	0.06	0.00	0.06	0.02	0.07	**0.79**
sex guilty	0.34	-0.02	0.18	0.14	-0.01	0.15	**0.64**

B. What are the predominant psychosocial profiles associated with these groups for males?

Latent Class Analysis

As for the women, once the factor analysis was completed and the appropriate factors were identified each factor was recoded into three categories. The continuous summative factors were categorized for two reasons: 1) I am primarily interested in individuals who fall in the tails of these factors, either very positive or very negative, and 2) inclusion of the already categorical item asking about the respondent's willingness to have an out of wedlock birth was theoretically important, and in order to include this already categorical item, the other items have to be categorical as well.[28] Each factor had the same response options, and they were all split in the same way. If responses to all items in the factor were four or five out of five, a respondent was classified as high/positive. Items were recoded to fit this pattern if the original response options were labeled in the reverse order. If responses to all items were two or one, s/he was classified as low/negative. All other response patterns were in the middle category. These categorized factors were then used along with one additional item (whether the respondent would consider having a baby when unmarried), and the data was transferred to "R" for Latent Class analysis. This final item could not be included in the factor analysis because it was categorical, and factor analysis can only be done on continuous items. The latent class analysis then identified different combinations of the seven factors and the one additional item for different groups of men. I label these different combinations as the "psychosocial profile" for each group. Seven classes with distinct psychosocial profiles were identified for men. The class that was middle of the road on every factor was selected as the reference class, and all other classes were named based on their deviation from the middle on each factor.

Male Psychosocial Profiles

A latent class analysis (LCA) was run separately for men. The average of 30 trials for the AIC and BIC are shown below (Figure 4).

[28] As described in chapter 3, MPlus can run a latent class analysis where both continuous and categorical items can be included but it was not possible to get access to MPlus on the Add Health server, and the Add Health data cannot be moved off of the server to be analyzed elsewhere.

AIC BIC

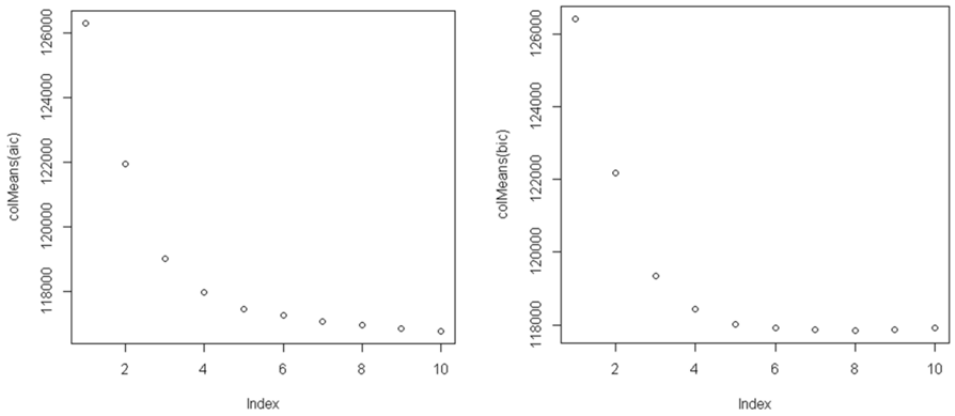

Figure 4.3: AIC and BIC graphs from the male latent class analysis sample, average of 30 trials.

The AIC graph for men began to flatten out at about seven classes, and for the BIC the seven and eight class solutions were the lowest. However, the BIC showed little difference in the six, seven or eight class solutions, and so all three were examined. For men, the seven class solution was the most distinguishable and interpretable. Again, as with the sample of women, each of the seven classes was examined relative to the other classes and labeled according to their overall disposition toward teen sex, pregnancy, and contraceptive use.

In general, the male psychosocial profiles followed the same pattern as the female psychosocial profiles did, but were different in a few important ways. The major differences that emerged were in regards to contraceptive use and teen pregnancy. The most important of these differences is that the items about social norms about teen pregnancy and the consequences of pregnancy grouped as two separate factors, rather than being combined as they were for women. Boys then, were more likely than girls to see teen pregnancy as normatively problematic. In addition, very few of the boys felt that a teen pregnancy would have many instrumental consequences for their lives (i.e. having to drop out of school, marry the wrong person, etc.). Most important of all, for the boys pregnancy norms explained more variance than did pregnancy consequences. Teen boys were also more positive about sex and more certain of their contraceptive self-efficacy than were the girls – although both the boys and girls were high on contraceptive self-efficacy generally. Perceptions of their parent's feelings about sex were more positive for boys than for girls as well.

Interestingly, as with the classes of girls, two male classes broke out according to age, and contained the majority of the respondents who were approximately 15 when they answered the items used to create the psychosocial context. The other five classes had average ages between 16 and 17. Specific discussion of the male psychosocial profiles follows. As with the girls, I begin with the two younger classes in order by socioeconomic status from highest to lowest, and then present the five older classes, also in order from highest to lowest socioeconomic status.

Class One: Class one is labeled "Young Mixed." This class of boys is high on parental disapproval, positive about teen pregnancy, and indicated few barriers to contraceptive use. The Young Mixed class represents 13% of the sample of boys. The majority of teen boys in the Young Mixed class reported that their parents felt negatively about the boys engaging in sexual activity. However, while the majority was negative, there were also fairly large percentages in the middle of the road and positive categories (20.1% and 20.7% respectively). In addition, two thirds of boys in this class indicated that it would not be all that bad if they got a girl pregnant. Young Mixed boys were in the middle on sex positive items, and somewhat split on sex negative items with 60% in the middle, 21% negative, and 19% positive. One-third of the boys in the Young Mixed class indicated that the consequences of a teen pregnancy would be high for them, and two-thirds were in the middle in terms of their feelings about the impact of a teen pregnancy on their lives. Young Mixed boys was the most positive by far on contraceptive norms (94.9%) and the highest on contraceptive self-efficacy of any class of boys or girls (100% high contraceptive self-efficacy), and as such they were clearly positively disposed toward contraception.

Class Two: Class two is labeled "Young Positive." Teen boys in the Young Positive class felt that they had parental approval for sex and contraceptive use, were positive about teen sex and about teen pregnancy, and indicated few barriers to contraceptive use. The Young Positive class represents 6% of the male sample. Young Positive males were labeled as positive because overall they reported high levels of parental approval of sex and contraceptives, positive norms and low consequences for teen pregnancy, and high endorsement of sex positive items. While they also reported high levels of agreement with the sex negative items, the

majority of their responses are positive rather than negative or middle of the road. Young Positive boys reported few contraceptive barriers and had high contraceptive self-efficacy.

Table 4.5: Item response probabilities for latent class analysis for male sample (N=5,638).

	Young Mixed (13%; N=1,334)	Young Positive (6%; N=592)	Older Negative Pregnancy (18%; N=1,796)	Older Negative (14%; N=1,381)	Older Middle (Ref.) (17%; N=1,747)	Older Mixed (9%; N=895)	Older Positive (23%; N=2,270)
Average Age of Class, Wa	**14.2**	**14.1**	**16.7**	**16.2**	**16.5**	**16.5**	**16.6**
Parent's Disapprove of Teen Sex	**59.2%**	0.8%	0.6%	**77.1%**	15.1%	11.5%	5.6%
Parent's Neutral on Teen Sex	20.1%	0.5%	**66.4%**	12.6%	**53.5%**	**42.2%**	36.4%
Parent's Approve of Teen Sex	20.7%	**98.7%**	33.0%	10.3%	31.4%	**46.3%**	**58.0%**
Disagree that Sex has Benefits	17.8%	1.3%	4.7%	18.3%	0.5%	2.2%	9.0%
Neutral about Sex having Benefits	**77.2%**	1.0%	**85.8%**	**76.8%**	**99.5%**	**69.0%**	**76.9%**
Agree that Sex has Benefits	5.0%	**97.8%**	9.5%	4.9%	0.0%	28.7%	14.1%
Disagree that Sex has Negative Consequences	21.4%	18.4%	8.0%	37.9%	0.9%	16.0%	3.0%
Neutral about Sex having Negative	**59.8%**	25.7%	**50.5%**	**53.4%**	**70.8%**	**47.6%**	33.2%
Agree that Sex has Negative Consequences	18.8%	**55.9%**	**41.4%**	8.7%	28.4%	**36.4%**	**63.8%**
Negative Pregnancy Norms	34.0%	0.6%	**86.0%**	**91.8%**	**44.2%**	**65.7%**	10.2%
Neutral Pregnancy Norms	2.6%	0.8%	14.0%	8.3%	**53.5%**	34.4%	**70.2%**
Positive Pregnancy Norms	**63.3%**	**98.6%**	0.0%	0.0%	2.3%	0.0%	19.6%
Hi Pregnancy Consequences	30.7%	0.9%	38.3%	**46.2%**	0.0%	**47.9%**	3.5%
Neutral Pregnancy Conseuqences	**63.2%**	0.6%	**57.7%**	**51.3%**	**100.0%**	**48.9%**	**72.3%**
Lo Pregnancy Consequences	6.1%	**98.5%**	4.0%	2.5%	0.0%	3.3%	24.3%
Not Willing to Have a Child when Unwed	**92.3%**	**85.5%**	**91.2%**	**95.4%**	**83.1%**	**69.9%**	**55.3%**
Willing to Have a Child when Unwed	7.7%	14.6%	8.8%	4.6%	16.9%	30.1%	**44.7%**
Hi Contraceptive Barriers	0.9%	2.5%	0.0%	4.3%	1.7%	11.0%	4.3%
Medium Contraceptive Barriers	4.2%	11.5%	36.8%	**62.7%**	**65.8%**	**80.8%**	**52.5%**
Lo Contraceptive Barriers	**94.9%**	**86.0%**	**63.2%**	33.0%	32.5%	8.2%	**43.2%**
Lo Contraceptive Self-Efficacy	0.0%	0.0%	0.4%	2.4%	1.9%	3.0%	3.3%
Medium Contraceptive Self-Efficacy	0.0%	0.2%	2.5%	16.7%	13.5%	**26.1%**	10.6%
High Contraceptive Self-Efficacy	**100.0%**	**99.8%**	**97.1%**	**80.9%**	**84.6%**	**70.9%**	**86.1%**

Class Three: Class three boys are labeled "Older Negative Pregnancy." Boys in this class were fairly middle of the road across most items, and exhibited few barriers to contraceptive use, but were negative about teen pregnancy. The Older Negative Pregnancy boys represented 18% of the male sample. Older Negative Pregnancy boys were labeled as having low contraceptive barriers (although 37% are in the middle of the road category) because the majority falls into the low contraceptive barriers category and the Older Negative Pregnancy boys in general were also high on contraceptive self-efficacy. The one factor on which Older Negative Pregnancy boys did not fall into the middle was on pregnancy norms, where the majority of boys were in the negative category. Older Negative Pregnancy boys were also strongly against having a child outside of marriage (92.2%).

Class Four: Class four is labeled "Older Negative." Boys in the Older Negative class reported high parental disapproval, were negative about teen pregnancy, and were also negative about unmarried childbearing. The Older Negative class of boys represents 14% of the male sample. Male adolescents in the Older Negative class reported the highest percentage of parental disapproval of sex and contraceptives. In addition, they had the highest percentage of any group of male teens who disagreed with the sex positive items. Older Negative Boys held negative norms about teen pregnancy and were split between middle of the road and high in terms of the instrumental consequences they felt a teen pregnancy would have for them. Older Negative boys also had the strongest negative norms against having a child when unmarried (95.4% disapproved). Interestingly, Older Negative male adolescents perceived a higher degree of barriers to contraceptive use, and were the second lowest on contraceptive self-efficacy. This lower perceived commitment to contraceptive use was at odds with their strongly negative views about teen pregnancy, but somewhat in line with their negative views of sex - as you might expect negative views of sex to lead to negative views of things associated with sex, such as contraceptives.

Class Five: Class five is labeled "Older Middle" and is used as the reference class for chapter five models. The Older Middleclass of boys represents 17% of the male sample. Boys in the Older Middleclass reported relatively lower levels of positivity about contraceptives, and somewhat lower levels of contraceptive self-efficacy, so they have some barriers to contraceptive use. Older Middle boys had fairly middle of the road

responses overall, with the majority of respondents falling into the middle of the road category on almost every factor. Older Middle boys were in the middle about both the sex positive and sex negative items, as well as about pregnancy norms and pregnancy consequences (although there are still a substantial proportion of them falling into the negative category on pregnancy norms, 44%, with the majority in the middle, 54%). Boys in the Older Middle class also fell largely in the middle of the road category in terms of their perceptions of their parents' views about their teens sexual and contraceptive activity (54%) - although there were still substantial percentages in the approval and disapproval categories (31.4 and 15.1, respectively). Older Middle adolescent boys were generally not in favor of having children outside of marriage (83.1% disapproved).

Class Six: Class six was labeled "Older Negative Pregnancy/Contraceptives." This class represents 9% of the male sample. Older Negative Pregnancy/Contraceptive boys have somewhat mixed views as they are split between two categories on almost every factor. However, the two things that differentiate this class from the Older Middle class are the very negative stance on pregnancy norms and consequences of boys in this class, and their more negative stance on contraceptives. That said, on most factors, the majority of respondents fell into the middle of the road category. Older Negative Pregnancy/Contraceptives boys held largely negative norms when it came to teen pregnancy, and about half of them felt that a teen pregnancy would have a high impact on their lives. Boys in the Older Negative Pregnancy/Contraceptives class were split on parental approval, with roughly half of them indicating that their parents would approve of them having sex and using contraceptives, and the other half in the middle on the subject. Older Negative Pregnancy/Contraceptives male adolescents perceived the most contraceptive barriers of any class, and had the lowest contraceptive self-efficacy, although no class of boys or girls was truly negative about contraceptives). Boys in the Older Negative Pregnancy/Contraceptives class also tended toward agreement with both the sex positive and sex negative items, indicating that they felt there were both benefits and consequences to teen sexuality.

Class Seven: Class seven is labeled "Older Mixed." The Older Mixed class had high parental approval, was negative about sex, and was positive about unmarried childbearing. The Older Mixed class made up 23% of the male sample. Boys in the Older Mixed class had generally middle of the road views about pregnancy, perceived some barriers to contraceptives, and had relatively high contraceptive self-efficacy. Older Mixed

boys were the only class of males where a large percentage said they would consider having a child outside of marriage (44.7%). Interestingly, the female class that that claimed parental approval and was positive about unmarried childbearing (the Older Positive class) was also split roughly half and half on unmarried childbearing.

C. How are demographics characteristics related to these psychosocial profiles?

For each class I then used descriptive statistics to examine the demographic makeup of the classes. I found that classes differed along age lines, with two classes for males (as there were for females) that consisted primarily of those respondents who were about age 15 when they responded to the underlying items included in the factor analysis (regardless of if they responded to those questions in Wave I or in Wave II), as opposed to age 16 or older. Male classes also differed substantially along socio-economic status lines, tending to break out into middle-income groups and low-income groups. Details on the demographics associated with each class of men are provided below.

Table 4.6: Descriptives for male sample by latent class (N=5638).

Wave I		Young Mixed (13%; N=1,334)	Young Positive (6%; N=592)	Older Negative Pregnancy (18%; N=1,796)	Older Negative (14%; N=1,381)	Older Middle (Ref.) (17%; N=1,747)	Older Mixed (9%; N=895)	Older Positive (23%; N=2,270)
	Overall Mean	**Class 1**	**Class 2**	**Class 3**	**Class 4**	**Class 5**	**Class 6**	**Class 7**
Age, Wave I	16.1	14.2 ***	14.1 ***	16.7 ***	16.2	16.5 ***	16.5 ***	16.6 ***
Race/Ethnicity (White, Ref.)	67.1%	75.8% **	71.0%	74.9% ***	79.5%	64.7%	54.2% ***	48.6% ***
Latina	12.0%	9.9%	8.5%	10.2% +	8.7% *	13.3%	19.7% **	15.5% **
Black	15.7%	8.7% ***	15.3%	10.8% ***	5.6% ***	15.5%	19.0%	32.2% ***
Other Race/Mixed Race	5.2%	5.6%	5.1%	4.0%	6.2%	6.6% +	7.1%	3.8% +
Born in the United States	94.4%	96.9% *	95.6%	94.2%	93.7%	93.0%	90.6%	94.9%
Wave I Household Poverty Status (0-100 ref.), Wave I	17.6%	13.8% *	21.0%	9.6% ***	10.7% *	17.6%	22.6% +	31.2% ***
Household Poverty Status 101-200%	23.0%	20.5%	26.3%	18.9% **	19.7%	23.2%	31.7% *	27.8% *
Household Poverty Status 201-300%	22.5%	23.9%	22.1%	24.9%	24.3%	23.3%	17.5%	18.6% *
Household Poverty Status 301-400%	15.4%	16.8%	11.0%	15.7%	24.0% **	15.6%	11.7%	10.5% **
Household Poverty Status 401% plus	22.2%	25.7% +	21.2%	31.1% ***	21.4%	21.2%	17.6%	11.8% ***
No Religious Affiliation (ref.)	13.8%	11.9%	15.4%	14.8%	5.8% ***	13.8%	13.0%	19.3% ***
Christian	32.9%	36.5% +	31.6%	36.8% *	36.4%	33.7%	32.9%	23.5% ***
Baptist	23.1%	19.6%	26.0%	18.7% **	23.6%	22.2%	25.7%	29.5% **
Catholic	25.2%	26.5%	23.9%	22.7% +	30.0%	26.7%	23.2%	23.5%
Other Religion	4.8%	5.3%	2.9%	6.8% *	4.2%	3.4% +	5.0%	4.1%
Rural Residence	29.0%	30.5%	27.9%	29.3%	33.4%	30.7%	22.3%	25.5%
Suburban Residence	38.9%	44.5% *	37.8%	45.4% **	44.4% *	37.1%	32.9%	27.8% ***
Urban Residence	31.9%	25.1% *	34.0%	25.1% ***	22.1% ***	32.1%	44.7% **	46.6% ***
<2.9, Grade Point Average	52.92%	48.46% *	43.71% *	43.14%	70.13% ***	56.96% +	39.35% ***	61.91% *
3.0-3.49, Grade Point Average	25.63%	29.13% *	27.40%	24.15%	18.94% ***	26.24%	29.38%	28.26%
3.5 or Greater, Grade Point Average (ref.)	24.31%	24.89%	32.94% *	34.21% ***	12.97% ***	19.50% *	33.99% ***	11.39% **
Average Depression (0-3), Wave I	0.53	0.43 ***	0.44 *	0.48 ***	0.50	0.57 **	0.70 ***	0.62 ***
Had Sex by Wave I	41.6%	10.7% ***	24.4% **	49.2% ***	15.4% ***	46.7% *	59.1% ***	68.7% ***
Abstinence Pledge by Wave I	8.6%	13.1% **	6.1%	5.2% **	21.9% ***	5.1% **	6.8%	4.1% ***

Wave III	Overall Mean	Young Mixed (13%; N=1,334) Class 1	Young Positive (6%; N=592) Class 2	Older Negative Pregnancy (18%; N=1,796) Class 3	Older Negative (14%; N=1,381) Class 4	Older Middle (Ref.) (17%; N=1,747) Class 5	Older Mixed (9%; N=895) Class 6	Older Positive (23%; N=2,270) Class 7
Age, Wave III	22.4	20.6 ***	20.5 ***	23.1 ***	22.6	22.9 ***	22.9 **	23.0 ***
Married , Wave III	14.6%	7.6% ***	7.9% *	15.4%	18.1% +	16.6%	16.7%	16.3%
Employed Full-Time, Wave III	57.5%	46.7% ***	40.8% **	63.1% **	58.8%	61.7% *	58.1%	59.4%
Employed Part-Time, Wave III	13.0%	16.7% *	15.1%	11.7%	16.1% +	12.9%	14.8%	8.6% ***
Unemployed, Wave III (ref.)	29.5%	36.6% **	44.2% **	25.3% *	25.2% *	25.4% *	27.1%	31.8%
Household Poverty Status 0-100% (ref.), Wave III	22.5%	19.9%	24.1%	20.5%	16.9% **	22.9%	30.9% *	27.3% *
Household Poverty Status 101-200%	21.7%	19.1%	22.7%	20.1%	21.4%	21.7%	18.1%	26.5% *
Household Poverty Status 201-300%	11.4%	10.8%	11.8%	9.2%	12.0%	12.7%	10.6%	13.0%
Household Poverty Status 301-400%	15.7%	13.2%	18.8%	17.0%	15.2%	16.7%	16.7%	14.6%
Household Poverty Status 401% plus	29.5%	40.5% ***	23.3%	32.6%	37.5% **	26.5%	23.4%	19.2% ***
Live with Parents	46.0%	59.0% ***	61.0% **	35.8% ***	44.1%	42.8%	51.4%	45.7%
Democrat	14.8%	14.9% *	15.0%	14.9% *	10.6% **	15.7%	16.5%	16.3%
Republican	13.6%	13.9%	7.1% +	16.1% +	24.1% ***	10.0% **	12.0%	8.9% ***
Other Political Party	2.0%	1.2%	2.6%	3.0% +	1.8%	2.2%	0.5%	1.8%
No Political Party	69.5%	69.9%	75.1%	66.1% *	63.5% **	72.1%	70.8%	72.9% *
Average Depression (0-3)	0.45	0.40 *	0.50	0.38 ***	0.44	0.45	0.56 ***	0.50 ***
Importance of Religion (higher=more important)	1.4	1.3	1.3	1.3	1.5 ***	1.3 *	1.4	1.4
Total Years Schooling, Wave III	12.9	12.8	12.1 ***	13.5 ***	13.5 ***	13.0	12.7	12.1 ***
Currently In School, Wave III	31.0%	47.5% ***	40.2% *	30.6%	37.9% *	26.6% *	25.9%	17.3% ***
Impulsivity Scale (std)	0.23	0.28	0.26	0.15 **	0.19	0.24	0.40 *	0.24
Self Esteem Scale (std)	0.03	0.00	0.01	0.05	0.02	-0.02 *	-0.01	0.09 *

WAVE III Outcomes	Overall Mean	Young Mixed (13%; N=1,334) Class 1	Young Positive (6%; N=592) Class 2	Older Negative Pregnancy (18%; N=1,796) Class 3	Older Negative (14%; N=1,381) Class 4	Older Middle (Ref.) (17%; N=1,747) Class 5	Older Mixed (9%; N=895) Class 6	Older Positive (23%; N=2,270) Class 7
Birth Between Age 18-24	21.7%	21.6%	13.4% *	16.4% ***	19.1%	21.6%	20.4%	31.5% ***
Abortion Between Age 18-24	3.8%	4.7%	0.1% ***	3.3%	3.2%	4.2%	3.2%	5.0% *
Unintended Birth Age 18-24	12.4%	12.6%	7.5% *	8.2% ***	11.7%	11.7%	11.1%	19.5% ***
No. Sex Partners/Last 12 Months	2.00	1.97	1.85	1.93	1.90	2.00	2.40	2.11 *
No. Times Had Sex/Last 12 Months	72.8	64.9	60.8	80.1 +	63.5 +	71.3	91.6 *	75.9
Pregnancy Prevention/Most Recent Sex	66.1%	68.9%	68.7%	74.7% ***	65.2%	62.1% *	66.4%	58.1% ***
Condom Used/Most Recent Sex	46.4%	53.2% **	46.5%	41.4% **	44.4%	47.2%	54.5% *	45.0%
No Contraceptive/Last 12 Months	19.0%	15.5% *	21.7%	14.8% ***	20.1%	19.5%	23.2%	23.2% **

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

*** p<0.001; ** p<0.01; * p<0.05; + p<0.10; all significance tests are for the class result compared to the average of all other classes

Male Descriptives

"Young Mixed"

Demographically, boys in the Young Mixed class were somewhat younger as a class, were primarily white, and had a lower percentage that reported having had sex at Wave I (11%). Young Mixed boys had the second highest parental income at Wave I and most of them reported a religious affiliation, predominately Christian and Catholic. Young Mixed boys reported the highest grade point averages and the lowest depression levels of all the male classes, and had a larger percentage than every other class but one, reporting having taken a pledge of abstinence until marriage by Wave I (13%). At Wave III far fewer men in the Young Mixed class were married than in other classes except one (also with a younger age on average), although this may be due to their relatively younger ages at Wave I. Young Mixed males were the poorest and most likely to be unemployed at Wave III, and a large percentage of them reported still living with their parents at Wave III (59%). The Young Mixed boys had the highest percentage of men still in school (48%), which may explain both their relatively high unemployment and the higher proportions living with their parents at Wave III. Interestingly, but perhaps not surprisingly given their mixed label, this class of men has one of the highest percentages of births between the ages of 18 and 24 (22%) – although they reported fairly high levels of contraceptive use at Wave III as well suggesting that early births to this class of men may have been intended.

"Young Positive"

Demographically, the Young Positive males were relatively younger at Wave I and had a high percentage of White respondents (71.0%), combined with a comparatively high percentage of Black youth (15.4%). Boys in the Young Positive class were generally poor (although not the poorest class) with 47% below 200% of the federal poverty line at Wave I. In general, at Wave I they had low levels of depression and much lower levels of sexual activity than did the other classes that were predominately poor. At Wave III, men in the Young Positive class self-rated as highly impulsive. Almost none of the men in this class were married at Wave III (less than 8%) and they had the highest percentage of unemployed men of all the classes (44.2%). Young Positive men also had one of the lowest numbers of years of school completed (12.1 years) - which may have contributed to their high unemployment levels.

Young Positive boys had the lowest percentage of reported births and abortions between the ages of 18 and 24 of all the male classes (13.4%). This may be because they reported the lowest level of sexual activity on average. However, they also reported one of the highest rates of nonuse of contraceptives at Wave III. It should follow that men reporting higher rates of non-contraceptive use would also report higher rates of births and/or abortions. As discussed for the women, it is possible that those respondents who were closer to 15 at Wave I or II answered differently than they would have if they had answered the same questions when they were closer to 17. It is also possible that this group of men was more likely to engage in sexual relationships which are short term or in which their partners' did not communicate to them if a birth or an abortion had occurred - in which case they would have reported a much lower number of births and abortions than is actually the case. It may also be that female contraceptives were being used but the male was unaware of that fact.

"Older Negative Pregnancy"

Demographically, the Older Negative Pregnancy class was the oldest at Wave I with an average age of almost 17 years old. Older Negative Pregnancy boys were three quarters White and had the second highest percentage of parental income above 400% of the federal poverty line (31.1%). Boys in the Older Negative Pregnancy class had grade point averages in the middle compared to other classes at Wave I, and 49% of them reported having had sex by Wave I. At Wave III, Older Negative Pregnancy men had the highest percentage of men employed full time, and correspondingly the lowest number of unemployed men. Only 36% lived with their parents and Older Negative Pregnancy men reported the lowest average depression levels of all the groups of men at Wave III. Men in the Older Negative Pregnancy class had completed the most years of school of any class by Wave III and had among the highest levels of self-esteem. Older Negative Pregnancy men had the lowest percentage reporting any birth between 18 and 24 of any class (16.4%), and had one of the highest percentages who reported that pregnancy prevention was used the last time they had sex (74.7%). This was not surprising given their low contraceptive barriers and high contraceptive self-efficacy. However, Older Negative Pregnancy men were also the lowest in recent condom use, though this may be due to reliance on female centered forms of contraception (41.4%).

"Older Negative"

Demographically, Older Negative boys are middle class. However, unlike the middle class boys in the Older Negative Pregnancy class, boys in the Older Negative class reported high levels of religious affiliation, including 22% of them reporting having taken a pledge of abstinence until marriage before Wave I - the highest percent of any class of boys by far. In addition, Older Negative boys were the second least likely to have had sex by Wave I, with only 15% reporting that they had done so. Older Negative boys were the most White (80%) of any class of boys, and the most religious, with only 6% reporting no religious affiliation. Older Negative boys also had the lowest grade point averages at Wave I of any group (70% below 2.9). At Wave III, this class had the highest percentage of men who were married (18%) and one of the lowest percentages of unemployed men (25%). Older Negative men also reported higher incomes at Wave III than all but one of the other classes; with 38% above 400% of the federal poverty line (although at Wave I their parental income levels were average).

Religion was more important at Wave III to Older Negative men than for men in any other class and Older Negative men also reported lower levels of impulsivity compared to all classes except the Older Negative Pregnancy class. The negative views that men in the Older Negative class held at Wave I about teen sex, and their strong desire to be married when they have a child, made sense in the context of their strong religious orientation. Older Negative men reported the lowest percentage of abortions between 18 and 24 (3.2%), and an average percentage of births between 18 and 24 (19.3%). Older Negative men also reported lower levels of sexual activity at Wave III – again not surprising given their negative views of sex and pregnancy at Wave I and their high levels of religiosity. Older Negative men's contraceptive use at Wave III was average.

"Older Middles**"**

Demographically, Older Middle boys were about two-thirds White and one-third minority. They were fairly evenly split among the parental income categories, neither as high income as the middle class groups, nor as low income as the poor groups, suggesting that they were "working class." Male teens in the Older Middle class had average levels of religious affiliation at Wave I but reported the lowest importance of religion at

Wave III, signifying that their religious affiliation at Wave I may have been driven by others in their household, such as their parents, rather than by their own beliefs. The grade point averages of Older Middle boys were low (57% below 2.9) and they reported the third highest levels of depression. Forty-seven percent of Older Middle boys reported having had sex by Wave I. At Wave III Older Middle men were among the most likely to be employed full time (61.7%), and in general fell toward the middle on Wave III household income. Only a quarter of Older Middle men were still in school at Wave III. Men in the Older Middle class reported fairly low levels of self-esteem when compared to the other classes of men (but still higher than all classes of women).

In terms of outcomes, men in class five had percentages of births between 18 and 24, on the high end (21.6%) of the classes of men, but well below that of the highest class (32%). Older Middle men reported one of the lowest rates of pregnancy prevention at most recent sex (62.1%), as well as relatively low levels of condom use at last sex (47.2%). The comparatively low levels of contraceptive use were not surprising given that they were middle of the road on both contraceptive barriers and self-efficacy. It was also not surprising that they had relatively high birth rates between the ages of 18 and 24. Overall Older Middle boys were in the middle about sex, pregnancy, and contraceptives, suggesting that they didn't hold either strong positive or strong negative views of these concepts. This lack of strong conviction may well have been indicative of lack of motivation to avoid sex or pregnancy, and/or a lack of motivation to use contraceptives.

"Older Mixed"

Demographically, the Older Mixed class was disproportionately poor and minority with 19.7% Latino, 19.0% Black, and 7.1% reporting "other race." In terms of parental income at Wave I, just over 54% of the boys in the Older Mixed class were below 200% of the federal poverty line. At Wave I, Older Mixed boys reported the second lowest grade point averages, and the highest levels of depression. Boys in the Older Negative Pregnancy and Contraceptives class were also the second most sexually active group at Wave I. At Wave III Older Mixed men generally had high levels of employment (58.2%), but maintained their status as the second poorest class with almost 50% below 200% of the Federal Poverty Line, which suggests that they may have been working in low paying jobs. Only one quarter of Older Mixed men were still enrolled in school at Wave

III and a large number of this class of men (51%) were still living with their parents. As at Wave I, Older Mixed men continued to report the highest levels of depression of any class of men at Wave III.

Older Mixed men reported high levels of impulsivity, by far the highest of any class, and the lowest levels of self-esteem out of all the classes of men – although, again, still higher than any of the classes of women. The mixed sex and pregnancy psychosocial context this class reports may be due to conflicts between norms and attitudes about sexuality, pregnancy and contraceptive use in lower income communities versus norms and attitudes about sexuality, pregnancy and contraceptive use associated with the broader United States culture. Older Mixed men reported the most sexual partners and the most sexual activity. Men in the Older Mixed class also reported one of the highest rates of births between the ages of 18 and 24 (20.4%), which was not surprising as they also reported the highest percentage of nonuse of contraceptives (23.2%).

"Older Positive"

Demographically, the Older Positive class is more than 50% minorities, and had the highest percentage of Black respondents (32.2%) as did the class of women with the most similar psychosocial profile (the Older Positive female class). Older Positive boys were the lowest income class at both Waves I (almost 60% below 200% of the Federal Poverty Line) and III (about 55% below 200% of the Federal Poverty Line). Boys in the Older Positive class also had the highest percentage of any class of men reporting no religious affiliation (19.3%). Male Older Positive teens had the second lowest grade point average of any class of men with 62% reporting below a 2.9. In addition, they had high levels of early sexual activity with 69% reporting having had sex by Wave I.

At Wave III, roughly 46% of Older Positive men were still living with their parents. Older Positive men also reported high levels of depression and low levels of schooling at Wave III, with one of the lowest in years of completed schooling across all classes of men (12.1, tied with the Young Positive class, which was also very low income and heavily minority). Only 17% of Older Positive men were enrolled in school at Wave III. Interestingly, Older Positive men reported the highest levels of self-esteem of all groups of both men and women. Older Positive men had the highest percentages of young births (31.5%), high numbers of sexual

partners, and high levels of sexual activity. Not surprisingly, they also reported the lowest rate of use of pregnancy prevention at last sex of all the classes of men (58%), and the highest use of no contraceptives at all in the 12 months prior to Wave III (23.2%, tied with the Older Mixed Class). These outcomes are not surprising given their pro-childbearing stance at Wave I.

Discussion

The analysis discussed in this chapter combined factor analysis with latent class analysis to produce classes which are both interpretable and predictive of later outcomes. Using these two data reduction methods together provides a coherent picture of the psychosocial context in adolescence and allows identification of different profiles in terms of sex, pregnancy, and contraceptive use in adolescence. The combination of factor analysis and latent class analysis is novel and thus represents a contribution to the literature.

This chapter demonstrates that psychosocial contexts are composed of multiple areas which stem from multiple sources. Psychosocial contexts include moral judgments combined with instrumental concerns and social concerns to create an overall disposition toward sex, pregnancy, or contraceptive use. Psychosocial context profiles clustered similarly for both men and women in this analysis in that demographically similar groups of men and women also tended to have similar psychosocial contexts. Interestingly, though while at first glance men and women looked to be identical in terms of the number of factors identified in the factor analysis, upon closer examination, definite differences in how items clustered for men versus women emerged. First, the factors differed in the variance explained for women and men. While parental views and contraceptive norms explained the most variance for both men and women, for men positive views of sex explained more variance in their responses than either of the pregnancy factors that emerged for men (pregnancy norms and pregnancy consequences), while for women the factors that combined norms and consequences of pregnancy explained the third most variance.

It is interesting that while United States culture takes a negative view of teen pregnancy (Goesling et al. 2014; Silk and Romero 2014) this analysis showed that teens vary in how positively they viewed teen pregnancy. Men's responses grouped such that there was a difference between pregnancy norms and the instrumental consequences of pregnancy - a difference that was not there among the female sample where all

of the norms and consequences items grouped together into one factor. One reason for this may be the simple fact that men do not directly experience pregnancy itself and from a culturally normative perspective, the consequences of a teen pregnancy are not as severe for men as they do not have to carry a child (Pearson, 2006) and are less likely to be co-resident with their child after birth (Mollborn and Lovegrove 2011). In fact, some men may in fact see pregnancy as a demonstration of their masculinity (Kegler et al. 2001; Marsiglio and Shehan 1993; Pearson 2006; Pleck, Sonenstein and Ku 1993; Resnick, Chambliss and Blum 1993).

Another interesting result of the factor analysis was the grouping of teens' perceptions of their parents' views of their children engaging in sex and parental views of their children using contraceptives. This is potentially problematic from my perspective as a researcher as I would expect parents might have different views about their children participating in sex *at all*, and their children using contraceptives if they *do* decide to participate in sex. However, I can see how these two ideas – parental views of sex and contraceptive use – might seem to be the same to the adolescent. If a teen does not think that his or her parents want him or her to have sex, then he or she may feel that using contraceptives would also be frowned upon since it presupposes sexual activity. Importantly, the identified factors around which adolescent views coalesced, when used in a latent class analysis, created specific psychosocial profiles for both girls and for boys that are meaningful and demographically distinct.

Both the female and male adolescent samples had distinct psychosocial profiles associated with each class. While the labels were generally the same between male and female classes, the distribution of negative, middle of the road, and positive responses within factors was often not the same for boys as it was for girls. For example, the reference class for both females and males is the class with the most middle of the road responses on each factor, but for women this is a middle-class group that is positive about contraceptives, while for men this was a working-class group with some contraceptive barriers. For example, for the middle of the road reference class of girls, 90% perceive few contraceptive barriers, while for boys in the middle of the road reference class only 33% perceive low barriers to contraceptive use. When it comes to unmarried childbirth in the middle of the road reference class, the girls are 67% in the disapproval category, while for boys in the middle of the road reference class, 83% disapprove. Nevertheless, despite difference in details of

how they fall out on the various categories, overall both of these classes tend toward the middle on multiple factors.

It is interesting that the classes reported here for both men and women fell out largely along socio-economic status lines with psychosocial profiles that make sense in the context of their social locations. Of note is the stark break among the classes between those who were 15 when they responded to the psychosocial context items (Young Negative and Young Positive for women, and Young Mixed and Young Positive for men) and the classes in which respondents were between 16 and 17 on average when they responded to those same items (all other classes for both women and men). This age distribution among classes supports a previous argument that suggested a substantial difference between younger high school students, and older high school students in terms of how they think about sexuality (Regnerus 2007). Given the smaller number of classes of 15 year olds (two for females and two for males), and the larger number of classes which represent those roughly 16-19 (four for females, and five for males) it seems likely that at least to some extent there is more homogeneity among the attitudes and norms of younger adolescents when it comes to sex, pregnancy, and contraceptive use, than there is among older teens.[29] An open question which cannot be addressed in this analysis is if the views of the younger groups of teens eventually diverge and would then be subsumed by the other classes of older teens, or if this age split represents some fundamental shift in societal views about teen sex, pregnancy, and contraceptive use. This would be an interesting point for further exploration in future research.

In the latent class analysis the men had less clear psychosocial profiles about sex, contraceptive use and pregnancy. This could be due to a conflict between cultural norms that say adolescents should not have sex (Santelli et al. 2006a) and norms of masculinity which dictate pursuit of sexual activity as a masculine trait (Marcell, Raine and Eyre 2003). Boys overall had much less clear pro-contraceptive norms than girls as well.

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[29] Given the filling in of data from Wave II for those respondents who were under 15 at Wave I but over 15 at Wave II, extensive data checks were performed to ensure that observed age differences were not a data artifact resulting from pulling from more than one wave of data. Analysis showed that those who were 15 when they responded to the items clustered into the two younger classes regardless of if they answered the items during Wave I data collection, or in Wave II data collection. In addition, the mean responses on primary items were largely the same for those who were under 16 at Wave I and those who were under 16 at Wave II, while the mean responses for those who were over 15 at Wave I tended to differ from the other two groups.

While girls were positive about contraceptives on the whole, and had strong contraceptive self-efficacy, boy's views of contraceptives were more mixed, with many more boys falling into the middle of the road or negative categories than did girls. This makes sense in light of the fact that most contraceptive methods are female methods, with boys really only have direct control over the use of condoms (Harvey et al. 2002). In addition, boys often profess to dislike using condoms, preferring to rely on girls' use of hormonal methods for pregnancy protection (Flood 2003). Boys in the Older Negative Pregnancy class specifically, a group of largely middle class boys, were the lowest in condom use at last sexual encounter. Research presented in this dissertation (Chapter Six) finds that women perceive that college men make assumptions about contraceptive use of female methods on the part of their female partners. This is consistent with the finding in this chapter that middle class men are the least likely to use condoms in emerging adulthood, and suggests that they may be relying on female centered forms of contraception.

Both girls and boys have one similar class that is more likely to be willing to consider out of wedlock childbearing (the Older Positive class for both women and men). This comparatively pro-childbearing class is the group with the highest percentage of Black girls or boys, is a largely minority class overall, and relatively low-income. This is consistent with findings from past research which suggest that childbearing may be preferenced over marriage among low income and minority groups (Edin and Kefalas 2007). However, it is important to note that women in the three classes with the highest percentages of minorities (around half in each class) and representing the three poorest classes, differed in their childbearing outcomes, with women in the Young Positive class reporting 25% of births between 18 and 24, while it was 35% in the Older Mixed class, and 50% in Older Positive class. In addition, some of the classes of middle class women reported higher percentages of early births then did the low income and minority classes. Given this, we should keep in mind that while early childbearing has been found to be associated with poor and minority women (Burton, 1996), not all poor and minority women experience the same psychosocial context in adolescence and not all of them experience higher birth rates.

There are some limitations to the research presented in this chapter. First, due to statistical software access limitations (MPlus not being on the Add Health server) I had to categorize the ordinal variables. This

reduces variance and may change the results as they are dependent on my method of categorization. I hope to remedy this by using MPlus in the future to rerun the analysis using the factors as continuous variables in the latent class analysis. The restriction of my analysis to the specific items I choose to use in the factor analysis is also potentially a limitation. Other items related to contraceptive knowledge and risk perceptions were also available but I chose to narrow the focus of the dissertation. I hope to remedy this with additional analysis in the future.

All classes for both men and women fall largely along the lines of socio-economic status suggesting that neighborhood and school level norms we experience in adolescence have strong implications for future outcomes and behaviors. Both the factors and the latent profiles identified in this chapter have more explanatory power, and therefore are likely to be more helpful in designing policies aimed at specific concepts or groups than would the underlying items. Chapter Five will examine the predictive ability of the latent classes for men and women to predict birth outcomes between the ages of 18 and 24 and contraceptive and sexual activity outcomes at Wave III in emerging adulthood.

CHAPTER FIVE: The Longitudinal Implications of the Adolescent Psychosocial Context

In this chapter I use a life course framework to examine the longitudinal effects of the adolescent psychosocial context on behavior and outcomes related to reproductive health, contraceptive risk-taking, and sexuality in emerging adulthood. The life course perspective emphasizes examining the impact of one life course stage on the next, suggesting that researchers should pay attention to how one phase of life influences the next (Elder 1994). Current research in reproductive health, however, does not generally examine contraceptive risk-taking across the life course or how the components of the psychosocial context (norms and attitudes) may have influence across life course stages. Rather, most research on sexuality in adolescence and emerging adulthood looks at sexuality, pregnancy, or contraceptive use within each stage rather than the influence of adolescence on emerging adulthood. This chapter seeks to fill these gaps in the literature by offering theoretical and empirical insights into how adolescent norms and attitudes surrounding contraceptive risk-taking influence reproductive health outcomes during emerging adulthood for women and men in the United States.

A limitation in current research is the lack of longitudinal research on social norms, although there is research on attitude persistence and change over time (Pierro et al. 2012; Rude, Wolniak and Pascarella 2012; Sung and Cho 2012). This lack of research on the longitudinal effect of social norms exists despite the focus of the life course perspective on culturally shared norms (Echeverría et al. 2015; Liang 2014), and the implicit longitudinal view of the life course perspective. To my knowledge, no one has examined the cumulative effects of social norms on sexuality and contraceptive risk-taking across the life course. This chapter aims to fill these gaps by using the different psychosocial profiles identified in Chapter Four to predict reproductive health and sexual and contraceptive behavior outcomes in emerging adulthood. This research demonstrates the importance of the longitudinal influence of the psychosocial context from one life course stage to the next. While Chapter Four in this dissertation presented results for research question 1, in this chapter I address research question 2 by examining how psychosocial influences in adolescence are related to later behavior and outcomes in emerging adulthood. Specifically, I use the psychosocial classes developed in

chapter four to predict births, unintended births, and abortions between the ages of 18 and 24, and sexual activity and a variety of contraceptive use outcomes immediately prior to Wave III. I explore how the psychosocial context we experience in temporally prior settings may carry over into new settings to influence our behavior within those new settings. The major question addressed in this chapter is: Can the psychosocial context in adolescence be used to predict later sexuality, reproductive health outcome, and contraceptive use and risk-taking in emerging adulthood?

To answer these questions I use Wave I psychosocial context classes and age at Wave I[30] to predict each reproductive, sexual behavior, and contraceptive outcome. Second, I include a variety of controls (discussed below) to determine if the effect of the psychosocial context on outcomes is due to selection into classes based on socio-demographic characteristics, or if there is something about the psychosocial context that is predictive above and beyond the socio-demographic characteristics.

Methods

Detailed methods are provided in Chapter Three: Methods. Here, I provide a summary which describes the major parameters used to determine the sample for each set of outcomes, the psychosocial context latent classes, and the socio-demographic control variables included in the models. Complex survey design was accounted for in all analyses.

Psychosocial Context Measures

As described in detail in Chapter Four, I used factors from Wave I of Add Health to create latent classes with specific psychosocial context profiles. Those classes are now used in this chapter to predict specific sexual and contraceptive use behaviors in emerging adulthood (reported at Wave III), and reproductive health outcomes between the ages of 18 and 24 (retrospectively reported in Wave IV). The classes found for women were: 1) Young Negative; 2) Young Positive; 3) Older Middle; 4) Older Negative; 5) Older Mixed; and 6)

[30] I include age at Wave I in all models due to the obvious age differences in the psychosocial classes. This allows the effect of the classes to be determined above and beyond the effect of the different ages at which individual respondents answered the items underlying the factors included in the psychosocial profiles. While there is an average difference across classes, there is also substantial variation within each class.

Older Positive. The classes found for men were: 1) Young Mixed; 2) Young Positive; 3) Older Negative Pregnancy; 4) Older Negative; 5) Older Middle; 6) Older Mixed; and 7) Older Positive.

Outcome Measures

I used multiple outcomes from Wave III. These were: 1) reporting having had sexual intercourse[31] by Wave III or not; 2) if a female form of pregnancy prevention was used during most recent sexual encounter; 3) if a condom was used during most recent sexual encounter; 4) if no female form of pregnancy prevention or condom was ever used in the twelve months prior to Wave III (versus if any pregnancy prevention or condom was used); 5) if no pregnancy prevention was ever used in the twelve months prior to Wave III versus any pregnancy prevention; 6) if no condoms were ever used in the twelve months prior to Wave III data collection versus any condom use; and 7) the frequency of sex reported on average over the twelve months prior to Wave III. For the "had sex by Wave III" outcome, respondents were eliminated from the sample only if they were missing Wave III weights. For the other Wave III contraceptive and sex outcomes, respondents were eliminated if they were missing Wave III weights or if

Table 5.1: Outomes by type and wave of Add Health

OUTCOMES	TYPE	WAVE
Had sexual intercourse by Wave III	**Behavioral**	**III**
Female form of contraceptive used during most recent sexual encounter	**Contraceptive Use**	**III**
Condom used during most recent sexual encounter	**Contraceptive Use**	**III**
No female form of contraceptive used during the last twelve months	**Contraceptive Use**	**III**
No form of pregnancy prevention used in last twelve months	**Contraceptive Use**	**III**
No condom used during the last twelve months	**Contraceptive Use**	**III**
Frequency of sex in the last twelve months	**Behavioral**	**III**
Birth between the ages of 18 and 24	**Reprodutive**	**IV**
Unitended birth between the ages of 18 and 24	**Reprodutive**	**IV**
Abortion between the ages of 18 and 24	**Reprodutive**	**IV**

[31] Sex is defined in Add Health for purposes of this question as: "Have you ever had vaginal intercourse? (Vaginal intercourse is when a man inserts his penis in to a woman's vagina.)"

they reported not having had sex by Wave III, as the relevant questions were not asked of those who reported not having had sex.

I also used three outcomes from Wave IV retrospective reproductive histories. The three outcomes were: 1) birth between the ages of 18 and 24; 2) abortion between the ages of 18 and 24; and 3) unintended birth between the ages of 18 and 24. I included the outcomes for birth and abortion rather than pregnancy because there are likely differences between those who decide to abort versus those who decide to give birth. Using an outcome of pregnancy in general conflates these two groups of people. The sample sizes vary among the reproductive outcomes. Respondents are excluded from the sample if: 1) they reported a birth prior to the age of 18; 2) they reported not having had sex by Wave III; or 3) they were missing Wave III weights. Those reporting an abortion prior to the age of 18 are not eliminated from the sample for the birth and abortion outcomes, but I did control for these early abortions in the analyses. In addition, for unintended birth between the ages of 18 and 24, those reporting no birth were eliminated from the sample (in addition to the eliminated parameters discussed above) so analyses would reflect intended versus unintended births only among those who experienced a birth between 18 and 24.

Analysis

For all Wave III and Wave IV outcomes, baseline models were estimated predicting the outcome using the latent classes and the respondents' age at Wave I. All models were run separately for women and for men. Age at Wave I was included in all analyses due to the fact that age distribution varied by latent class, with two of the classes of women and two of the classes of men having a mean age at Wave I of just below 15 years old and the other classes of both men and women having a mean age of over 16 years old. This age distribution is discussed in detail in Chapter Four. Because of the Add Health study design, these age differences persisted at the waves that measured outcomes (i.e. those who were younger at Wave I were also younger at Wave III).

A second model was estimated to include a set of socio-demographic background control variables (described below) from Wave I. This was done to assess possible effects of socio-demographic factors on outcomes as well as to examine possible selection into the latent classes. The socio-demographic factors

include: race/ethnicity (White [ref.], Black, Hispanic, and Other Race); percent of the federal poverty line (below 100%, 100-199%, 200-299%, 300-399%, and 400% or above [ref.]); religious affiliation (Baptist, Catholic, other Christian, other religion, and no religion [ref.]); grade point average at Wave I (below 2.9, 3.0-3.49, 3.5 and above [ref.]); average depression at Wave I (continuous measure, 0-3 scale); if they reported having had sex at Wave I (yes/no); and, if they had taken an abstinence pledge by Wave I (yes/no).

Results

Below I report all models for women first followed by all models for men. For each sex, I begin with models for outcomes related to sexual activity (had sex by Wave III, number of partners, and frequency of sexual activity). Next, I present models for contraceptive outcomes (female forms of pregnancy prevention at most recent sex, condom use at most recent sex, female forms of pregnancy prevention in the twelve months prior to Wave III, condom use in the twelve months prior to Wave III, and no contraceptive of any kind used in the twelve months prior to Wave III). Last, I present models for three reproductive outcomes (birth between 18 and 24, abortion between 18 and 24, and unintended birth between 18 and 24). For both women and men the class for which women or men were most middle of the road on all factors is used as the reference class (the Older Middle class for women and the Older Middle class for men).

Women

Wave III Sexual Activity Outcomes

Had Sex by Wave III

Logistic regression was used to examine the outcome of having had sex by Wave III for all classes compared to the reference class for women: Older Middle (Table 5.2).

Table 5.2: Logistic regression models for women, ages 18-24, predicting who has had sex by Wave III of Add Health.

WOMEN (N=7,040)						
	Model One: Baseline Model			Model Two: Add Controls		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Negative Women	0.25	0.17	***	0.31	0.18	***
Class 2: Young Positive Women	0.27	0.26	***	0.25	0.27	***
Class 4: Older Negative Women	0.51	0.19	***	0.55	0.20	**
Class 5: Older Mixed Women	0.27	0.18	***	0.30	0.18	***
Class 6: Older Positive Women	0.93	0.23		0.75	0.23	
Age at Wave I	1.07	0.04	+	1.07	0.04	
Race (Ref: White)						
Black				0.93	0.16	
Latino/a				0.79	0.19	
Other Race				0.67	0.20	*
Born in the United States				1.31	0.17	
Percent of Federal Poverty Ratio (Ref: 400% and above)						
<100%				1.27	0.20	
100-199%				1.38	0.17	+
200-299%				1.12	0.17	
300-399%				0.92	0.15	
Religious Affiliation (Ref: No Affiliation)						
Christian, Other				0.53	0.21	**
Baptist				0.91	0.25	
Catholic				0.52	0.23	**
Other Religion				0.56	0.29	*
Grade Point Average (ref: 3.5 or above)						
<2.9				2.14	0.14	***
3.0-3.4				1.72	0.14	***
Depression, Wave I				1.13	0.14	
Abstinence Pledge Taken - Wave I				0.68	0.13	**
Constant	15.93	0.14	***	12.94	0.29	***
F		22.05	***		11.04	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Model one for women shows the predictive ability of psychosocial context in adolescence, controlling for age at Wave I. The Older Middle class has a psychosocial context profile that is middle of the road on almost every factor and is used as the reference group. Girls in the Older Middle class are also the most advantaged of the four older classes that had a higher average age at Wave I. In model one, all classes except the Older Positive class are significantly less likely to have had sex by Wave III than the Older Middle class. Young Negative women, who were negative about sex, teen pregnancy, and unmarried childbearing in adolescence, had 75% lower odds (OR=0.25, P<0.001) of having had sex by Wave III when compared to the Older Middles and this

effect was only slightly attenuated when background controls were added (OR=0.31, p<.001). This result is not particularly surprising given the negative psychosocial context. However, Young Positives, who were *positive* about teen sex and pregnancy, were also *less* likely to have had sex by Wave III when compared to Older Middles (OR=0.27, p<.001), and this effect was essentially unchanged by the addition of background controls (OR=0.25, p<.001). On the surface, this is a counterintuitive result since Young Positives have a positive psychosocial context about both adolescent sex and pregnancy. However, as noted in Chapter Four, the Young Positive group is composed of those who were younger at Wave I (14.8 years) and also younger at Wave III (21.2 years). While the model controls for age at Wave I, we should also consider the possibility that the Young Negative women may very well split into additional classes if psychosocial context had assessed when they were 16 or older. This split could either have been into the other existing classes of older teens, or it could potentially have formed one or more new classes. If, for example, Young Positive women split into Older Mixed women and Older Positive women as they aged (this is the most likely scenario based on the demographics of the classes), then the Young Positive women who are positive about sex and positive about teen pregnancy at age 15, might split into two classes - one of which is negative about sex and one that is positive about sex - but which is similar on other factors.

The Older Negative group of women is negative about teen pregnancy and has some contraceptive barriers. The Older Negative women had 49% lower odds of having had sex by Wave III (OR=.51, p<.001) compared to the Older Middle women. Potentially, the Older Negative women were more afraid of a teen pregnancy occurring than the Older Middle women were, and so were less likely to participate in actions (such as sex) that could lead to the perceived negative outcome. The Older Mixed class had 73% lower odds of having had sex by Wave III (OR=.27, p<.001) compared to the Older Middle class, which may be related to their negative psychosocial context in terms of teen sex (although positive about teen pregnancy which may be due to the relatively higher percentage of Latina women in this group and the high value placed on childbearing in Latino culture; Afable-Munsuz and Brindis 2006).

It was interesting to see only very minor attenuation of the effect of psychosocial context on the outcome for each class when socio-demographic factors were added to the model, with the odds ratio

reduction ranging from 2% for the Young Positives (essentially unchanged) to 7% for the Young Negatives. Overall, after the inclusion of a range of socio-demographic factors, the Young Negative women, Young Positive women, the Older Negative women and the Older Mixed women still had significantly lower odds of having had sex by Wave III (the Older Positive women remained statistically indistinguishable on this outcome) when compared to the Older Middle women, suggesting that there is something about the psychosocial context that has an impact above and beyond basic background demographic factors when it comes to female initiation into sexual activity.

Number of Sexual Partners in the Twelve Months Prior to Wave III

OLS regression[32] was used to examine the outcome of number of sexual partners reported in the twelve months prior to Wave III for all classes compared to the reference class (Table 5.3). Model one shows significant differences between the Older Middle class and the Young Negative women and Older Mixed women. Both the Young Negative women ($b= -0.24$, $p<.001$) and the Older Mixed women ($b= -0.31$ $p<.001$) reported fewer sexual partners in the twelve months prior to the Wave III interview than did the Older Middle reference class. For the Young Negative women, this was primarily explained by background demographic factors ($b= -0.17$, $p<.1$). For the Older Mixed women however, there was a reduction in the coefficient ($b= -0.22$, $p<.001$) but it remained statistically significantly in comparison to the Older Middle women. These results suggest that, to some extent classes of women who hold more negative attitudes and norms about sex and when they are teens have fewer sexual partners in emerging adulthood than do women with more middle of the road norms.

[32] Although this is a count variable I was unable to use a Poisson or Negative Binomial due to the use of Multiple Imputation. When the imputation is run, it assigns negative values which prevent the models from running. There is a truncated regression command that can be used to prevent the assignment of negative values (truncreg), however you cannot use that command unless you are using the multiple imputation chained command (mi chained), and mi chained cannot be used with the survey set command (svyset) which is necessary to correct for Add Health survey design.

Table 5.3: OLS Regression models for women, age 18-24, predicting number of sexual partners and frequency of sexual activity reported in the past twelve months at Wave III of Add Health (N=6,161).

	Number Sex Partners						Frequency of Sex					
	Model One			Model Two			Model One			Model Two		
	b	SE	p	b	SE	p	b	SE	p	b	SE	p
Latent Class (Ref: Older Middle)												
Class 1: Young Negative Women	-0.24	0.09	**	-0.17	0.08	+	-19.98	5.92	**	-18.26	6.24	**
Class 2: Young Positive Women	-0.09	0.16		-0.05	0.17		-13.04	9.89		-5.06	9.87	
Class 4: Older Negative Women	0.06	0.23		0.11	0.24		-7.74	6.21		-8.20	6.34	
Class 5: Older Mixed Women	-0.31	0.08	***	-0.22	0.08	**	-20.80	6.60	**	-13.98	6.85	*
Class 6: Older Positive Women	-0.05	0.08		-0.08	0.09		-3.80	6.79		-0.50	6.45	
Age at Wave I	-0.09	0.02	***	-0.10	0.02	***	1.22	1.36		-0.01	1.29	
Race (Ref: White)												
Black				0.21	0.19					-45.35	4.83	***
Latino/a				-0.28	0.07	***				-11.13	7.32	
Other Race				-0.23	0.11	*				-21.00	7.63	**
Born in the United States				-0.15	0.13					-7.00	7.89	
Percent of Federal Poverty Ratio (Ref: 400% +)												
<100%				-0.10	0.15					-3.90	7.81	
100-199%				-0.16	0.09	+				-3.39	6.45	
200-299%				-0.22	0.08	**				0.57	6.40	
300-399%				-0.02	0.12					1.31	6.75	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				0.00	0.12					1.47	5.62	
Baptist				-0.07	0.11					3.28	6.62	
Catholic				0.00	0.11					-6.13	5.99	
Other Religion				0.05	0.16					-3.52	10.56	
Grade Point Average (ref: 3.5 or above)												
<2.9				0.07	0.12					3.88	5.16	
3.0-3.4				-0.09	0.12					3.38	5.32	
Depression at Wave I				0.09	0.07					0.57	4.38	
Had Sex at Wave I				0.10	0.08					13.61	4.68	**
Abstinence Pledge Taken - Wave I				-0.08	0.07					-0.06	4.93	
Constant	1.68	0.06	***	1.90	0.22	***	79.86	4.22	***	88.45	10.36	***
F		4.91	***		3.97	***		4.43	***		7.39	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.
SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Frequency of Sexual Activity in the Twelve Months Prior to Wave III

OLS regression[33] was used to examine the outcome of frequency of sexual activity reported in the twelve months prior to Wave III for all classes compared to the reference class. Similar to the results for the number of sexual partners, frequency of sex differed from the Older Middle women for the Young Negative women and the Older Negative women in both models one and two. In model one, compared to the Older Middle class, the Young Negative women reported a significantly lower frequency of sexual activity in the twelve months prior to Wave III ($b= -19.98$, $p<.01$). This was also true for the Older Negative women who had an even lower reported sexual frequency ($b= -20.01$, $p<.001$) in comparison to the Older Middle women than did the Young Negatives. In model two, when socio-demographic factors are added, the effects are reduced, yet still significant, for both the Young Negatives and the Older Negatives ($b= -18.26$, $p<.01$; $b= -13.98$, $p<.05$).

Summary of Wave III Sexual Activity Outcomes

All classes of women were compared to the class of women with the Older Middle psychosocial context (middle of the road on almost every factor). For women, most classes were the same as the Older Middle women. Differences were found as follows: 1) some classes were *less* likely than the Older Middle women to have had sex; 2) some classes had *fewer* sexual partners; and 3) some classes had sex *less* frequently than the Older Middle women. This suggests that women with weaker psychosocial contexts about sex, teen pregnancy, and out of wedlock childbearing may be more likely to engage in sex, to have more partners, and to have sex more frequently (Brückner, Martin and Bearman 2004). The Older Positive women were the least statistically distinguishable from the Older Middle women. In general, women with psychosocial contexts that were negative about sex had significantly fewer partners and had sex less frequently than the Older Middle reference class and this effect was significant even after background factors were taken into account.

[33] Although this is a count variable encountered the same issues with the survey design and multiple imputation and I did with the outcome for the number of sexual partners, and so was unable to use Poisson or Negative Binomial regression.

Wave III Contraceptive Outcomes

Five outcomes regarding contraceptive use at Wave III were examined. First, I present the results for the use of any female form of pregnancy prevention compared to none at most recent sex prior to Wave III. Second I report results for the use of a condom at most recent sex prior to Wave III. Third, I present results for use of no female form of pregnancy prevention at all in the twelve months prior to Wave III versus use of any. Fourth, I present results for condom use at every sexual encounter in the twelve months prior to Wave III, versus not in every sexual encounter. Finally, I combine female forms of pregnancy prevention and condoms, and present the results for use of no form of contraceptive in the twelve months prior to Wave III data collection. I separate out female forms, male forms (condoms), and no contraceptive use in order to investigate how patterns of reporting about contraceptives may differ between men and women depending on who may be expected to have primary control over the contraceptive method.

Female Form of Pregnancy Prevention Used During Most Recent Sexual Encounter

Logistic regression was used to examine the effect of psychosocial context on the outcome of female forms of pregnancy prevention used at the most recent sexual encounter prior to Wave III (Table 5.4). All classes were compared to the Older Middle women reference class. There are few significant differences for female forms of pregnancy prevention used at the most recent sexual encounter prior to Wave III for all classes of women compared to the Older Middle class of women. Of the differences I did find, the Young Negative class of women had significantly higher odds of having used some form of female pregnancy prevention when compared to the Older Middle class of women (OR=1.28, $p<.05$) in model one. However, this effect was explained entirely by background socio-demographic factors in model two. The Older Positive women had significantly lower odds of having used any form of female pregnancy prevention during their last sexual encounter (OR=0.66, $p<.0001$), which is consistent with their positive disposition toward childbearing at Wave I. However, the effect for the Older Positive women was also explained entirely by the addition of background socio-demographic factors in model two, suggesting that psychosocial context is not predictive beyond the association of the psychosocial contexts with socio-demographic profiles for women for female forms pregnancy prevention used at most recent sex.

Table 5.4: Logistic regression models for women, age 18-24, for female forms of pregnancy prevention and condom use at most recent seuxal enounter (N=6,161).

	Pregnancy Prevention Used Most Recent Sex						Condom Used Most Recent Sex					
	Model One			Model Two			Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Negative Women	1.28	0.11	*	1.05	0.11		1.51	0.11	***	1.40	0.11	**
Class 2: Young Positive Women	1.12	0.21		1.25	0.21		2.03	0.23	***	1.78	0.22	*
Class 4: Older Negative Women	1.01	0.13		0.99	0.14		1.11	0.11		1.08	0.11	
Class 5: Older Mixed Women	0.93	0.11		0.98	0.12		1.37	0.11	**	1.19	0.12	
Class 6: Older Positive Women	0.66	0.12	***	0.87	0.12		1.07	0.12		1.05	0.13	
Age at Wave I	1.02	0.03		1.05	0.03	+	0.96	0.02		1.00	0.02	
Race (Ref: White)												
Black				1.01	0.12					2.41	0.11	***
Latino/a				0.90	0.13					1.32	0.12	*
Other Race				0.65	0.17	*				1.40	0.16	*
Born in the United States				0.89	0.18					0.85	0.15	
Percent of Federal Poverty Ratio (Ref: 400% and above)												
<100%				0.46	0.15	***				1.01	0.14	
100-199%				0.50	0.14	***				0.94	0.13	
200-299%				0.71	0.14	*				1.04	0.12	
300-399%				0.97	0.15					1.00	0.14	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				1.00	0.11					0.94	0.12	
Baptist				0.93	0.14					0.92	0.12	
Catholic				1.06	0.13					1.15	0.13	
Other Religion				1.18	0.22					0.85	0.20	
Grade Point Average (ref: 3.5 or above)												
<2.9				0.58	0.10	***				0.78	0.09	**
3.0-3.4				0.70	0.11	**				0.81	0.10	*
Depression at Wave I				0.79	0.08	**				0.98	0.08	
Had Sex at Wave I				0.73	0.09	**				0.66	0.09	***
Abstinence Pledge Taken - Wave I				1.03	0.10					0.89	0.11	
Constant	2.58	0.1	***	6.95	0.25	***	0.62	0.07	***	0.87	0.22	
F		4.04	**		8.42	***		6.57	***		6.77	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Condom Used During Most Recent Sexual Encounter

Logistic regression was used to examine the outcome of condom used versus not used during the most recent sexual encounter prior to Wave III for all classes of women compared to the Older Middle reference class (Table 5.4). Effects of the psychosocial context beyond socio-demographic factors are evident for condom used at most recent sex. In model one, the Young Negatives, Young Positives, and Older Mixed classes of women all had significantly higher odds of having used a condom at most recent sex than did the Older Middle class. The Young Negative women had 51% higher odds of having used a condom during their most recent sexual encounter compared to the Older Middle women (OR=1.51, $p<.001$). This effect was slightly reduced but still significant in model two when socio-demographic factors are added to the model (OR=1.40, $p<.01$). The Young Positive women also had significantly higher odds than Older Middle women of having used a condom during their most recent sexual encounter prior to Wave III (OR=2.03, $p<.001$). This effect is slightly reduced in model two by the addition of socio-demographic factors (OR=1.78, $p<.001$) but also remains significant. For the Older Mixed women, a significant effect is present in model one (OR=1.37, $p<.01$) but that effect was entirely explained by the addition of the socio-demographic factors (OR=1.19, p=n.s.). Thus, it appears that those holding negative views of sex and pregnancy in adolescence have somewhat higher odds of having used a condom the most recent time they engaged in sex prior to Wave III. In some cases however, this effect is explained by selection into psychosocial context based on socio-demographic background factors while in other cases, psychosocial context has predictive ability above and beyond socio-demographic background factors.

Female Forms of Pregnancy Prevention Not Used in the Twelve Months Prior to Wave III

Logistic regression was used to examine the outcome of pregnancy prevention (not including condoms) used none of the time versus any of the time in the twelve months prior to Wave III for all classes compared to

the Older Middle reference class (Table 5.5).[34] There were no effects of psychosocial context for the Young Negative women or the Young Positive women in comparison to the Older Middle Women for non-use of female forms of contraceptives in the twelve months prior to Wave III. The addition of background socio-demographic factors did not change this result. The Older Positive women were the only class that was significantly different when compared to the Older Middle women. Older Positive women had significantly higher odds (OR=1.49, p<.01) of reporting no use of female forms of pregnancy prevention in the twelve months prior to Wave III compared to the Older Middle reference class. This result is consistent with positive psychosocial context in regards to childbearing, as well as the presence of contraceptive barriers for Older Positive women.

Condoms Not Used in the Twelve Months Prior to Wave III

Logistic regression was used to examine the outcome of whether a condom was used none of the time versus any of the time in the twelve months prior to Wave III for all classes compared to the Older Middle women reference class (Table 5.5).[3] For women, the results for non-use of condoms in the twelve months prior to Wave III are somewhat different than the results for non-use of female forms of pregnancy prevention. In model one, there was no significant effect of psychosocial context for the Young Negative women (OR=1.19, p=n.s.). However, once background factors were added the odds *increased* such that the Young Negative women in model two had *higher* odds of having not used condoms at all in the twelve months previous to Wave III (OR=1.35, p<.05) compared to the Older Middle group. The Young Negative women were a younger, higher income, and primarily white class, and were also more likely to report being enrolled in college at Wave III (over 50% of this class is enrolled in school at Wave III, the highest of any class). Thus, the sexual activity at Wave III of the Young Negative women was likely to have taken place within the context of hookup cultures commonly found on college campuses (Fielder, Carey and Carey 2013; Fielder

[34] I also ran models for use of contraceptives all the time versus not all the time in the 12 months prior to Wave III, however almost no effects of psychosocial context were present for either women or men, so I chose to present the models for none versus any, which do show the effect of psychosocial context.

and Carey 2010) – a context in which condom use is often inconsistent (Fielder and Carey 2010; Paul and Hayes 2002).

The Young Positive women also had significantly higher odds of non-use of condoms in the twelve months prior to Wave III. In model one, the Young Positive women had 166% higher odds (OR=2.66, $p<.01$) of non-use of condoms in the previous twelve months compared to Older Middle women. In

Table 5.5: Logistic regression models for women for no female form of pregnancy prevention used and for no condoms used in twelve months prior to Wave III of Add Health (N=6,161).

	No Pregnancy Prevention Used 12 Months Prior to Wave III						No Condom Used 12 Months Prior to Wave III					
	Model One			Model Two			Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Negative Women	0.95	0.12		0.99	0.12		1.19	0.12		1.35	0.13	*
Class 2: Young Positive Women	1.40	0.25		1.48	0.26		2.66	0.30	**	2.38	0.30	**
Class 4: Older Negative Women	1.24	0.12	+	1.23	0.12	+	1.31	0.15	+	1.29	0.15	+
Class 5: Older Mixed Women	1.28	0.13	+	1.29	0.14	+	2.05	0.15	***	1.80	0.16	***
Class 6: Older Positive Women	1.49	0.12	**	1.45	0.12	**	1.71	0.13	***	1.35	0.13	*
Age at Wave I	1.14	0.02	***	1.12	0.03	***	1.08	0.03	*	1.07	0.03	*
Race (Ref: White)												
Black				0.52	0.10	***				1.10	0.11	
Latino/a				1.07	0.13					1.57	0.16	**
Other Race				0.86	0.15					1.34	0.20	
Born in the United States				1.13	0.20					1.08	0.19	
Percent of Federal Poverty Ratio (Ref: 400% and above)												
<100%				1.22	0.14					1.70	0.15	***
100-199%				1.17	0.11					1.48	0.14	**
200-299%				1.14	0.12					1.25	0.14	
300-399%				1.02	0.16					1.05	0.19	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				0.91	0.13					0.97	0.15	
Baptist				1.02	0.14					1.02	0.15	
Catholic				0.80	0.13	+				0.87	0.15	
Other Religion				0.92	0.21					0.83	0.28	
Grade Point Average (ref: 3.5 or above)												
<2.9				1.17	0.09	+				1.55	0.12	**
3.0-3.4				1.04	0.10					1.24	0.12	+
Depression at Wave I				1.07	0.07					1.30	0.09	**
Had Sex at Wave I				1.24	0.09	*				1.03	0.09	
Abstinence Pledge Taken - Wave I				1.25	0.12	+				0.97	0.13	
Constant	0.54	0.08	***	0.43	0.27	**	0.21	0.09	***	0.12	0.28	***
F		11.41	***		7.77	***		7.21	***		6.34	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

model two, this effect was attenuated but remained significant with the Young Positive women having 138% higher odds of non-use of condoms (OR=2.38, p<.01) compared to Older Middle women. Although the

effect was attenuated slightly by the addition of the background factors, it remained statistically significant. Given the positive psychosocial context in regards to sex and teen pregnancy at Wave I among the Young Positive women, this effect was in the expected direction.

The Older Mixed women had 105% higher odds of not using condoms at all in the previous twelve months compared to the Older Middle women (OR=2.05, P<.001). This effect was reduced by the addition of background factors but remained significant (OR=1.80, p<.001). Again, given the psychosocial context of the Older Mixed women, which includes a positive disposition toward teen pregnancy, and perceptions of at least some contraceptive barriers, this result was expected. The Older Positive women had a pattern similar to that of the Older Mixed class with 71% higher odds of having reported non-use of condoms in the twelve months prior to Wave III (OR=1.71, p<.001) when compared to the Older Middle women. The addition of background socio-demographic factors in model two reduced this effect somewhat, but it remained significant (OR=1.35, p<.05). Again, because the Older Positive women have positive dispositions toward pregnancy and childbearing this result makes sense.

No Contraceptive Used in the Twelve Months Prior to Wave III

Logistic regression was used to examine the outcome of no form of contraceptive used in the twelve months prior to Wave III for all classes compared to the Older Middle reference class (Table 5.6). Significant differences for non-use of contraceptives (female forms and condoms combined) in the twelve months prior to Wave III were found between the Older Middle reference class and both the Older Mixed and Older Positive women. Older Mixed women had significantly higher odds than the Older Middle women of reporting having used no form of contraceptive in the twelve months prior to Wave III (OR=1.55, p<.001), but this effect was partially explained by background socio-demographic factors in model two (OR=1.35, p<.1). The Older Positive women had a pattern similar to the Older Mixed women, but the effect found in model one (OR=1.60, p<.01) was entirely attenuated by the addition of background factors in model two (OR=1.24, p=n.s.). The results for both the Older Mixed women and the Older Positive women are intuitive when you consider that both the Older Mixed and Older Positive classes report more contraceptive barriers at Wave I than does the Older Middle class. However, I would have expected to find significantly more non-

Table 5.6: Logistic regression models for women for no form of contraceptive used in twelve months prior to Wave III of Add Health (N=6,161).

	Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Negative Women	0.90	0.16		1.02	0.17	
Class 2: Young Positive Women	2.01	0.43		1.81	0.43	
Class 4: Older Negative Women	1.33	0.16	+	1.28	0.17	
Class 5: Older Mixed Women	1.55	0.15	**	1.35	0.17	+
Class 6: Older Positive Women	1.60	0.14	**	1.24	0.15	
Age at Wave I	1.10	0.04	*	1.10	0.04	*
Race (Ref: White)						
Black				0.90	0.12	
Latino/a				1.47	0.20	+
Other Race				1.26	0.23	
Born in the United States				0.95	0.22	
Percent of Federal Poverty Ratio (Ref: 400% +)						
<100%				1.70	0.16	**
100-199%				1.29	0.16	
200-299%				1.26	0.17	
300-399%				1.01	0.23	
Religious Affiliation (Ref: No Affiliation)						
Christian, Other				0.97	0.16	
Baptist				1.10	0.17	
Catholic				0.96	0.20	
Other Religion				0.40	0.32	**
Grade Point Average (ref: 3.5 or above)						
<2.9				1.54	0.15	**
3.0-3.4				1.22	0.16	
Depression at Wave I				1.39	0.12	**
Had Sex at Wave I				1.05	0.11	
Abstinence Pledge Taken - Wave I				0.94	0.15	
Constant				0.10	0.28	***
F					5.19	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

use of contraceptives in the Older Negative class as they also reported more contraceptive barriers and were also positive about sex and unmarried childbearing when they were teens, but the Older Negative class was not significantly different from the Older Middle reference class.

Summary of Wave III Contraceptive Outcomes

Female forms of pregnancy prevention showed few effects of psychosocial context for women, while more effects were seen for condom use. This result may be because women have more perceived control over the female forms of contraceptives (Green et al. 2001) and must engage in negotiation with their partner about the use of condoms. For women, negotiating condom use is a complex and sometimes difficult task in which women must be agentic in ways that are contrary to typical

stereotypes of women as submissive to men within romantic and sexual encounters (Masters et al. 2013; Spengen 2013). This is discussed further in the general discussion at the end of this chapter.

Wave IV Reproductive Health Outcomes

Three reproductive outcomes were taken from Wave IV of Add Health. First, I present the results for women's reports of any birth between the ages of 18 and 24. Second, I present results for unintended birth between the ages of 18 and 24. Third, I report results for any abortion between the ages of 18 and 24.

Birth Between the Ages of 18 and 24

Logistic regression was used to examine births between the ages of 18 and 24 for all classes compared to Older Middle reference class (Table 5.7). In model one for births between the ages of 18 and 24, I found that the Younger Negative, Young Positive, and Older Negative classes of women were less likely to report a birth than the Older Middle reference class. The Young Negative women had 47% lower odds of a birth between 18 and 24 years of age (OR=0.53, p<.01) when compared to the Older Middle women. The odds ratios were slightly attenuated when background socio-demographic controls were added to model two, but remained significant (OR=0.62, p<.01). This suggests that psychosocial context at Wave I had an effect on birth outcomes above and beyond background controls for the Young Negative women.

In model one, Young Positive women had 56% lower odds of reporting a birth between the ages of 18 and 24 (OR=.44, p<.001) when compared to the Older Middle women. For Young Positive women, this effect was *strengthened* by the addition of background controls (OR=0.36, p<.001). Older Negative women had 28% lower odds of a birth between 18 and 24 years of age (OR=0.72, p<.01), and this effect was essentially unchanged when background controls were added to the model (OR=0.74, p<.05). Older Positive women had the opposite effect from the previously discussed classes, as they were 79% *more* likely to have a birth between the ages of 18 and 24 then the Older Middle class (OR=1.79, p<.001). This effect was attenuated somewhat by the addition of the socio-demographic background factors but remained significant (OR=1.41, p<.05).

Table 5.7: Logistic regression models for women for birth between age 18 and 24, and abortion between age 18 and 24 from Wave IV Add Health reproductive histories (N=5,904).

	Birth Between 18 and 24						Abortion Between 18 and 24					
	Model One: Baseline Model			Model Two: Add Controls			Model One: Baseline Model			Model Two: Add Controls		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OI**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Negative Women	0.53	0.13	***	0.62	0.15	**	0.66	0.21	+	0.74	0.22	
Class 2: Young Positive Women	0.44	0.20	***	0.36	0.22	***	0.67	0.36		0.69	0.35	
Class 4: Older Negative Women	0.72	0.12	**	0.74	0.13	*	0.68	0.21	+	0.73	0.22	
Class 5: Older Mixed Women	0.88	0.15		0.82	0.15		0.45	0.27	**	0.47	0.28	**
Class 6: Older Positive Women	1.79	0.13	***	1.41	0.14	*	0.98	0.19		0.87	0.20	
Age at Wave I	0.91	0.03	***	0.87	0.03	***	0.91	0.05	*	0.86	0.05	**
Race (Ref: White)												
Black				0.87	0.12					2.82	0.19	***
Latino/a				0.94	0.18					1.77	0.24	*
Other Race				0.66	0.18	*				2.66	0.28	**
Born in the United States				1.26	0.22					0.81	0.30	
Percent of Federal Poverty Ratio (Ref: 400% and above)												
<100%				2.65	0.15	***				0.44	0.24	**
100-199%				3.18	0.13	***				0.75	0.22	
200-299%				2.15	0.13	***				0.85	0.23	
300-399%				1.67	0.14	**				0.75	0.27	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				1.15	0.13					0.92	0.25	
Baptist				1.47	0.15	*				0.70	0.25	
Catholic				0.80	0.14					0.93	0.26	
Other Religion				0.69	0.27					0.71	0.38	
Grade Point Average (ref: 3.5 or above)												
<2.9				1.87	0.11	***				1.25	0.16	
3.0-3.4				1.33	0.12	*				1.34	0.19	
Depression, Wave I				1.15	0.10					0.99	0.17	
Had Sex, Wave I				1.57	0.09	***				1.47	0.14	**
Abstinence Pledge Taken - Wave I				1.25	0.12	+				1.03	0.22	
Abortion Before Age 18				2.12	0.37	*				4.15	0.34	***
Constant	0.65	0.10	***	0.15	0.29	***	0.11	0.14	***	0.11	0.42	***
F		13.90	***		13.03	***		2.38	*		5.17	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Abortion Between the Ages of 18 and 24

Logistic regression was used to examine abortions between the ages of 18 and 24 for all classes compared to Older Middle reference class (Table 5.7). Older Mixed women had significant effects of psychosocial context for abortion between the ages of 18 and 24 such that they were 55% less likely to have an abortion that the

Older Middle reference class (OR=0.45, p<.01). For both the Young Negative women and the Older Negative women there was a marginally significant effect of psychosocial context in model one (Young Negative women OR=0.66, p<.1; Older Negative women OR=0.68, p<.1); however, the marginally significant effects for both of these classes were entirely explained by the addition of background controls in model two. In light of the strong effect for births in this age range, it may be that the lack of effect of psychosocial context for abortion was due to the small numbers of abortions reported in the sample. There was likely significant underreporting of abortion in the Add Health data, a problem that plagues self-report surveys of abortion in general (Jones and Forrest 1992; Sedgh et al. 2012). This is discussed further in the discussion of reproductive outcomes below.

Unintended Birth Between the Ages of 18 and 24

Logistic regression was used to examine the outcome of unintended births versus intended births for all classes of women compared to the Older Middle reference class (Table 5.8). The sample used for the outcome unintended birth between 18 and 24 included only those women who reported a birth between 18 and 24 and compares those with intended births to those with unintended births. Women who reported no birth were dropped from the sample, making the sample size smaller for this outcome.

In model one, the only effect of psychosocial context present is a marginally significant difference between the Older Middle reference class and the Older Mixed women (OR=1.41, p<.1), such that the Older Mixed women had 41% higher odds of an unintended birth. However, in model two when socio-demographic background controls were added in, the effect *increased* and became significant (OR=1.65, p<.001), such that the Older Mixed women had 65% higher odds of having an unintended birth between the ages of 18 and 24. This suppression effect warrants additional investigation, but cannot be explained with the current data.

Table 5.8: Logistic regression models for women for unintended birth between age 18 and 24 from Add Health Wave IV Reproductive Histories (N=2,000).

	Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Negative Women	1.19	0.18		1.19	0.19	
Class 2: Young Positive Women	1.11	0.33		1.15	0.33	
Class 4: Older Negative Women	1.02	0.22		1.03	0.23	
Class 5: Older Mixed Women	1.41	0.17	+	1.66	0.18	**
Class 6: Older Positive Women	1.10	0.16		1.23	0.17	
Age at Wave I	1.00	0.04		1.00	0.05	
Race (Ref: White)						
Black				0.56	0.16	***
Latino/a				1.19	0.25	
Other Race				1.06	0.37	
Born in the United States				2.41	0.32	**
Percent of Federal Poverty Ratio (Ref: 400% and above)						
<100%				0.94	0.25	
100-199%				1.34	0.22	
200-299%				1.20	0.26	
300-399%				1.20	0.28	
Religious Affiliation (Ref: No Affiliation)						
Christian, Other				0.72	0.21	
Baptist				0.82	0.23	
Catholic				0.68	0.24	
Other Religion				1.11	0.49	
Grade Point Average (ref: 3.5 or above)						
<2.9				0.84	0.16	
3.0-3.4				0.95	0.18	
Depression at Wave I				1.04	0.14	
Had Sex at Wave I				1.06	0.14	
Abstinence Pledge Taken - Wave I				1.02	0.18	
Abortion Before Age 18				0.71	0.50	
Constant	1.39	0.13	*	0.76	0.44	
F		0.80			2.64	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Summary of Wave IV Reproductive Health Outcomes

Almost all of the classes of women had fewer births between 18 and 24 than the Older Middle reference class. The only exception to this is the Older Positive women who had significantly more births, and the Older Mixed women who were not significantly different from the Older Middle women. This suggests that overall women with a middle of the road psychosocial context were more likely to have an early birth than those with negative or mixed psychosocial contexts, while women with more positive psychosocial contexts are more likely to give birth. The exception to this is the Young Positive class which had fewer births than the Older Middle reference class. Given that all of the models also control for age at Wave I, this effect is a bit puzzling. One possible explanation, as was discussed in Chapter Four, is that the teens in the Young Positive women's class will eventually split into two or more classes, as later in adolescence their views become more diverse. If this were the case, it would suggest that if the teens in the Young Positive class had been interviewed two years later and asked the items that were included in the psychosocial context when they were closer to 17 than 15, their answers may have been different. It may also be that there was a cohort effect that Add Health inadvertently captured in which changes in how sex, pregnancy, and childbearing were viewed changed rapidly over a short period of time.

There were few effects of abortion for women between the ages of 18 and 24. The only significant effect was for the Older Mixed women, who were significantly less likely to report having had an abortion. This lack of significant effect of psychosocial context may be related to the chronic underreporting that plagues self-report abortion surveys (Jones and Forrest 1992; Sedgh et al. 2012). It should also be noted that the abortion outcomes were taken from Wave IV of Add Health when the respondents were in their late 20s and early 30s. Taking abortion data from Wave IV, although recommended by Add Health, may present a particular problem as research has shown that abortions may be reported later in life as miscarriages (Casterline 1989).

Unintended births also show almost no effects for women, and suffer from the same kinds of problems that abortion reporting does – people tend to remember pregnancies that were unintended as intended at later times, especially once the child is born (Santelli et al. 2003), and unintended pregnancies also

tend to be underreported in general (Jagannathan 2001). I suspect that this may be due – at least in part – to small sample sizes, with the Young Positive women reporting the fewest unintended births with only 22 in the relevant age range, and the Older Middle women reporting the most unintended births, but still only 202 in the relevant age range.

Men

Wave III Sexual Activity Outcomes

The Older Middle men had a psychosocial context profile in adolescence that was middle of the road on almost every factor and thus the Older Middle male class is used as the reference group n all analyses. Demographically, the Older Middle men tended to be white and working class, with incomes falling somewhere between the middle class groups (the Young Mixed men and the Older Negative Pregnancy men) and the lower income groups (the Young Positive men, the Older Negative men, the Older Mixed men, and the Older Positive men). For each outcome, model one shows the predictive ability of psychosocial context controlling for age at Wave I, and model two adds socio-demographic background factors.

Had Sex by Wave III

Logistic regression was used to examine the outcome of having had sex by Wave III for all classes compared to the reference class for men: Older Middle (Table 5.9). In model one, Young Positive men had 66% lower odds of having had sex by Wave III compared to Older Middle men (OR=.34, $p<.01$). This effect was unchanged by the addition of socio-demographic background factors (OR=.34, $p<.01$). It seems somewhat counterintuitive that Young Positive men have lower odds of having had sex by Wave III then Older Middle men, as I might expect a group that is positive about sex to be more likely to engage in sexual activity. However, the underlying items used in the factor analysis suggest only that people feel that there are benefits to sex, not that they in fact have a desire to - or plan to - have sex. Another possible explanation of this effect is the influence of media portrayals of sex both among teens and adults. Even if adolescent boys do not intend to participate in sex, they may well be influenced to be positively disposed toward it based on media and other cultural message, particularly in the presence of positive messages about sexual activity from their

Table 5.9: Logistic regression models for men, ages 18-24, predicting who has had sex by Wave III of Add Health.

MEN (N=6,579)						
	Model One: Baseline Model			Model Two: Add Controls		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Mixed	0.42	0.24	***	0.48	0.26	**
Class 2: Young Positive	0.34	0.38	**	0.34	0.40	**
Class 3: Older Negative Pregnancy	1.30	0.18		1.31	0.18	
Class 4: Older Negative	0.56	0.18	**	0.72	0.20	
Class 6: Older Mixed	0.97	0.25		1.00	0.25	
Class 7: Older Positive	1.34	0.18		1.19	0.18	
Age at Wave I	0.98	0.06		0.98	0.06	
Race (Ref: White)						
Black				0.98	0.15	
Latino/a				0.99	0.16	
Other Race				0.67	0.18	*
Born in the United States				1.52	0.18	*
Percent of Federal Poverty Ratio (Ref: 400% and above)						
<100%				0.92	0.17	
100-199%				1.06	0.17	
200-299%				1.18	0.20	
300-399%				0.89	0.18	
Religious Affiliation (Ref: No Affiliation)						
Christian, Other				0.59	0.19	**
Baptist				0.82	0.19	
Catholic				0.82	0.20	
Other Religion				0.51	0.24	**
Grade Point Average (ref: 3.5 or above)						
<2.9				1.86	0.14	***
3.0-3.4				1.58	0.14	**
Depression at Wave I				0.75	0.15	+
Abstinence Pledge Taken - Wave I				0.51	0.14	***
Constant	11.38	1.01	*	5.27	0.36	***
F		11.4	***		8.23	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

parents – which the Young Positive men experienced. Finally, another possible explanation is that this class was younger at Wave I when they responded to the questions used to determine their psychosocial context. It may be that the boys feel more positively about sex at Wave I because they have not had sex and are relying on depictions of sexual activity in media to form their attitudes about the benefits and consequences of sexual activity. More exploration of this effect of psychosocial context is warranted.

Young Mixed men had 58% lower odds of having had sex by Wave III when compared to Older Middle men (OR=.42, P<.001). This may have been due to the high level of perceived parental disapproval present for Young Mixed men. When socio-demographic background factors were added in model two, the

odds ratio was slightly reduced but remained significant (OR=.48, P<.01). Older Negative men showed an effect of psychosocial context in model one such that Older Negative men had 44% lower odds of having had sex by Wave III when compared to Older Middle men in the reference class. However, this effect is entirely explained by the addition of background controls in model two (OR=.72, p=n.s.). For both Young Mixed men and Older Negative men, there was stronger parental disapproval of teen sexual activity than for any of the other classes. This could be motivating the lower odds of sexual activity by Wave III in emerging adulthood. In addition, for the Older Negative men, there was a negative disposition both toward teen pregnancy and unmarried childbearing. These views of teen pregnancy and unmarried childbearing may have contributed to the lower odds of sexual activity having occurred by Wave III because men in the Older Negative class were likely motivated to avoid negative outcomes such as pregnancy and non-marital childbearing.

Number of Sexual Partners in the Twelve Months Prior to Wave III

OLS regression[35] was used to examine the outcome of number of sexual partners reported in the twelve months prior to Wave III for all classes compared to the reference class (Table 5.10). In model one, the Young Mixed men reported fewer sexual partners than did the Older Middle reference class (b= -0.36, p<.05). However, this effect is entirely explained by the background factors added in model two (b= -0.18, p=n.s.). The Young Positive men also reported fewer sexual partners in comparison to the Older Middle reference class (b= -0.49, p<.05). However, the effect for the Young Positive men persisted and was essentially unchanged when background socio-demographic factors were added to the model (b= -0.48, p<.05), suggesting that psychosocial context for Young Positive men was predictive above and beyond background factors. No significant effects were present for men in any of the other classes.

[35] Although this is a count variable I was unable to use a Poisson or Negative Binomial due to the use of Multiple Imputation. When the imputation is run, it assigns negative values which prevent the models from running. There is a truncated regression command that can be used to prevent the assignment of negative values (truncreg), however you cannot use that command unless you are using the multiple imputation chained command (mi chained), and mi chained cannot be used with the survey set command (svyset) which is necessary to correct for Add Health survey design.

Table 5.10: OLS regression models for men, age 18-24, predicting number of sexual partners and frequency of sexual activity reported in the past twelve months at Wave III of Add Health (N=5,638).

	Number of Sex Partners						Frequency of Sex					
	Model One			Model Two			Model One			Model Two		
Latent Class (Ref: Older Middle)	**b**	**SE**	**p**	**b**	**SE**	**p**	**b**	**SE**	**p**	**b**	**SE**	**p**
Class 1: Young Mixed	-0.36	0.16	*	-0.18	0.16		0.65	8.86		0.04	8.96	
Class 2: Young Positive	-0.49	0.22	*	-0.48	0.22	*	-2.86	10.68		-3.40	10.75	
Class 3: Older Negative Pregnancy	-0.04	0.13		-0.01	0.14		7.85	6.93		5.22	6.93	
Class 4: Older Negative	-0.15	0.20		0.16	0.20		-6.64	6.75		-4.53	7.16	
Class 6: Older Mixed	0.42	0.33		0.31	0.32		21.98	12.93	+	21.69	12.29	+
Class 7: Older Positive	0.12	0.14		-0.11	0.15		4.03	6.91		6.01	6.80	
Age at Wave I	-0.15	0.03	***	-0.20	0.03	***	2.93	1.42	*	1.86	1.46	
Race (Ref: White)												
Black				0.41	0.17	*				-46.92	5.68	***
Latino/a				0.19	0.19					-0.74	7.86	
Other Race				-0.24	0.20					-6.05	9.29	
Born in the United States				0.16	0.20					20.93	8.17	*
Percent of Federal Poverty Ratio (Ref: 400% +)												
<100%				-0.22	0.20					3.59	8.68	
100-199%				-0.01	0.17					-2.23	7.07	
200-299%				0.02	0.17					-0.96	6.74	
300-399%				-0.25	0.16					-12.44	7.13	+
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				-0.07	0.19					-8.32	7.46	
Baptist				0.20	0.20					-13.33	7.91	+
Catholic				-0.03	0.21					-19.78	8.20	*
Other Religion				-0.41	0.23	+				-19.64	11.89	
Grade Point Average (ref: 3.5 or above)												
<2.9				0.07	0.14					4.57	6.38	
3.0-3.4				0.04	0.15					-0.67	6.32	
Depression at Wave I				0.11	0.13					-1.13	6.30	
Had Sex at Wave I				0.56	0.14	***				14.41	5.18	**
Abstinence Pledge Taken - Wave I				-0.43	0.12	**				1.88	8.03	
Constant	2.20	0.11	***	1.84	0.34	***	22.90	23.58		61.55	13.23	***
F		5.27	***		4.25	***		2.81	**		5.04	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Frequency of Sexual Activity in the Twelve Months Prior to Wave III

OLS regression[36] was used to examine the outcome of frequency of sexual activity reported in the twelve months prior to Wave III for all classes compared to the reference class (Table 5.10). Overall there were no significant differences for men in the reported frequency of sex in the twelve months prior to Wave III.

Summary of Wave III Sexual Activity Outcomes

For men, there were few differences between the middle of the road reference class and the other classes for most of the sexual activity outcomes. Interestingly, the class that was explicitly *positive* about sex (Young Positive men) had significantly fewer sexual partners than the middle of the road class. Overall, any differences that were found in comparison to the Older Middle male reference class tended to be in the two classes who were younger at Wave I (the Young Mixed and Young Positive men). Since the models controlled for age at Wave I, these effects are difficult to interpret. As indicated previously, it may be that the two classes who were closer to 15 years old when the Wave I data was collected eventually diversified and moved into the classes of older teens (between 16 and 17 at Wave I). This should be further explored in future work.

Wave III Contraceptive Outcomes

As with the female sample, in the sample of men I examine five outcomes regarding contraceptive use at Wave III. First, I present the results for the use of any female form of pregnancy prevention compared to none at most recent sex prior to Wave III. Second, I report results for the use of a condom at most recent sex prior to Wave III. Third, I present results for use of no female form of pregnancy prevention at all in the twelve months prior to Wave III versus use of any. Fourth, I present results for non-use of condoms at all in the twelve months prior to Wave III versus any use. Finally, I combine female forms of pregnancy prevention

[36] Although this is a count variable I was unable to use a Poisson or Negative Binomial due to the use of Multiple Imputation. When the imputation is run, it assigns negative values which prevent the models from running. There is a truncated regression command that can be used to prevent the assignment of negative values (truncreg), however you cannot use that command unless you are using the multiple imputation chained command (mi chained), and mi chained cannot be used with the survey set command (svyset) which is necessary to correct for Add Health survey design.

and condoms, and present the results for use of no form of contraceptive in the twelve months prior to Wave III data collection. I separate out female forms, male forms (condoms) and no use to investigate how patterns of reporting about contraceptives may differ between men and women depending on who has primary control over the contraceptive method.

Female Form of Pregnancy Prevention Used During the Most Recent Sexual Encounter

Logistic regression was used to examine the effect of psychosocial context on the outcome of female forms of pregnancy prevention used at the most recent sexual encounter prior to Wave III (Table 5.11). Multiple classes show an effect for female forms pregnancy prevention used in their most recent sexual encounter compared to the Older Middle reference class. For the most part, I find that classes that report few contraceptive barriers are more likely to report their female partners having used a form of female pregnancy prevention of some sort during their most recent sexual encounter (the classes that report few (or low) barriers to contraceptive use are the Young Mixed men, the Young Positive men, and the Older Negative Pregnancy men).

The Young Mixed men had 49% higher odds of reporting that their partner used a female form of pregnancy prevention at last sex (OR=1.49, $p<.01$) when compared to the Older Middle men. The effect of psychosocial context became marginally significant once socio-demographic background factors were added (OR=1.28, $p<.1$). The effect of psychosocial context for the Young Positive men was marginally significant (OR=1.72, $p<.1$), such that Young Positive men had 72% higher odds of reporting that their female partners had used some form of female pregnancy prevention. This effect was somewhat reduced by the addition of background factors but remained marginally significant (OR=1.63, $p<.1$). Older Negative Pregnancy men showed the strongest effect of psychosocial context for use of female forms of pregnancy prevention at last sex. Older Negative Pregnancy men had 84% higher odds of reporting that their female partner used a form of female pregnancy prevention at last sex (not including condoms) when compared to the Older Middle reference class (OR=1.84, $p<.001$). While the effect for the Older Negative Pregnancy men was reduced by the addition of background factors, it remained significant (OR=1.67, $p<.001$). This effect is not surprising as I would expect a class of men for whom the distinguishing attribute of their psychosocial context is their

negativity toward teen pregnancy would be more inclined to use an effective form of contraceptive with their partners. Older Negative Pregnancy men also reported few barriers to contraceptive use, suggesting that they had both the self-efficacy to discuss use of female forms of

Table 5.11: Logistic regression models for men, age 18 to 24, for female forms of pregnancy prevention and condom use at most recent sexual enounter (N=5,638).

	Pregnancy Prevention Used Most Recent Sex						Condom Used Most Recent Sex					
	Model One			Model Two			Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Mixed	1.49	0.14	**	1.28	0.1	+	1.06	0.14		1.07	0.15	
Class 2: Young Positive	1.72	0.29	+	1.63	0.3	+	0.96	0.25		0.98	0.25	
Class 3: Older Negative Pregnancy	1.84	0.13	***	1.67	0.1	***	0.83	0.11	+	0.86	0.11	
Class 4: Older Negative	1.33	0.14	*	1.14	0.1		1.00	0.14		0.99	0.15	
Class 6: Older Mixed	1.33	0.19		1.55	0.2	*	1.44	0.15	*	1.43	0.15	*
Class 7: Older Positive	0.85	0.13		0.97	0.1		0.90	0.13		0.85	0.13	
Age at Wave I	1.01	0.03		1.03	0		0.92	0.02	**	0.94	0.03	*
Race (Ref: White)												
Black				0.9	0.1					2.06	0.12	***
Latino/a				0.61	0.1	***				1.09	0.1	
Other Race				0.73	0.2	*				1.16	0.15	
Born in the United States				1.47	0.2	*				0.85	0.16	
Percent of Federal Poverty Ratio (Ref: 400% +)												
<100%				0.71	0.1	*				1.00	0.13	
100-199%				0.72	0.1	*				1.02	0.13	
200-299%				0.89	0.1					1.03	0.12	
300-399%				0.81	0.2					1.07	0.13	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				1.06	0.1					1.05	0.13	
Baptist				0.87	0.1					1.06	0.13	
Catholic				1.2	0.1					1.28	0.15	+
Other Religion				1.37	0.2					1.55	0.23	+
Grade Point Average (ref: 3.5 or above)												
<2.9				0.78	0.1	+				0.96	0.1	
3.0-3.4				0.83	0.1					0.96	0.12	
Depression at Wave I				0.87	0.1					1.10	0.11	
Had Sex at Wave I				0.83	0.1	*				0.77	0.08	**
Abstinence Pledge Taken - Wave I				0.98	0.2					1.00	0.13	
Constant	2.07	0.10	***	2.43	0.2	***				1.32	0.23	
F		7.34	***		5.9	***					3.94	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

contraceptives with their sexual partners, and that they were highly motivated to do so. Older Negative men also showed a significant effect of psychosocial class in model one with 33% higher odds of having used a female form of pregnancy prevention at last sex (OR=1.33, p<.05), but this effect is explained by the addition of socio-economic factors in model two (OR=1.14, p=n.s.). There was an interesting suppression effect when the Older Mixed class was compared to the Older Middle reference class. In model one, using just psychosocial context and age at Wave I to predict use of female forms of contraceptives, there was not a significant effect of psychosocial context. However, in model two, when background factors were added, a significant relationship emerged (OR=1.55, p<.05) such that Older Mixed men had 55% higher odds of reporting that their female partners had used some form of pregnancy prevention at last sex (not including condoms) than the Older Middle men.

Condom Used at Most Recent Sexual Encounter

Logistic regression was used to examine the effect of psychosocial context on the outcome of condoms used at the most recent sexual encounter prior to Wave III (Table 5.11). For men, psychosocial context was not particularly good at predicting condom use at most recent sex compared to female forms of pregnancy prevention. In fact, significant effects of psychosocial context were found for only one class. Older Mixed men had 44% higher odds of having used a condom at last sex (OR=1.44, p<.05) compared to the Older Middle male reference class. This effect remains essentially unchanged by the addition of background factors (OR=1.43, p<.05). Interestingly, the Older Mixed men were also more likely to have used female forms of pregnancy prevention at most recent sex suggesting that in emerging adulthood, men who had an Older Mixed psychosocial context in adolescence were particularly conscientious about contraceptive use.

Female Forms of Pregnancy Prevention Not Used in the Twelve Months Prior to Wave III

Logistic regression was used to examine the outcome of pregnancy prevention (not including condoms) used none of the time versus any of the time in the twelve months prior to Wave III for all classes compared to

the Older Middle reference class (Table 5.12).[37] In terms of reports of non-use of female forms of pregnancy prevention over the twelve months prior to Wave III, Older Negative Pregnancy men had significantly lower odds of reporting that their female partner did *not* used pregnancy prevention in the previous twelve months (OR=0.75, p<.05) compared to Older Middle men. However, this effect was entirely explained by the inclusion of socio-demographic background factors in model two. This was an interesting and somewhat strange result given that the Older Negative Pregnancy men were *more* likely to report use of a female method of contraception the last time they had sex. In contrast, the three classes that reported some contraceptive barriers (as did the Older Middle reference class) were significantly *more* likely to report that their female partner did *not* use a female form of pregnancy prevention in the previous twelve months. Specifically, the Older Negative men had 39% higher odds of reporting that their female partner did not use a female form of pregnancy prevention (OR=1.39, p<.05), and the effect of psychosocial context found in model one persisted and was essentially unchanged with the addition of background factors (OR=1.38, p<.05) in model two. The Older Mixed men showed a similar effect of psychosocial context to the effect found for the Older Negative men, with the Older Mixed men having 47% higher odds of reporting no use of female forms of pregnancy prevention in the twelve months prior to Wave III (OR=1.47, p<.05). However, while for the Older Negative men this effect remained significant when background factors were added, for the Older Mixed men the effect was partially explained by the addition of background factors (OR=1.38, p<.1). The Older Positive men had a pattern similar to the Older Mixed men, with significant effects for psychosocial context in model one (OR=1.31, p<.05) which were partially explained by background factors (OR=1.25, p<.1).

Older Negative Pregnancy men were the only class for whom psychosocial context mattered significantly above and beyond background factors. Older Negative Pregnancy men had a generally middle of the road psychosocial context although it leaned toward negative on some factors – parental disapproval was reported, and they were clearly negative about teen pregnancy and unmarried childbearing. I hypothesized that negative psychosocial context in adolescence specifically tied to pregnancy would make

[37] I also ran models for use of contraceptives all the time versus not all the time in the 12 months prior to Wave III, however almost no effects of psychosocial context were present for either women or men, so I chose to present the models for none versus any, which do show the effect of psychosocial context.

Table 5.12: Logistic regression models for men, age 18-24, for no form of pregnancy prevention used and for no condoms used in twelve months prior to Wave III of Add Health (N=6,579).

	No Female Contraceptive Used 12 Months Prior to						No Condom Used 12 Months Prior to Wave III					
	Model One			Model Two			Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Mixed	1.10	0.14		1.15	0.14		1.02	0.15		0.98	0.15	
Class 2: Young Positive	1.70	0.29	+	1.76	0.29	+	1.64	0.26	+	1.64	0.26	+
Class 3: Older Negative Pregnancy	0.75	0.13	*	0.82	0.13		0.99	0.10		0.99	0.10	
Class 4: Older Negative	1.39	0.14	*	1.38	0.16	*	1.17	0.14		1.10	0.15	
Class 6: Older Mixed	1.47	0.18	*	1.38	0.19	+	0.93	0.18		0.95	0.18	
Class 7: Older Positive	1.31	0.12	*	1.25	0.13	+	1.07	0.11		1.14	0.11	
Age at Wave I	1.08	0.03	*	1.11	0.03	**	1.17	0.03	***	1.19	0.03	***
Race (Ref: White)												
Black				1.00	0.12					0.52	0.13	***
Latino/a				0.90	0.18					0.68	0.15	*
Other Race				1.21	0.16					1.04	0.15	
Born in the United States				1.01	0.20					1.51	0.17	*
Percent of Federal Poverty Ratio (Ref: 400% +)												
<100%				1.87	0.18	**				1.45	0.16	*
100-199%				1.62	0.15	**				1.33	0.13	*
200-299%				1.12	0.14					1.15	0.13	
300-399%				1.23	0.17					1.09	0.14	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				0.92	0.14					0.88	0.14	
Baptist				0.84	0.16					0.74	0.15	*
Catholic				0.81	0.17					0.75	0.15	+
Other Religion				1.05	0.21					0.88	0.20	
Grade Point Average (ref: 3.5 or above)												
<2.9				1.16	0.14					1.06	0.12	
3.0-3.4				1.12	0.15					0.96	0.12	
Depression at Wave I				1.36	0.13	*				1.11	0.11	
Had Sex at Wave I				0.76	0.11	**				0.88	0.09	
Abstinence Pledge Taken - Wave I				1.15	0.17					1.07	0.15	
Constant	0.28	0.11	***	0.23	0.29	***	0.43	0.10	***	0.35	0.28	***
F		7.27	***		4.96	***		6.38	***		4.67	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

young men more likely to use pregnancy prevention in order to avoid outcomes they see as negative. However, my results showed the Older Negative men as being *more* likely to report their female partners as foregoing use of female forms of pregnancy prevention in the twelve months prior to Wave III. One possible explanation is that men simply don't always know or remember if the women they had sex with used a female form of contraceptive. In fact, researchers have shown that communication about contraceptives is least likely to happen in casual sexual encounters (Landry and Camelo 1994) which appear to peak in emerging adulthood (Lyons et al. 2014a; Lyons 2009). This seems a likely explanation given that the Older Negative Pregnancy class was more likely to report use of a female form of contraceptive during their most recent sexual encounter – temporally closer to Wave III and as such, more easily recalled. Another possible explanation is that negative messages about sex work to *increase* rather than reduce the likelihood of unprotected sex (Berne and Huberman 2000; Lefkowitz and Espinosa-Hernandez 2007; Stanger-Hall and Hall 2011). Regardless, these results support the idea that negative psychosocial contexts in adolescence in regards to sex, pregnancy, and childbearing are associated with non-use of pregnancy prevention.

Condoms Not Used in the Twelve Months Prior to Wave III

Logistic regression was used to examine the outcome of whether a condom was used none of the time versus any of the time in the twelve months prior to Wave III for all classes compared to the Older Middle men reference class (Table 5.12).[3] In terms of the likelihood of *no* condom use over the twelve months prior to Wave III, there were no significant effects for men, suggesting that psychosocial context does not influence condom use for men. This may be due to the need for men to participate in condom use, rather than relying on their partner for some form of contraceptive coverage, or it may mean that men are making assumptions about the use of female contraceptive methods in their sexual encounters and foregoing condom use based on those assumptions (see Chapter 6 in this dissertation for further discussion of this dynamic).

No Contraceptive Used in Twelve Months Prior to Wave III

Table 5.13: Logistic regression models for men for no form of contraceptive used in twelve months prior to Wave III of Add Health (N=6,579).

	Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Mixed	1.07	0.16		1.12	0.17	
Class 2: Young Positive	2.02	0.32	*	2.11	0.33	*
Class 3: Older Negative Pregnancy	0.69	0.13	**	0.74	0.14	*
Class 4: Older Negative	1.09	0.15		1.14	0.16	
Class 6: Older Mixed	1.23	0.19		1.16	0.20	
Class 7: Older Positive	1.24	0.12	+	1.20	0.13	
Age at Wave I	1.14	0.03	***	1.17	0.04	***
Race (Ref: White)						
Black				0.76	0.14	+
Latino/a				1.08	0.16	
Other Race				0.87	0.21	
Born in the United States				1.05	0.21	
Percent of Federal Poverty Ratio (Ref: 400% +)						
<100%				1.86	0.17	**
100-199%				1.65	0.17	**
200-299%				1.23	0.17	
300-399%				1.22	0.19	
Religious Affiliation (Ref: No Affiliation)						
Christian, Other				0.90	0.17	
Baptist				0.84	0.17	
Catholic				0.74	0.19	
Other Religion				1.11	0.23	
Grade Point Average (ref: 3.5 or above)						
<2.9				1.38	0.15	*
3.0-3.4				1.17	0.16	
Depression at Wave I				1.19	0.14	
Had Sex at Wave I				0.78	0.12	*
Abstinence Pledge Taken - Wave I				0.91	0.20	
Constant	0.03	0.55	***	0.15	0.33	***
F		7.05	***		4.25	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Combining female forms of pregnancy prevention and the use of condoms, I next looked at those who reported using no form of contraceptive in the twelve months prior to Wave III compared to those who reported use of any type of pregnancy prevention (including condoms). The Young Positive men, had 102% higher odds of reporting not using any form of contraceptive when compared to the Older Middle men (OR=2.02, p<.05). This effect was strengthened with the addition of socio-demographic background factors (OR=2.11, P<.05). Given the positive stance on sex and

teen pregnancy held by the Young Positive men in adolescence, these results make sense. Men who see sex as positive and do not feel a teen pregnancy would be that bad might be expected to have less motivation to avoid pregnancy and, thus, less motivation to use contraceptive methods of any sort. The result for this outcome for the Young Positive men was also consistent with results for the Young Positive men on previous outcomes – they had marginally higher odds of non-use of both female forms of pregnancy prevention and of condoms in the last twelve months.

Older Negative Pregnancy men had significantly lower odds of non-use of contraceptives in the twelve months prior to Wave III (OR=0.69, $p<.01$) when compared to the Older Middle men, and this effect of psychosocial context was only slightly attenuated by the addition of socio-demographic background factors, and remained significant (OR=0.74, $p<.05$). Given that men in the Negative Pregnancy class are defined by their negative psychosocial context in regards to teen pregnancy, this result is not surprising. There were no other significant effects for other classes of men for non-use of any form of contraceptive in the twelve months prior to Wave III.

Summary of Wave III Contraceptive Outcomes

There were effects of psychosocial context for men when asked about both most recent use of female forms of contraceptives, and use of female forms in the twelve months preceding Wave III. In contrast, there were few significant effects of psychosocial context for men when it came to either most recent or last twelve month condom use. This suggests that the psychosocial context has more predictive ability when men negotiate use of female forms of contraceptive with a female partner. This makes relying on female forms of contraceptives for men a social activity that necessitates communication with female partners if they plan to engage in protected sex. Psychosocial context, or the attitudes and norms men hold about teen sex, pregnancy, and childbearing, could easily have more impact in a situation in which some sort of communication or social exchange is required. When men have more control over the method, as they do with condoms, there is less need for discussion and communication about the method, and therefore potentially less room for norms and attitudes of men to play a role in the use of condoms.

Wave IV Reproductive Health Outcomes

Three reproductive outcomes were taken from Wave IV. First, I present the results for men's reports of any birth between the ages of 18 and 24. Second, I report results for any abortion between the ages of 18 and 24. Third, I present the third outcome, unintended birth between the ages of 18 and 24.

Birth Between the Ages of 18 and 24

Logistic regression was used to examine births between the ages of 18 and 24 for all classes compared to Older Middle reference class (Table 5.14). Both the Young Positive men and the Older Negative Pregnancy men had significantly lower odds of experiencing a birth between the ages of 18 and 24 compared to the Older Middle men. In model one, the Young Positive men had 53% lower odds of an early birth than the Older Middle men (OR=0.47, $p<.05$). This effect remained unchanged in model two with the addition of socio-demographic background factors (OR=0.48, $p<.05$). The Older Negative Pregnancy men had 28% lower odds of an early birth compared to the Older Middle men (OR=0.72, $p<.05$). This effect was somewhat attenuated with the addition of socio-demographic background factors (OR=0.78, $p<.1$). The Older Positive men in model one had significantly higher odds of experiencing an early birth (OR=1.62, $p<.01$), but this effect was also somewhat attenuated in model two with the addition of background factors (OR=1.31, $p<.1$).

Abortion Between the Ages of 18 and 24

Logistic regression was used to examine abortions between the ages of 18 and 24 for all classes compared to Older Middle reference class (Table 5.14). The abortion outcome for men - as for birth between 18 and 24 - showed that Young Positive men had with significantly lower odds of reporting an abortion between the ages of 18 and 24 (OR=0.01, $p<.001$) compared to Older Middle men. This effect was unchanged by the addition of background factors (OR=0.01, $p<.001$). There were no effects of psychosocial context for any other class. As with the women, this non-effect may be due to the low number of abortions reported overall and in each class with the lowest number of abortions reported for the Young Positive men (3), and the highest for Older Positive men (74).

Table 5.14: Logistic regression models for men for birth between ages 18 and 24, and abortion between ages 18 and 24 from Add Health Wave IV Reproductive Histories (N=5,560).

	Birth Between 18 and 24						Abortion Between 18 and 24					
	Model One: Baseline			Model Two: Add Controls			Model One: Baseline Model			Model Two: Add Controls		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Mixed	0.87	0.19		1.09	0.20		0.70	0.32		0.83	0.30	
Class 2: Young Positive	0.47	0.30	*	0.48	0.29	*	0.01	0.83	***	0.01	0.86	***
Class 3: Older Negative Pregnancy	0.72	0.13	*	0.78	0.13	+	0.83	0.27		0.86	0.26	
Class 4: Older Negative	0.84	0.18		1.12	0.19		0.71	0.36		1.02	0.33	
Class 6: Older Mixed	0.91	0.20		0.75	0.22		0.77	0.40		0.74	0.39	
Class 7: Older Positive	1.62	0.15	**	1.31	0.16	+	1.24	0.24		1.09	0.23	
Age at Wave I	0.93	0.03	*	0.90	0.03	**	0.82	0.05	***	0.76	0.06	***
Race (Ref: White)												
Black				0.64	0.15	**				2.19	0.26	**
Latino/a				0.94	0.15					1.64	0.28	+
Other Race				0.40	0.29	**				1.39	0.39	
Born in the United States				1.22	0.20					1.07	0.46	
Percent of Federal Poverty Ratio (Ref: 400% and above)												
<100%				2.49	0.18	***				0.30	0.31	***
100-199%				2.82	0.16	***				0.58	0.26	*
200-299%				1.95	0.16	***				0.88	0.26	
300-399%				1.01	0.20					0.73	0.36	
Religious Affiliation (Ref: No Affiliation)												
Christian, Other				1.31	0.14	+				1.05	0.28	
Baptist				1.20	0.17					0.86	0.28	
Catholic				0.76	0.16	+				1.41	0.29	
Other Religion				0.90	0.32					0.67	0.76	
Grade Point Average (ref: 3.5 or above)												
<2.9				1.78	0.16	**				1.41	0.32	
3.0-3.4				1.20	0.17					1.04	0.36	
Depression at Wave I				1.17	0.14					1.11	0.22	
Had Sex at Wave I				1.57	0.11	***				1.78	0.21	**
Abstinence Pledge Taken - Wave I				0.80	0.18					0.75	0.41	
Abortion Between 18 and 24				1.96	0.56					16.06	0.52	***
Constant	0.30	0.11	***	0.08	0.31	***	0.06	0.20	***	0.03	0.60	***
F		6.10	***		8.28	***		6.60	***		4.67	***

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Table 5.15: Logistic regression models for men for unintended birth between age 18 and 24 from Add Health Wave IV reproductive histories (N=1,086).

	Model One			Model Two		
Latent Class (Ref: Older Middle)	**OR**	**SE**	**p**	**OR**	**SE**	**p**
Class 1: Young Mixed	1.10	0.33		0.87	0.35	
Class 2: Young Positive	1.11	0.44		0.78	0.49	
Class 3: Older Negative Pregnancy	0.86	0.26		0.75	0.28	
Class 4: Older Negative	1.28	0.30		1.00	0.34	
Class 6: Older Mixed	0.95	0.40		0.87	0.42	
Class 7: Older Positive	1.33	0.24		1.40	0.25	
Age at Wave I	0.97	0.05		0.98	0.06	
Race (Ref: White)						
Black				0.54	0.24	*
Latino/a				1.16	0.27	
Other Race				1.13	0.54	
Born in the United States				0.50	0.51	
Percent of Federal Poverty Ratio (Ref: 400% and above)						
<100%				1.49	0.33	
100-199%				1.12	0.30	
200-299%				1.04	0.29	
300-399%				1.09	0.38	
Religious Affiliation (Ref: No Affiliation)						
Christian, Other				0.85	0.26	
Baptist				0.79	0.28	
Catholic				0.46	0.32	*
Other Religion				1.60	0.58	
Grade Point Average (ref: 3.5 or above)						
<2.9				0.80	0.27	
3.0-3.4				0.86	0.31	
Depression at Wave I				0.86	0.25	
Had Sex at Wave I				0.75	0.23	
Abstinence Pledge Taken - Wave I				1.21	0.35	
Abortion Before Age 18				2.27	1.13	
Constant	1.23	0.21		4.29	0.72	*
F		0.88			1.13	

Source: Harris and Udry, 2013. National Longitudinal Study of Adolescent Health (Add Health), 1994–2008.

SE = standard errors for weighted means; *** p<0.001; ** p<0.01; * p<0.05; + p<0.10

Unintended Birth Between the Ages of 18 and 24

Logistic regression was used to examine the outcome of unintended births versus intended births for all classes of women compared to the Older Middle reference class (Table 5.15). Psychosocial context does not appear to be predictive for men for unintended pregnancy.

Summary of Wave IV Reproductive Health Outcomes

There were very few effects of psychosocial context on reproductive health outcomes for men once socio-demographic background factors were added to the models. The exception to this was the Young Positive men. The

Young Positive men were significantly less likely than the Older Middle class to have both an early birth and an abortion between the ages of 18 and 24. For this class only, the psychosocial context was predictive above and beyond background factors. While the lower likelihood of abortion makes sense for this class, given their positive stance on pregnancy and childbearing, the results showing fewer early births are more puzzling. As noted elsewhere, this non-intuitive result may be due to the relatively younger age of these men when they responded to the items that make up the psychosocial context. It is possible that if they had responded to the items a couple of years later, the men in this class would instead have fallen in to two or more of the older classes of men. This result warrants further exploration.

Discussion

This chapter demonstrates the longitudinal impact of the adolescent psychosocial context. The norms and attitudes expressed in the respondent's teen years were predictive of multiple outcomes related to childbearing, sex, and contraceptive use in emerging adulthood, and in many cases this relationship held net of controls. This supports the argument that scholars studying social norms need to take a longitudinal view and account for previous norms when examining norms in the current context.

Some interesting patterns appeared when the women's results were compared with the men's results for the contraceptive use outcomes. For each gender, the psychosocial context is not particularly effective at predicting use of contraceptives for the method presumably controlled by that sex in actual use, but it is useful in predicting use of contraceptive methods that are primarily controlled by the opposite sex. So, for men for example, psychosocial context is not useful in predicting use of condoms but it is useful in predicting use of *female* forms of contraceptives. For women, the opposite pattern exists with predictive ability occurring for *condoms* and not for female forms. This may be due to the necessity of communication between the sexual partners about use of contraceptives as has been shown in previous research (Stone and Ingham 2002; Tschann and Adler 1997). In other words, psychosocial context – or the attitudes and norms about contraceptives in this case – may be more likely to come into play when one must engage in an interaction with a sexual partner about contraceptive use. I found this result to be counterintuitive. One would imagine that a woman's or a man's psychosocial context about contraceptives would be more useful in predicting his

or her *own use* of forms of contraceptives over which they have primary control. Thus, if a woman is positive about female forms of contraceptives, then she would be more likely to use them, and vice versa for men. However, these results show that the opposite was true with psychosocial context having more predictive ability for forms controlled by the opposite sex. If this effect is due to partner communication, then more research examining the effect of psychosocial context on partner communication about both female forms and condoms should be conducted. This is especially true given the prohibition against carrying condoms both expressed by women interviewed for this dissertation and documented in the literature (Bell 2009; Bertens et al. 2008; Cook 2012; Hillier, Harrison and Warr 1998; Hynie, Schuller and Couperthwaite 2003).

Results for men about female pregnancy prevention methods need to be considered in light of the fact that men may make assumptions about what forms of pregnancy prevention their female partners are using and may not be aware when contraceptive risk-taking is occurring (Ekstrand et al. 2007) – such as when a woman had forgotten to take her pill multiple days in a row. In such cases, while the woman may be aware that there is a greater chance of pregnancy, their male partners may assume pregnancy prevention is taken care of (Ekstrand et al. 2007). It is interesting that it is men and women that are the most middle of the road on all of the factors that make up the psychosocial context that is more likely to engage in sexual activity without using either a female form of contraceptive or a condom. It may be that when an individual does not have strong feelings about contraceptives one way or the other, one is complacent about their use – which may mean that the contraceptive discussion is not initiated with sexual partners. In contrast, when an individual is strongly positive or strongly negative, the contraceptive discussion is presumably more likely to occur, which may lead either to contraceptive use in the case of those with strong positive psychosocial contexts or to termination of the sexual encounter without intercourse by their partner in the case of those who have negative psychosocial contexts. In the future I plan to examine this issue by recruiting people with specific psychosocial profiles for in-depth interviews.

Psychosocial context is also useful when looking at births between 18 and 24 for women, but far less so for men. This result may be due to the fact that men do not always know when a sexual partner is pregnant (Joyner et al. 2012; Montgomery 1996), or it may be because the final decision to follow through

with a birth or to terminate the pregnancy lies with the woman (Lohan et al. 2010). Psychosocial context is also likely to have an influence on unintended birth. Although no effects were found in this dissertation, it is possible that the lack of results is due to the very small sample size that was available for analysis. There also may be more than one path through which psychosocial context exerts an influence on unintended pregnancy. It may be that one such path is that women with differing psychosocial contexts also differ in their likelihood of labeling a pregnancy as unintended. Researchers have shown that how women view and label the intention status of their births can vary over time (Joyce, Kaestner and Korenman 2000; Joyce, Kaestner and Korenman 2002). In addition, Chuang and colleagues (2009) suggested that pregnancy intention was not a useful predictor of actual pregnancy among emerging adults specifically. Given the questions about both the stability of pregnancy intention and the lack of predictive ability of intention found for emerging adults in particular, it may be that incorporating measures of psychosocial context in both adolescence and emerging adulthood would provide a better insight into the motivations behind the label of unintended pregnancy or unintended birth among emerging adults (Maxson and Miranda 2011). A second possible path, which was demonstrated in this dissertation, is that women with certain psychosocial profiles are less likely to use contraceptives effectively and are therefore more likely to experience an unintended pregnancy. The literature has shown that women who are worse contraceptors are also more likely to experience unintended pregnancy (Schünmann and Glasier 2006).

Some limitations to this chapter should be noted. First, although where present the effect of the latent class typically is either only slightly or not at all reduced by the control variables, the socio-demographic items used as controls were not exhaustive. There may be variables not included in the analysis that explain the effect of the latent classes. In addition, it is not clear from this analysis why the latent classes have an effect above and beyond the socio-demographic controls. Second, it is important to note that Wave III variables were not included as controls in these models. As some of the women and men at Wave III were married, inclusion of these controls may have an effect on the predictive ability of the latent classes. This is especially true for outcomes such as childbearing, which is more common among married women and men (Shelton and John, 1993; Sneed et al., 2012; Treas and Giesen, 2000), use of condoms which is less common

in monogamous relationships such as marriage (Eisenberg et al., 2012; Kong et al., 2012), and other such outcomes.

Third, it should be noted that I estimated mediational models for both the birth and abortion outcomes. In order to establish a clear timeline however, I had to limit the sample to include only those births and abortions that took place after the Wave III interview date. This limited the sample so much that few effects were found for birth or abortion, and those that were found were explained by the socio-demographic background factors rendering mediational analyses superfluous. It may be that these effects truly do not exist in the data, or it may be that the small sample size rendered the effect impossible to detect due to lack of statistical power.

Overall, this chapter demonstrated the longitudinal effect of adolescent psychosocial class on pregnancy, sex, and contraceptive use outcomes in emerging adulthood. The results presented here call for greater examination of how earlier life stages influence later ones in terms of the attitudes one forms, and the social norms one is surrounded by. Future research should be done to look at a greater array of outcomes. In addition, it would be worthwhile to estimate a new latent class structure including knowledge variables as well as family structure and family instability of the family of origin.

CHAPTER SIX: Adolescent Psychosocial Context and Integration into Hookup Cultures: Strategies, Behaviors, and Contraceptive Risk Taking

The previous two chapters presented classes of individuals with specific psychosocial context profiles, who shared similar reproductive outcomes. The question remains: How does the psychosocial profiles in adolescence function to influence individual choices and behaviors in emerging adulthood? This chapter utilizes the life course perspective to argue that attitudes and norms about sexuality developed in adolescence shape how one integrates into new psychosocial contexts by leading women to engage in specific strategies as they adapt to college sexual cultures. These new contexts in college are often, but not always, different from the psychosocial contexts they experienced in high school. This research is set in a United States context, and uses literature about sexual and contraceptive attitudes and social norms, hook-up cultures, and contraceptive risk-taking to contend that we must look at psychosocial contexts as cumulative over time and as such, must take into account the impact of the psychosocial context from previous social environments on how we adapt to new psychosocial contexts in our current environments.

Researchers who focus on sexuality have generally examined sexual norms and attitudes in adolescence or in emerging adulthood, looking at them separately and not examining the impact of one psychosocial context on later life stages. An excellent example of this is how, without being aware of it, older adolescents use the norms and attitudes about sexuality they learned from their families, peers, school, and communities to craft specific strategies which allow them to cope with the norms associated with hookup cultures on college campuses. This chapter shows how young emerging adult women view "hookups," using their adolescent attitudes and norms about sexuality as a lens to help them navigate new sets of attitudes and norms which dictate casual sex.

This chapter argues that women entering college draw on both their experiences of sexuality and contraceptive use and the psychosocial context that existed about these issues in high school to determine how they will approach their sexuality, formation of romantic relationships, and use of contraceptives within the psychosocial context of college hookup cultures. Specifically, I argue that psychosocial context in adolescence, which includes expectations about sexuality and contraceptive use in one's community, in one's

school, by one's parents' and among one's peers has a direct influence on how sexuality is approached in emerging adulthood, and thus on contraceptive risk taking both in casual sexual encounters, and within romantic relationships. Interestingly, the vast majority of women interviewed were not concerned about protection from sexually transmitted infections (STI). They generally assumed that because they knew the man they were having sex with - or at least had friends who knew him – that they could count on him not having an STI.

To date, limited work has examined contraceptive use and risk-taking within casual sexual encounters among emerging adults in hookup cultures, and the focus of that research has typically been on condom use (Bearak 2014; Fantasia et al. 2014; Moore et al. 2013; Raine et al. 2010). In contrast to predominant cultural norms of women as relationship seeking (Hamilton and Armstrong 2009), some research on hookup cultures has emphasized the benefits that young women may perceive in participation in hookup cultures such as being able to focus more on their studies or being able to focus on themselves and their own needs rather than on a relationship or male partner (Hamilton and Armstrong 2009). For these women, romantic relationships take more time than they have, and they are in no hurry to establish a relationship as they plan to postpone marriage in favor of establishing a career (Gilmartin 2006; Hamilton and Armstrong 2009). In addition, cultural norms generally suggest that women focus on finding a romantic relationship while men are out for sex, a premise that some researchers dispute (Hamilton and Armstrong 2009). To my knowledge, no one has examined how one's psychosocial context in high school impacts how one integrates into the normative environment of casual sex within hookup cultures. While the literature has focused on casual sex as normative in the college environment, my research suggests that there are in fact multiple and differing strategies women use to navigate their sexuality in college. For example, past experiences of women entering college range from women who have no sexual experience prior to beginning college to women who participated in a hookup environment in high school similar to the one posed as normative in college. These differing strategies led to differing forms of contraceptive risk-taking.

Alcohol has been linked closely with participation in hookup cultures (Burdette et al. 2009; Fielder and Carey 2010). The literature argues that alcohol is a facilitator of hookups largely due to the lowering of

inhibitions that occurs with alcohol intake (Berntson, Hoffman and Luff 2014; Bersamin et al. 2012; Downing-Matibag and Geisinger 2009; Fielder and Carey 2010; Owen et al. 2010; Paul and Hayes 2002). Indeed one scholar reported that over 80% of college students reported drinking prior to engaging in a hookup and that many of them would not have done so if they had not been drinking (Downing-Matibag and Geisinger 2009), and another found that 65% reported drinking prior to their most recent casual sexual experience (Grello, Welsh and Harper 2006). Other scholars have found that men interpret alcohol consumption as an indicator of sexual availability (Corcoran and Thomas 1991; Cowley 2014), and that other women stigmatize women who they believe are drinking in order to facilitate casual sexual encounters (Lyons and Willott 2008).

While religious service attendance has been found by some scholars to be associated with reduced participation in hookups (Burdette et al. 2009; Penhollow, Young and Bailey 2007), others have found that subjective feelings of religiosity were not related to casual sexual behavior (Fielder and Carey 2010; Freitas 2008; Owen et al. 2010). Freitas (2008) has argued that today's youth have disconnected their sexual experiences from their religious life and that being in a hookup culture was a more important predictor of casual sexual behavior than were measures of religiosity. Others have found that youth feel that casual sex and religiosity can co-exist without harming their religious faith (Brimeyer and Smith 2012). Those that have found an influence of religion on sexual behavior have asserted that more religious youth have fewer partners (Bearman and Brückner 2001; Meier 2003; Regnerus 2007). However, others have argued that religion simply influences youth to not use contraceptives as they are not supposed to plan for sex if they are not supposed to have sex (Brewster et al. 1998; Miller and Gur 2002). Some have also suggested that the influence of religiosity is dependent on one's surroundings, such that those in religious moral communities, such as a religious college campus, may be less likely to participate in hookups but that if religious individuals are in a secular college, they may be more likely to participate in casual sex because there is no moral prohibition against doing so (Regnerus 2007). Finally, some scholars have suggested that religion has a stronger effect on female participation in casual sex than it does for men (Bearman and Brückner 2001; Burdette and Hill 2009; Regnerus 2007).

When examining the psychosocial context, it is important to consider that attitudes and norms from previous environments guide how we adapt to new environments with new psychosocial contexts. We should also acknowledge that different groups around us at any one time may have different norms and attitudes which can often be contradictory to our own, or to those of other social groups of which we are a part. Therefore, in order to understand how people deal with the psychosocial context they are currently experiencing, we have to understand what psychosocial contexts they have experienced in the past. I argue that the transition between two different psychosocial contexts about sexuality provides the ideal setting to investigate the influence of past attitudes and norms on our perceptions of our formation of new attitudes and adaptation to new norms. This longitudinal approach helps us to understand people's responses to current psychosocial contexts which sometimes can appear illogical, especially when it comes to sexual decision making and contraceptive use. This life course approach has been argued to be valuable in sexuality research (Amaro et al. 2002; Carpenter and DeLamater 2012; Rossi 1994), and I argue in this chapter that it is not only valuable, but in fact critical, for the understanding of individuals' sexual and contraceptive behavior. While some researchers have examined how people navigate networks of competing norms about sexuality (Mollborn and Sennott 2014; Sennott and Mollborn 2011) to my knowledge, the influence of the combination of past attitudes and norms on subsequent behavior within different psychosocial contexts has not been examined.

Methods

Full methods are included in detail in Chapter Three. Here I include a brief review of how the analysis was performed. After interviews were conducted and professionally transcribed, I read through each interview multiple times. As I read I began to notice similarities in women's background sexual experiences and the way in which they dealt with hookup cultures on the campus. I then spent some time rereading and grouping transcripts that I felt were similar. Once this was done I read through each group and memoed about their similarities and differences to try to determine what experiences they had in common. This sometimes required moving women from one group to another in which they fit better. I stopped when I had the majority of the transcripts grouped. Four of the women did not appear to fit any of the patterns I identified,

and data from those women are not included in this chapter. From this point I continued to memo about each group and as I did so, I began to pull quotes that I felt represented the major similarities of the women in each group. These memos eventually became the results presented below.

I want to note a few limitations to this analysis. These interviews represent the findings of one set of female undergraduates on one college campus. As such, they are not necessarily generalizable to other groups, other college campuses, women not enrolled in college, or to men. In addition, it is quite likely that certain groups of women with different backgrounds and strategies for integrating into the college hookup culture were uncomfortable talking with a stranger about their sexual experiences and thus did not participate in the study. However, this research does provide us with a rich and detailed account of how some women deal with moving from one psychosocial context to another, often different one, and what strategies they develop to successfully do so.

Results

Women interviewed tended to talk about their experiences in high school in terms of being young and making mistakes while they tended to talk about their current experiences in college as being separate and better informed than their past behavior. Most frequently, women represented that they learned from their experiences but that they did not see that their past experience had a large influence on their current strategies for adapting to new environments. This suggests that these women were largely unaware of the influence the psychosocial context had on their actions.

Those interviewed described different strategies for dealing with the transition from the adolescent normative environment to that of the hookup cultures they felt were present on the Mountain University campus. Women did not necessarily, however, realize that they were using any one specific strategy to adapt to their new environments. It was only in aggregate, looking across women with similar backgrounds and similar approaches to dealing with hookup cultures, that the influence of their past psychosocial context on their present strategies to integrate into a new psychosocial context emerged. While all young women indicated that there was an influence of alcohol on both their willingness to engage in sexual activity within

romantic relationships or casual sexual ones, their overall approach to engagement in hookup cultures was associated with the adolescent psychosocial context they described.

All women interviewed felt that the most salient type of sexual activity occurring at Mountain University (MU) was that of hooking up. Tiffany talked about her friends engaging in hookups: "they do that, most of them." When asked if her friends wanted relationships, she went on to say: "Not really. They are just 'let's go have fun' types.'" Other women also felt that casual sex was common on the MU campus and many of them talked about their own casual sex experiences. When asked about her college sexual encounters, Haley pulled out her computer and said "I have a list, you can laugh…we all [her friend group] have a blacklist so we don't recycle men." When asked about MU's culture specifically Haley said "Here it's like, 'Oh I just want to get it [sex]." Like Tiffany and Haley, most of the women interviewed felt that the most visible culture on campus was that of casual sex. Further, even if women did not participate in hookups themselves, they almost all had friends who did so. Five groups emerged from the data, each reporting somewhat different psychosocial contexts, as well as different strategies used to deal with the often very different psychosocial context they experienced upon entry to college.

One group, which I labeled as "The Religious", talked about their religious background and focused on sex within romantic relationships – often reporting only one long term relationship which had continued into college from high school. These women took contraceptive risks as part of their desire to please their partners and justified those risks in terms of the long term support they expected should a pregnancy occur. They disapproved of hookup cultures of casual sex and distanced themselves from it by focusing on the romantic nature of their sexual relationship. This group essentially did not participate in hookups in either high school or in college and did not approve of those women who did participate.

Another group, labeled "The Insecure," came from backgrounds in which traditional gender norms were strongly endorsed. These women gave more power to men within sexual relationships, engaging in contraceptive risk taking because they did not want to disrupt their relationship, whether casual or romantic with their partner. They also unsuccessfully used casual sex as a pathway to romantic relationships, and as such were willing to take risks as a way of demonstrating their trust in their partner and their desire for a

relationship. They reported many negative experiences in high school related to sexuality, and thus in college were inclined to engage in sex as a hopeful pathway to a romantic relationship.

A third group of women, labeled "The Late Bloomers," reported not having sex until after they graduated from high school, and sometimes not until after their freshman year of college. These women were not interested in sex until they entered the college hookup environment -sometimes not until after their first year of college - and had little education about contraceptives. When they did begin to have sex, they were afraid to question their male partners and trusted the man to deal with contraceptives appropriately which often led to risk taking. The fourth group, labeled "The High School Partiers," engaged in casual sex in high school and went to high schools with strong peer and school level norms of sex and also teen pregnancy. They tried to use contraceptives but were generally not very good at it, and on entering college decided that they were done with casual sex, and sought romantic relationships instead. For the most part, this group of women had engaged in contraceptive risk-taking while in high school and reported being better at taking responsibility for contraceptive use in college.

The fifth and final group, labeled "The Career Women," was the only one to have open communication about sex and contraceptive use with their parents. They tended to engage in both romantic and casual sexual relationships within high school, but then eschewed romance in favor or "self-focus" and only casual sex once they got to college. This group of women was most concerned with their future goals and career opportunities and felt that romantic relationships would be detrimental to their studies in college.

The Religious: "We were raised Catholic."

Women in this group came from religious backgrounds. While they denied that there was a strong influence of religion on their morals and their behavior, they described their actions in ways that are consistent with religious conservatism and often referenced religion when discussing their orientation toward romantic relationships. Victoria, a 20 year old journalism major described her religious upbringing and how it influenced her belief system when it comes to sex:

> My background, or my core belief, I'm more or less Episcopalian, and for religious beliefs I just wanted to wait until I was in love with someone and … knew that the person was going to be there

> unconditionally for me until I gave myself to them sexually…So I definitely waited until I was in a serious relationship.

Interestingly, while Victoria felt that she needed to be in a serious relationship to justify sexual activity she did not express the belief that she needed to wait until marriage to have sex which one might expect given her religious upbringing. Abby, a 19 year old sociology major, on the other hand, explained how her parents explicitly advised her to wait until marriage: "My parents, they really said, 'Wait until you're married, wait until you're married." Abby's parents used an explicit religious doctrine in talking to their daughter about sexuality and wanted her to wait until marriage before having sex. Abby went on to describe lying to her mother about her sexual activity, even though it caused her some distress to do so: "My mom has asked me [if I have sex] and I have lied to her. Which is really, really hard to admit but that's the truth." Women in this group generally hid their sexual activity from their families, which is not surprising given the explicit "wait until marriage" messages they received. In line with literature, these women felt that so long as they connected their sexual activity with goals of marriage, and with purity and innocence, that it somehow allowed them to live up to society's edict that women are "damaged goods" if they have sex before marriage (Valenti 2009). However, the 'wait until marriage' messages their parents gave the young women were ignored in favor of entering into long-term romantic relationships which these women convinced themselves were akin to marriage in their commitment and longevity and in doing so justified their sexual activity as appropriate. While these relationships began in high school, they carried over into the college setting, extending the approach they had to sexuality and contraceptives while in high school into the college setting.

One of the ways these women justified their sexual behavior was by describing it in terms of being a way to connect with their romantic partners in a deeply emotional way and by emphasizing the purity of their sexual experiences rather than purity as being chaste or virginal. They spoke with pride about being virgins when they first had sex with their boyfriends, and in most cases they also pointed out that their boyfriends had also been virgins. Alyssa, an 18 year old freshman working toward a marketing degree said: "[My boyfriend is] the only sexual relationship I've ever had" and for her this had deep meaning in that it allowed her to justify her sexual activity as part of a deep and long-lasting emotional commitment. Victoria emphasized the wholesomeness of her first sexual experience as well: "It was … a first-time experience, like

he was my first sexual experience ever and [it] felt very clean and pure." For Victoria, and the other women in this group, their own sexual activity was justifiable and in keeping with the religious messages they received from their communities, schools, and parents, which allowed them to experiment sexually without compromising the religious values they had been taught. This supports previous work that has found that religiosity and sexual activity can coexist (Brimeyer and Smith 2012).

Women in this group talked about how they decided to have sex the first time while they were still in high school. While they hid their sexual activity from their parents, they explicitly sought approval and permission from their friends or same gender siblings most of whom were not having sex themselves. Samantha, an 18 year old freshman studying international affairs discussed asking her friends in high school if she would be able to have sex with her boyfriend and still avoid the label of 'slut.' "I consulted [my friends before I first had sex] because I was like, 'Is this a bad choice? Is this a slutty sort of thing?' And they were really encouraging of it because they really liked my boyfriend and we'd been going out and stuff." Samantha and her high school friends, who shared her religious values, found her sexual activity to be permissible because she had been going out with her boyfriend for some time and was explicitly engaged in a romantic relationship which she anticipated would last long-term. At the time of her interview, Samantha was in fact still with the same boyfriend she had begun seeing in her sophomore year of high school and with whom she had first had sex. Jessica, an 18 year old freshman who has not yet declared a major, also expressed seeking approval from others for having sex within a romantic relationship, in this case from her sisters: "Since [sex] was with my boyfriend [my sisters] were like, 'Okay. You guys have been together.'" This justification of women's own sexual activity became even more important to them as they described entering college and experiencing a normative environment of casual sex to which they did not feel they belonged. These narratives are reminiscent of research that has found that women use slut discourse to draw boundaries between themselves and other women on the basis of social class (Armstrong et al. 2014). By checking with friends or same sex siblings these women sought to avoid the slut discourse by receiving same gender approval for their actions.

When they arrived at college, women in this group had difficulty with the college hookup culture of casual sex and strongly disapproved of it. At the same time, the casual sexual activity going on around them provided them with a perfect opportunity to delineate how their sexual activity differed from the casual sex culture, and was therefore better. They did this largely by judging other women for having sex outside of a romantic relationship, labeling them as "sluts." Their religious background and teaching created tension within these women as they moved into a casual sex environment and so the othering of women around them became an important tool for them to resolve their own internal conflicts and figure out where they fit – or did not fit - in the college world of casual sex (Armstrong et al. 2014).

In their narratives, the distancing of themselves from those who engaged in casual sex often began with statements delineating their relationship focus and subtly indicating that they disapproved of women who did not focus on meaningful emotional and romantic relationships as a gateway to sex. Abby has been with her one and only boyfriend since her junior year of high school. Abby comes from a very religious background and referred frequently to what the Bible says throughout her interview. Her school environment was very different, however, and she was called "Abstinent Abby" by other teens because of her religious views against pre-marital sex. Abby's sister married young and did not have sex until her wedding night, which is what Abby was taught by her family growing up and what she fundamentally thinks is the correct way in which to do things. Despite this, Abby decided to have sex with her current boyfriend, David, after she graduated from high school. Throughout her interview Abby worked to reconcile her decision to have sex before marriage with her conservative religious beliefs. She talked about her philosophy of sex and romantic relationships in a way that was typical of how this group of women thought about their sexuality upon entering college:

> I definitely knew that, number one I didn't want to sleep around with a lot of different guys because sex meant more to me than sex. It was something – like it was not only like you are giving away a part of your body but you are giving up like a part of you. And if you are going to do it with somebody then it's going to be somebody who is meaningful to you.

For Abby, having sex was the same thing as giving a part of herself away to her partner. Because she and her boyfriend had been together for over a year when they graduated, Abby convinced herself that they would eventually marry and so having sex was alright. She also relied on her perception of the stability of her

relationship with David to subtly emphasize that their sexual activity was appropriate – even at one point telling me that their friend's joked that they were "like an old married couple." The way in which Abby talks about her own sexuality versus the sexuality of those around her who engage in casual sex, helps her to draw symbolic boundaries between herself as pure and in love as a justification for having sex, and other women who engage in casual sex or have slept with multiple men. This "othering" of women who do not view sex the way that Abby does, helps her to protect herself from self-recrimination for having sex before marriage. This is a common strategy among young women carving out moral sexual identities (Wilkins and Dalessandro 2013). Referring to her relationship with David as just as good as a marriage and also emphasizing that they will get married in the future, allows Abby to have sex, and do so before marriage, but not see herself as a 'slut' or 'whore', and to not attach negative connotations to what she sees as a gift she is giving to David, although she never mentioned receiving a gift *from* David. Other women in this group described their view of sexuality similarly, and were very careful to distance their own behavior from that of other women who do not wait for marriage – or even a "meaningful" relationship before having sex.

This led to a strong "slut" rhetoric among these women, often directed at *friends* who did engage in hookups and casual sex. Their new college friends provided these women with an obvious group with whom they could compare their own sexual behavior, and they clung determinedly to the views of sexuality they held in high school. Describing how their friends' casual sexual behavior was 'bad' because they engaged in casual sex with multiple partners, reinforced these women's own pride at having only had sex with only one man within a romantic relationship, and provided women with a strategy for defensive othering in which they could make a claim to a higher morality than their friends (Ezzell 2009; Schwalbe et al. 2000). Sydney, a 19 year old freshman psychology major, described her interactions with friends that choose to participate in hookups: "I have some risky friends [in college]…They will go out and drink and sleep with people. Which is bad. Very, very bad." Like the other women in this group, Sydney labeled her friends' casual sexual activity as 'bad' and then used that label to distance her own sexual activity within a romantic relationship from the casual sexual activity taking place around her. By labeling casual sex as "bad," these women inherently labeled their own sexuality within a romantic relationship as "good."

While their relationship status allowed them to protect their identities as 'good girls', the associated romantic relationship orientation and belief in the longevity of their relationship, both developed in high school, caused them problems in negotiating contraceptive use with their boyfriends over the long term. From a practical perspective, while women felt that they sexual behavior was better than those of the women around them who were engaging in casual sex, they were more likely than some other groups to put themselves at risk of unintended pregnancy. Women in this group most often talked about contraceptive risk-taking in the context of using withdrawal at the suggestion of their boyfriend when no other contraceptive was available. They described their willingness to use withdrawal as stemming from their romantic relationship and their belief that their boyfriends would be there to support them emotionally if a pregnancy occurred. Jessica described her feelings this way: "[My boyfriend and I] had a conversation… He was just reassuring like, 'No, we were fine [using withdrawal]. Like I made sure I was careful. Even if I did get you pregnant, I'm not going to leave.' Which is like, okay." Despite Jessica's misgivings about using withdrawal as contraception, which she had stated earlier in her interview, she was willing to use it as her primary method of contraceptive because she believed that her partner would stay with her and help her raise the baby if a pregnancy did occur. This whole hearted faith in their partner's support was an integral part of these women's romantic relationship orientation and their justifications for engaging in sexual activity in general. Contraceptive risk-taking was potentially a bigger risk for many of the women in this group than for women in other groups, as they expressed negative views of abortion and stated that if a pregnancy occurred they would accept responsibility for the 'mistakes' they made and leave school to have the baby.

Women in this group came from religious backgrounds which generally dictated waiting for marriage to engage in sexual activity. They all engaged in sex outside of marriage, justifying it by doing so only within long-term romantic relationships. By restricting their sexual activity to their long-term romantic relationship, they opted out of participation in hookup cultures, maintaining their romantic relationships long-distance if necessary and clinging to the views they had of sex in high school. They felt morally superior to women who engaged in casual sex and explicitly differentiated themselves from those women. In fact, the college hookup culture they experienced provided them with a way to reinforce their own belief that their approach to

sexuality was the correct one. However, their romantic orientation and their belief in the longevity of their relationships led them to engage in contraceptive risk-taking. They commonly engaged in withdrawal and justified it by citing their partner's commitment and fidelity, which they viewed as unusual within an environment of casual sex. In addition, they protected their male partners by asserting that they, as women, would accept fault for any unintended pregnancy that occurred.

The Insecure: "It's what you have to do to make them like you."

Women in this group came from families who endorsed traditional gender stereotypes when it came to sexuality. These messages were clearly communicated to their daughters. Similar to "The Religious" group, the traditional gender norms women in "The Insecure" group grew up with led them to value romantic relationships very highly and to have generally negative feelings about casual sex. However, these women typically did engage in both casual sex and sex within romantic relationships during high school and college. Having experienced sex in both the casual and romantic context, eventually, all of these women decided that sex with a romantic partner was better and that they wanted to be in a long-term romantic relationship.

Women in this group were taught when they were younger that men should have more control in both romantic and sexual relationships which has been shown to reinforce gendered power differentials (Sanchez, Crocker and Boike 2005; Sanchez, Kiefer and Ybarra 2006). Lauren, a 19-year-old sociology major, talked about her traditional views of gender: "I was brought up that a guy is more in control of the majority of that aspect [contraceptive use]. And just, like, in general." Messages Lauren received in adolescence emphasized romance over sex, and she viewed men as having more power in romantic and sexual situations. These messages did not, however, stop her from engaging in the normative casual sex culture present in both her high school, and later on in college.

While women in the first group generally experienced norms in their high school peer groups which dictated abstention from sexual activity, the high school environments women in this group experienced were generally ones in which both casual sex and sex within a relationship were common, although they generally did not endorse casual sexual encounters, they did participate in them. Hannah, a 20 year old who describes her college status as "second year-ish" and has yet to declare a major, said simply that in her high school

"everybody was having sex." Like Hannah, the other women in this group all reported that sexual activity in their high school setting was frequent, and both romantic and casual. While sexual activity was common among their peers, these women did not have sexual education classes in school, nor did they report receiving information about sex and contraceptive use from their parents. Instead, they received most of their sexual information from their peers. Lacey talked about the lack of communication and education about contraception as she was growing up and where she got her information from: "I think for me I've never been educated enough on birth control. I've always just kind of heard off of my friends." Almost all of these women reported getting the majority of their contraceptive knowledge from friends, but at the same time, reported that these same friends were frequently taking contraceptive chances, which makes the information they did receive somewhat suspect, something that is supported by current research (Jaccard 2009; Kaye, Suellentrop and Sloup 2009).

While some of the women in this group discussed their mothers helping them to obtain a contraceptive method, it was exclusively described as being framed for non-contraceptive purposes. This framing was often accompanied by explicitly negative messages about sexuality from their doctor or parents. Women described the messages they received as being negative and explicitly condemnatory both of sexual activity and of other aspects of hookup cultures, such as multiple partners and short term purely sexual relationships. Ellie, an 18 year-old freshman studio arts major described her mother's reaction when she first started on the pill, ostensibly for heavy periods: "My mom, she kind of addressed [sex] when we were first starting the birth control. She was like 'You know now that you're on birth control, you can't just go around sleeping with people.'" While her mother had helped Ellie obtain the birth control pill, she wanted to make sure that Ellie understood that it was not permission for sexual activity, with the implicit message that sleeping with more than one person was inappropriate. Thus Ellie, like other women in this group were caught between negative (if somewhat mixed) messages from their parents, and the psychosocial environment of their high school which endorsed sexual activity.

Not surprisingly, these women often expressed self-doubt and issues with their own self-esteem and many of these doubts appeared to be tied to their belief in traditional gender expectations. Casual sex was

generally described as reinforcing their negative views of their own behavior and thus contributed to their overall negative self-perception. Many women in this group explicitly said that they did not see themselves as the 'type' of person to have casual sex – even when they were engaging *only* in casual sexual relationships. Lauren said "I don't think I'm really the type to be randomly hooking up with guys. But I have." Lauren's statement is representative of this group of women who did not identify themselves as people who were comfortable engaging in casual sex, but participated in hookup cultures in both high school and college anyway. This statement and others like it also call attention to the women's negative views of casual sex and the value that they placed upon sexual activity within romantic relationships as well as their subscription to traditional norms about male dominance, especially in the realm of sex and relationships (Morrison et al. 2014).

Given their romantic relationship orientation, subscription to traditional gender expectations, and the negative views about sexuality they were receiving at home, these women felt a strong need to justify engaging in casual sex. In addition, they wanted to bring their actions in line with their traditional gender views which for them dictated that women want romance, while men want sex (Morrison et al. 2014). Women accomplished this by indicating that they hoped the casual sex they engaged in would lead to the romantic relationship they really desired. However, this also led to contraceptive risk taking in an effort to communicate their desire for a relationship to their partners indirectly. This made them more willing to have sex without condoms, and often other forms of contraceptives, with regular casual sex partners. Women described having sex without a condom as being a clear way to portray their trust and romantic feelings to their partners. Ellie described it this way: "Sex without a condom is a very intimate thing. Like you are pretty much just connecting with a person as close as you can get." She went on to discuss how she hoped that her willingness to have sex without a condom would earn her respect from her casual sex partner and lead to a romantic relationship.

> I would've thought that he would've had a little bit more respect if he's thinking like 'Maybe having sex with her without a condom is going to happen'….I kind of hoped or thought or was naïve enough to think that he would think it was also a sign of respect and not do anything with other people. But I was wrong.

Other women also talked about engaging in contraceptive risk taking specifically as a way of expressing their desire for a romantic relationship non-verbally. Lauren was in a long term 'friends with benefits' relationship which she desperately wanted to turn into a romantic one. She discussed being willing to do 'anything' her sexual partner wanted in hopes that eventually he would see her in a romantic light: "It was like I just want him to only be with me so bad that I would just do anything." This idea that women would do 'anything' to turn a casual sexual relationship into a romantic one was prevalent among this group of women and when their relationships did not become romantic ones, they felt badly both about having casual sex and about engaging in contraceptive risk-taking, which they stressed was out of character for them. This supports findings that show that men often have more power within casual sex encounters as they are less likely to want a relationship than their female partner (Uecker and Regnerus 2010). Lauren perfectly described the way these women justified their behavior: "The first time I had sex with him he was a stranger to me. But in my mind I was like, well, maybe we'll get to know each other, so that was kind of like my justifying what I was doing. But I still felt guilty." Lauren used future possibilities of getting to know her partner, or even potentially dating him, to explain her causal sexual behavior although that did not stop her from feeling guilt about behavior she fundamentally considered inappropriate and negative.

Almost all of these women had sexual encounters in college in which the man involved either did not want to wear a condom or the issue of contraception was simply never brought up. In these situations, their lack of education about contraceptives combined with their traditional gender views resulted in significant contraceptive risk taking. Lauren admitted that she just didn't know how to negotiate these kinds of conversations with sexual partners: "I don't really know how to actively bring [contraceptives] up … I guess [it depends] if I'm more scared or not." She went on to say what it was about asking for a condom that bothered her the most: "I guess I feel more awkward about it because I feel like they should be just as scared as I am, so I don't understand why they're not bringing it up" In these statements Lauren expresses both a general subscription to traditional gender norms which put men in charge, and a lack of confidence in herself. For women in this group, the combination of psychosocial environments in high school which normalized

sex, and the lack of information they received about contraception led to significant risk taking in college where they typically reported becoming more sexually active then they were in high school.

Entwined with the reluctance to bring up a conversation about contraceptives was the feeling these women described of it being socially inappropriate for women to carry condoms with them. Several of them used the word 'slut' to describe women carrying or providing condoms, and also in regard to the number and type of sexual partners women had. Other research supports this view of women being labeled sluts if they have multiple partners, when men are not (Armstrong et al. 2014; Bordini and Sperb 2013). Women in this group also perceived differences in status between men and women associated with sexual activity and so specifically differentiated what made women 'sluts' versus men. For these women this occurred both in high school and in college. Hannah talked about the gendered double standard about sexual activity that existed at her high school: "For guys the more sex you had the better. And in the girl world, if they found out that you had slept with more than three [men], you were a slut. It was just like 'I'm going to hit that slut.'" Marlee, a 21 year old ecology and evolutionary biology major, was also inclined to pass judgment on other women – even close friends – based on the number of sexual partners they had. She described her dynamic with her college roommates this way, "If one of my roommates is sleeping around too much and my other roommate and I are talking about how slutty she has been, we will tell her to her face, 'You are being slutty.'" For these women, identifying someone who had casual sex frequently with different partners – and therefore not for the purposes of seeking out a romantic relationship – helped them to justify their own casual sexual behavior because they *were* seeking a romantic partner. In their use of the word 'slut' both Hannah and Marlee were inadvertently acknowledging and perpetuating the negative gender stereotypes associated with female sexuality.

Also in keeping with their views of traditional gender norms that put the man in charge, these women felt that it wasn't appropriate to stop sex once a sexual encounter had begun - even if no contraceptives were available or they simply changed their mind about having sex. Hannah tied this feeling directly to her self-esteem issues and problems with saying no to sexual activity in a more general sense.

> There's a weird taboo about stopping somebody... I had a really hard time saying no to people [about sex] for a really long time, even if I didn't really want to have sex with them…Because it's like 'Oh, you want to have sex with me? Me? This one right here? All right. I kind of don't want to but, okay.'

Hannah, like other women in this group, had issues with self-esteem and used sex as a way to feel desirable and good about herself in the short term, while justifying her casual encounters by asserting that she was engaging in casual sex with the express purpose of finding a romantic partner. However, for Hannah, as for other women in this group, rather than helping them to establish the desired romantic relationship, longer term their casual sexual encounters tended to lead to further feelings of reduced self-worth and increased contraceptive risk taking.

Overall, women in this group experienced environments in both high school and college that encouraged casual sexual encounters, while receiving traditional messages about appropriate female behavior from their families. They were led to value love highly and to disparage casual sex – unless it was engaged in with the purpose of entering into a romantic relationship. Their participation in the hook up culture in search of romance led to increased feelings of worthlessness and increased contraceptive risk taking in an effort to communicate their relationship desires to their partners, and this often became exacerbated when they entered college and began to participate in more frequent sexual encounters.

The High School Partiers: "I feel like I got it all out of my system in the past."

A small group of women who engaged in casual sex in high school decided that they were done with it by the time they entered college. These women generally had not discussed sex or contraceptives with their parents, and similarly to the insecure group, their peers in high school were engaging in both casual sex and sex in relationships. However, for these women there was a strong norm of sex and pregnancy in their high schools and they all knew someone, frequently a close friend of theirs, who had become pregnant in high school and had either, had the baby, or had an abortion. Their friends were engaged in contraceptive risk taking and so were these women. While they tried to use contraceptives, they still tended to take contraceptive chances such as frequently missing taking their birth control pills. Late in high school or as they began college, they sought romantic relationships and decided they were done with engaging in casual sex. This demonstrates the influence of the psychosocial context on both their behavior in high school and their

behavior once they got to college. The fact that everyone around them was engaging in casual sexual encounters encouraged them to do so. At the same time, the experiences they were encouraged to have in high school by the prevalent psychosocial context, also reduced their desire to participate in casual sex in the college setting.

Like many other groups, these women experienced home environments in which parents did not discuss sexuality or contraceptive use with their daughters. When asked about communication with her parents about sex, Megan, a 19 year old advertising major, said "I didn't talk to them about it." Jasmine, a 20 year old double major in psychology and sociology, talked about her perception that her mother was afraid that if sex was discussed it would make Jasmine more likely to engage in it, "[My mom] thought if she did talk to me about [sex] that she was encouraging me to have sex." Although many of these women had sex education in their school, there was no discussion about it at home, and their close friends were engaging in casual sex and taking a lot of contraceptive risks, a norm which these women adhered to.

Overall, these women fully participated in both casual and romantic sex while in high school, and saw this as normal within their high school environments. Stephanie, a 19 year old political science major, said simply "I was kind of a party girl" in talking about her experiences in high school. She went on to describe the range of her sexual experiences before coming to college, "I had repeated hookups and I also had like one-time things." Stephanie also described her high school as "kind of like a hookup culture because it's like most people were drinking and it was a big group [of kids]." These women had psychosocial contexts in their schools which dictated participation in sex, often - though not always - casual, and a perceived lack of communication from their parents. In retrospect they felt this combination led them to participate in casual sex, perhaps before they were ready to do so. Stephanie described it this way: "I let myself – when I was not even 18 years old – be in 'friends with benefits.' That's kind of a lame move on my part." While they did not necessarily disapprove of casual sex encounters in general, they did feel that it was not appropriate for women in high school. A psychosocial context that dictated that everyone should be engaging in sex - often casual sex - in high school influenced women's behavior and led them to participate in casual sex encounters in high

school which they later regretted. Unfortunately, strong norms encouraging casual sex in high school for these women were not accompanied by strong norms of contraceptive use.

Neither the women in this group nor their friends in high school were particularly effective contraceptive users. They all described instances of friends or teenaged relatives using withdrawal or taking other contraceptive chances. Stephanie talked about her cousin, "My cousin uses the pullout method with birth control but sometimes she lets the guy finish." Stephanie's cousin was not only using withdrawal, but sometimes was engaging in totally unprotected sex. While the experiences of their friends and close age relatives motivated these women to attempt some form of contraceptive, they were not always effective in using it. Stephanie talks about using condoms – most of the time. "Most of the time we used condoms. There were a couple times where I didn't. I wasn't on birth control either. So yeah there were times when I didn't use anything." This kind of risk taking was common among these women. Jasmine describes her lack of knowledge about contraceptives: "I was young and I didn't think you could get pregnant that way - if you pulled out." Not only was Jasmine not aware of the risks withdrawal presented, she also experienced pressure from her boyfriend at the time to engage in risk-taking. She describes asking him to use a condom when they first began having sex, which was before they were dating: "[After we had sex using withdrawal] I said something like, 'Oh, we should use condoms.' And he's like, 'Oh, that's so stupid.'" Other women asked about condom use prior to sex and were persuaded by their male partners to allow use of withdrawal even if it made the women uncomfortable. Stephanie talked about her experiences with this, "I mean I said that I didn't want to [have sex] without a condom. I told him that. I didn't want to without a condom. But he talked me into it and I said okay." This type of persuasion by partners to use withdrawal was common in this group of women even though they described being very uncomfortable with the situation, and this is also reminiscent of documented gender power differences in sexual relationships in general (Masters et al. 2013). However both contraceptive risk-taking and casual sex were common in their high school social groups, making these women more likely to take risks similar to those risks they knew their friends were taking. While these women sometimes tried to supplement their use of withdrawal with taking birth control pills, they were not good at taking the pill in general and frequently missed days at a time.

Given the risk-taking that was occurring among these women and their friend and school groups, it is not surprising that these women were in high school environments where teen pregnancy was common. They frequently had friends or casual acquaintances who had experienced a pregnancy and abortion, or who had a child. Stephanie talked about a friend of hers who got pregnant in high school: "I had one of my best friends … she didn't use a condom and she actually got pregnant and had to have an abortion." For some of these women, experiencing a friend's pregnancy, or even pregnancy scare, led to an increased desire to use contraceptives. Megan said, "I guess like hearing my friends not use condoms and then have to take pregnancy tests made me really sure that – I made sure that I wanted to use contraceptives." However, while they might have been somewhat motivated to be good contraceptive users by the pregnancy scares and experiences of those around them, overall, this did not translate into correct and consistent use of a contraceptive method when they engaged in sex.

The experiences they had, as well as those of their friends, led these women to eventually declare that they were no long interested in casual sex. Stephanie described coming to this conclusion in her senior year of high school, "I didn't want to like go and have sex with a bunch of people…. I was so over it. And that's why I kind of wanted a boyfriend." Stephanie, and other women in this group, did not report participating in casual sex in college, and also tended to improve their contraceptive practices. However, this decision did not necessarily mean that they were looking for an immediate romantic relationship. In fact, about half of the women had decided to stop having sex altogether before they met the boyfriends they were with at the time of their interview. Stephanie describes her feelings about this, "I was like 'I'm just going to lay off sex. I don't want to put myself through that right now [going into college].'" Jasmine agreed with Stephanie, saying, "I came to college and I was like, okay, I don't need [to take birth control pills] anymore… I figured I would stay away from boys." This was not what ended up happening for these women, who all entered into relationships either right before coming to college or within the first few days of college. Interestingly, their romantic relationships generally began with casual sex – despite their declarations that they were no longer interested in participating in casual sexual encounters.

Entering relationships through casual sex was not common in other groups, but was in this group. Megan talked about the progression of her eventual official dating relationship with her boyfriend:

> We just hung out and then it was obvious that we liked each other so it started out just sex on the weekends. Then we actually started hanging out like just us two instead of me going out and coming back and sleeping with him I would like stay and want to hang out with him so then we just started dating.

Although others have found that casual sexual encounters are not a common pathway to a relationship (Bogle 2008), this was a common trajectory for women in this group, with all of them beginning their romantic relationships through casual sex. Jasmine also described hookups as beginning her relationship with a boyfriend, saying, "We started hooking up at first and then we started dating after." Although these women had been engaging in casual sex throughout high school and had decided that they no longer wished to do so, they appear to have communicated their desire for a relationship, perhaps in ways other than sex, to casual partners through their participation in casual sex encounters leading to romantic relationships with those casual partners.

These women experienced normative environments in high school of sex, contraceptive risk-taking, unintended pregnancy, and abortion or teen childbearing. They also participated in casual sex frequently in high school, and sometimes took contraceptive chances. They were willing to have an abortion if it became necessary as this was not uncommon among their friend group. By the time they were ready to enter college they were "over" casual sex and often decided to not have sex at all. While they did not necessarily seek them, they ended up in romantic relationships – often through the pathway of casual sexual encounters.

The Late Bloomers: "I wasn't sexually active all through high school."

This group of women didn't begin any sexual relationships until after they graduated from high school and some of them did not have sex until after their freshman year in college. They received conflicting messages in that their families didn't discuss sex with them or give them any explicit messages about sexual activity – negative or positive, but at the same time women often were put on birth control pills by their parents while they were in high school specifically to avoid a teen pregnancy. So, these women came from an environment in high school that was essentially silent on the subject of sex – both within their families, in their schools,

and among their peers. This silence led them to a general disapproval of the casual sex hookup culture in college although they participated in it once they did become sexually active. In addition, when they eventually did begin to have sex, often out of curiosity and in casual situations, they generally had a difficult time negotiating contraceptive use with partners and were very hard on themselves for any contraceptive chances they took.

While other groups of women often reported active negative communication regarding sex from their parents, this group of women experienced a more equivocal parental message. Lana, a 21 year old senior, described her family's way of addressing sensitive issues such as sexuality this way: "My family is funny when we talk about things. We kind of insinuate a lot and imply but we don't really say the exact things. Like [my mother will] say, 'Well, you're smarter than that you know better than getting pregnant.' Meaning like you know to use condoms, you know to take your birth control." While her family wasn't communicating active negative messages about sex, they also were not providing the information Lana said she wanted to receive from them.

Despite the lack of direct communication and education from their parents, many of the women in this group described their parents, usually their mothers, as taking an active role in putting them on some form of contraceptive –while at the same time not talking much about their reasons for doing so. Unlike mothers in other groups who may have assisted their daughters in obtaining contraceptives for pregnancy prevention purposes at their request, or who put their daughters on hormonal contraceptives ostensibly for non-sex related reasons such as acne or heavy periods, these women's mothers typically instigated putting their daughters on hormonal contraceptive specifically to avoid teen pregnancy – but at the same time did not address sex. Ashley, a 23 year old integrative physiology major, talked about how her mother had been a teen parent, and was determined for her daughter not to have the same experience.

> My mom put me on [the pill] when I was 16 and I wasn't having sex…when she was younger she actually got on birth control and her mom called her a slut and threw them away, and a month later she got pregnant…So my mom was like, that's not going to be a problem for you because I'm learning from my own mom's mistakes.

While Ashley was not having sex when her mother put her on the pill, her mother was determined to make sure that Ashley was protected from pregnancy whenever she did begin having sex. This approach of putting

teen girls on birth control for ostensibly non-sexually related reasons has been found before (Sennott and Mollborn 2011). However, beyond putting her on a form of contraceptive, Ashley's mother did not address contraceptive use or sexuality with her leaving Ashley somewhat confused as to how to approach the idea of sexual activity and contraceptive use. Similar to Ashley's mother, other mothers of the women in this group were also pro-active about helping their daughter to get on contraceptives, despite their general lack of communication about sexuality. Emmy, an 18 year-old economics major, also described her parents as putting her on birth control pills before she began having sex because they "just wanted me to be safe." The pro-active stance of these parents in getting their daughters on contraceptives combined with the lack of sexual activity of their daughters in high school often meant that the women in this group were using a contraceptive method, generally the birth control pill, for a year or more before they became sexually active.

As in high school they had little interest in sex, and their first sexual encounters were often driven by curiosity rather than romantic feelings, these women were often observers of hookup cultures when they first transitioned to college, but not necessarily immediate participants. For the most part, when first in college they surrounded themselves with friends who were also not as interested in direct participation in hookups and whom they could rely on to help them avoid unwanted advances from men in social situations, as they were still participating to some extent in the party culture associated with hookups and casual sexual encounters on campus. However, they eventually began to participate in both casual sex and short-term romantic relationships.

Despite being on a contraceptive method for purposes of pregnancy prevention, women in this group did not know a lot about sex or contraceptive use. Nicole, a 21 year old Asian Studies and Business double major, described being naïve when she went into her first sexual relationship explaining "I didn't have a lot of sex ed." This was a theme among these women, who all felt somewhat at a disadvantage in terms of sexual and reproductive knowledge when they began having sex. Ashley, a 23 year old fifth year senior studying integrated physiology, also described her lack of knowledge about sex. "I remember when I first started having sex, I never had sex ed … so I was kind of like going in blind and didn't really know anything about it…So I was kind of relying on the knowledge of my partner who had had sex before." Ashley relied

on her partner for contraceptive knowledge because he was sexually experienced, she had not had sex education, and she had not learned about sexuality or contraceptive use from her parents or peers in high school. So, overall, sexuality and contraceptive use was silent and secret for women in this group until after they were in college and began to be sexually active within the casual sex hookup culture. This left them at a bit of a loss in terms of knowing how to navigate their sexual relationships.

Despite their participation in casual sex after high school, silence about sex with their families and their peer group earlier on, translated to disapproval of casual sex and multiple sexual partners in college. Differently from how other groups expressed disapproval of hookup cultures, these women communicated this disapproval in subtle ways throughout their interviews and often this disapproval came through in how they spoke about their own casual sex experiences, rather than how they talked about other women. Ashley at first said she had never engaged in a one night stand, and then later in the interview said: "I forgot about this, but I lied about the whole one night stand thing. That's why the IUD thing freaked me out because … I didn't like how comfortable it made me with sex. That was my rationale." Ashley felt that having an extremely effective form of contraceptive such as the IUD was actually detrimental to her as it encouraged her to engage in casual sex - which she fundamentally disapproved of.

Other women also expressed this tension between their generally negative feelings about casual sex and their actual participation in casual sexual encounters. Early in her interview, Nicole explicitly said "I don't do hookups, like that's not really my thing." However, later in the interview she described participating in both one night stands and a "friends with benefits" relationship which was incongruent with her feelings about what constituted appropriate sexual activity. "I started a 'friends with benefits' relationship which…doesn't align with my morals at all. That's not the person I am. It's not what I do. And we were together for about two months and had sex every week, always used a condom, but it was like I felt empty afterwards." Ashley and Nicole, like other women in this group, participated in casual sex even though they did not feel comfortable with it, and in the end, did not get out of it what they wanted. This is congruent with previous research that found that women were more likely to endorse negative emotional reactions to casual sex then were men (Owen et al. 2010).

Because these women engaged in casual sex but fundamentally did not feel it was appropriate behavior, they were motivated to set limits about what was appropriate and what was not, and they delineated that boundary in such a way that they could say that their own casual sexual encounters were not as bad as the encounters engaged in by friends. Emmy, an 18 year old economics major, talked specifically about where her boundaries were in regards to multiple partners: "I always thought it's okay to just hookup every once in a while but never a different guy each week like how my friends were. It was too much." She expressed this despite the fact that she indicated that, while she was sexually active, she had never had a romantic relationship and so all of her sexual activity was taking place within the context of casual sexual relationships. Emmy's drawing of symbolic boundaries between her behavior and the behavior of those around her is similar to other findings that suggest that women use "defensive othering" or bolster their own social position (Armstrong et al. 2014), although women in this group engaged in this behavior less than women in some other groups did. Nicole was also very negative about a friend who she felt engaged in too much casual sexual activity, "[My friend] had a lot of hookups…I don't want to judge her but it wasn't very exclusive and I feel like when she's in the moment, especially when she's like intoxicated or anything like that, she doesn't really think." While both Emmy and Nicole prefaced their statements by stating that they did not want to appear – or be – judgmental, they clearly were passing judgment on their friends sexual activity, deeming it as too much and therefore inappropriate in comparison to their own, more conservative sexual activity. They did not, however, use the slut discourse favored by other groups who engaged in this "othering" process. Women in this group worried more about how others perceived their sexual activity and spent less time judging other women for their sexual activity.

Their tendency to judge others and their fear of judgment themselves also led them to be very hard on themselves for any contraceptive chances took. However, their perception of contraceptive risk-taking was different from most other groups in that they felt a risk was present when they did not use *two* forms of contraceptives. Despite the fact that they were rarely taking true contraceptive chances in terms of risking pregnancy, the narratives these women engaged in communicated their distress at what they perceived as the very real contraceptive risk-taking they had engaged in. Because women in this group were on a female form

of contraceptive, usually the birth control pill, long before they began having sex, they seemed to not consider the pill when evaluating their contraceptive risk taking. Instead, their distress was caused by not doing something else in addition to the birth control pill to prevent pregnancy.

These women also felt distress related to having not communicated with their partner about contraceptives, which they felt was the result of the lack of communication they experienced as younger adolescents. Ashley put it this way: "I think what made me more uncomfortable was my lack of doing anything about [the lack of contraceptive use]. It was more against myself, like why didn't I say something?" Although her partner had not brought up contraceptive use, Ashley's distress was focused on her own behavior rather than her male partner's. Ashley, and others in this group, was angry with herself rather than her partner, for engaging in unprotected sex although neither of them brought up contraceptive use in her encounter.

This group of women was both willing to use Plan B and to have an abortion if necessary, which is not surprising given the strong orientation toward the future they expressed, as has been found in previous research (Garwick et al. 2004). Fear of what having a child would do to their future was a common theme among these women. Ashley talked about having "a strong focus on a lot of goals that I have" as a motivation for protecting herself from an unintended pregnancy. Emmy focused specifically on what would happen to her educational goals should an unintended pregnancy occur: "Education is really important to me and I really wouldn't want anything to affect it that much. So it would be a pretty big deal in my life if I found out I got pregnant. I'm pretty sure I would just have an abortion and I would not be able to have a kid right now." Finishing school was a strong goal for Emmy who later said she would not want to have to drop out of school, or even attend a community college, as she felt it would interfere with her long-term life goals. Amber saw having a child as being equivalent to being in poverty for the rest of her life. "I have no skills to get a career. Like I would just be stuck with a child at McDonald's. There's nothing for me to do. So I would definitely not have a kid [right now]." Amber's fear of an unintended pregnancy stemmed from her idea, shared with other women in this group, that a child would mean a lifetime of working at minimum wage jobs

with no resources to care for herself or a child. This fear of pregnancy contributed to their perception of risk-taking as using only one form of contraceptive.

This group of women did not have sex until after graduating from high school, and some did not have sex until their sophomore year of college. They described a background where sex education was not offered in their school and sexuality and contraceptive use was not discussed in their home, despite the fact that they were often put on contraceptives by their parents' long before they had sex. They felt strongly that contraceptives should be used and judged themselves very harshly when they engaged in risk-taking, which they defined as not using *two* forms of contraceptives. While they did engage in casual sex, they often had negative feelings about having done so, and worried about how others might judge their behavior.

The Career Women: "I want non-committed sex."

This group differed from the four other groups in that they described open communication with their parents about sexuality and a generally sex positive upbringing. This meant that these women did not have the negative views of casual sex that many other women in the study held. Women described talking with their parents when they first had sex and asking them to help them obtain contraceptives specifically for pregnancy prevention purposes. They also described actively participating in the casual sex hookup environment when they came to college, viewing this as part of the "freshman experience." They had strong goals and an orientation toward their future careers rather than toward romantic relationships. Most engaged in romantic relationships at some point in high school and did reach a point in college where they decided that they were done with casual sex, concluding that they felt sex was more rewarding within a romantic context – although stressing that they felt casual sex was fine if that is what women wanted to do. They felt strongly that women should protect themselves from pregnancy, and that men should be expected to use a condom, which they had no problem asking them to do both within romantic and casual sexual relationships. They described communicating openly with their sexual partners about contraceptive use, and as with the group of women who delayed sexual activity until after high-school; risk-taking to these women was not using *two* forms of contraceptives.

Women in this group described telling their mothers about their sexual activity either before they had sex for the first time, or more commonly very soon after they began having sex. Erin, a 19 year old advertising major, described her mother's reaction when she discussed sex with her soon after she became sexually active: "I told her I think roughly six months after I had had sex with [my boyfriend] and she handled it super well. She was like, 'Okay, well if you need anything or you need to talk about anything come to me and I hope you're being safe about it.' Communication about being safe in their sexual encounters was the common response from the parents of the women in this group, and their mothers also generally offered to answer any questions the women might have. Mothers of women in this group also served as a trusted adult for the friends of these women, both in high school and college. Madison, a 19 year old psychology major, talked about her mother being there for her college friends to talk to when they couldn't go to their own parents:

> I've got some friends who, still, at 19 or 20 years old can't really talk to their parents about sex, being sexually active. A lot of them will come talk to my mom because she will talk to people about [sex]. And I think it definitely makes things easier for me, being more comfortable with her. And it's definitely nice to have someone who is supportive in reminding me to pick up my birth control.

More than one woman in this group described her mother as the go to adult for their friends in both high school and college. Overall, this communicated to these women that sex was not something to be ashamed of, but a normal, natural part of life. Natalie, a 21 year old double major in psychology and sociology, talked specifically about the messages she received from her mother about sex when she was younger:

> I feel like I grew up in a very open household…My mom is very spiritual and very about being comfortable in your own body, being comfortable with who you are and sharing things. My mom would always give me the sex books and talk to you like about growing and puberty and all that stuff, 'That's normal and natural and everything's okay.' Like it's okay to be a sexual being. Which I know some parents make it seem more shameful. But my mom was very just like, 'It's okay to have sex... It's a beautiful thing. Instead of a naughty thing.

This message was markedly different from the messages received by other groups of women which tended to frame sex outside of outside of long term relationships, or outside of marriage, as being shameful. Because women in this group did not view sex as shameful, they were active and willing participants in hookups in college.

These women had a strong orientation toward their education and future goals, and felt that romantic relationships were not appropriate for them, especially in the first year or two of college. This is congruent with other research that has found that romantic relationships are time intensive and can be perceived as distracting from school (Carbone-Lopez 2012; Hamilton and Armstrong 2009). Haley, a 19 year old sociology major, described her feelings about romantic relationships in a way that was representative for this group of women: "I'm not in a serious relationship, I'm here to learn." Haley, and others, felt that college was for learning and planning one's career and future, and not for romantic relationships, and most definitely not for having a child. Allison, an 18 year old who has not yet declared a major, also felt this way: "I want to do a lot. I want to be able to go to college and stay out here, be on my own for a while and not have to worry about somebody else." Their strong orientation toward their future and their own development as students precluded involvement in romantic relationships, especially early in college, but that did not mean that they were not interested in sex.

For these women casual sex was not something to be ashamed of participating in. Natalie talked about her view of casual sex: "I think sex is definitely way more casual now. It's so casual. It's kind of like, I had sex with this guy this weekend, oh cool, tell me the details. Oh cool." Alexa, a 19 year old psychology major, also talked about her views of casual sex as appropriate: "[My friend and I] actually talked about it being a booty call. We were fine with it. We were both kind of like 'Its fine. We can hang out, we can smoke, we can have sex occasionally.'" For both Natalie and Alexa, as well as for other women in this group, casual sex was something that was a normal and positive experience, and so they regularly participated in casual sexual encounters. Jordan, an 18 year old who has not declared a major, describes her view of sex this way: I guess I'm very open about sex, I like sex, I don't think it's taboo. I think it's great… it's something to be embraced and human sexuality is interesting … I don't see sex as that big of a deal." While other groups of women had a lot of conflicted feelings about casual sex and felt that it was inappropriate behavior – even if they were engaging in it – this group of women saw it as a normal and natural part of life and a way to retain their own identity as students and women while still engaging in sex. Jordan went on to say: "I wanted non-

committed sex." In fact, for some of the women in this group romantic relationships represented a loss of independence. Jordan described this well when talking about her peer group in college:

> I think my friends are very strong, independent girls … And they definitely focus on being really happy with themselves and guys – that they don't want to be dependent on guys. And that I think relationships really do symbol dependency. And my friends just don't want that at all.

In some case these women saw romantic relationship as being negative, while casual sex was something that was fun and could be engaged in without compromising their focus on school and on their own development.

In keeping with their view of romantic relationships as being inhibitory to their own growth and development, women in this group who were in romantic relationships in high school specifically broke them off when they left for college. Natalie described the history of this group of women: "We were all kind of broken up with our boyfriends and [we] came to college [and] it was more just kind of people casually sleeping together." Women in this group were seeking what they called the "freshman experience" which for them included casual sex in addition to self-exploration as has been found by others investigating sexuality and entry into college (Allhoff et al. 2011; Willoughby and Dworkin 2008). Jordan put it this way: "I feel like you miss out on a lot going to college in a relationship… Definitely there are many ways that a relationship can kind of ruin your freshman experience." Jordan was concerned that having a boyfriend in college would both distract her from her studies, as well as draw her attention from participating in the activities on campus – including parties, drinking, and casual sex encounters.

As part of focusing on their own education, growth and development, women in this group were agentic within their sexual encounters. They felt strongly that women had to protect themselves from pregnancy by using some form of female contraceptive, and at the same time, expected men to use condoms for both pregnancy and STI protection. Kaitlin, a 20 year old philosophy major, talked about her view of her own decision about beginning birth control pills in college: "I alone made the decision to go on birth control, and that's for my protection… I'm doing it for me." Kaitlin, and other women, were proud of their own agency in deciding to protect themselves from pregnancy in their casual sexual encounters which is in line with existing research showing that many women do exert agency in sexual encounters (Albanesi 2010;

Carpenter 2005). While other groups of women frequently discussed taking birth control pills or using other forms of female contraceptives because they could not rely on the man to use a condom, these women did it because they felt that it was the best way to protect themselves in their sexual encounters.

Being on a female contraceptive did not mean that they were willing to have sex without a condom. In fact, risk-taking for these women was not using two – or sometimes even three - forms of contraceptive. They felt strongly that men should provide condoms since the women were providing other forms of contraceptives, but they also had no problem carrying condoms with them and insisting that the man use them during sex. Allison said: "We just always used a condom. No matter what." These women were not willing to forgo condom use and would refuse to engage in sexual activity without one. If a man presented an argument against condom use – such as pointing out that the woman was using a form of contraceptive already - women in this group such as Erin said: "I said I don't care. We are using a condom." When they did insist on condom use they described meeting little resistance from their male partners. These women described sex without a condom as "unprotected" and Madison said frankly that it was "a risk I'm not willing to take." While other groups of women would give in to requests for sex without condoms, sometimes reporting that their male partners could not maintain an erection with a condom on, this group of women was unwilling to give in even if it meant that sex would not occur. Haley described being faced with such a situation and her reaction to it: "I know one of my college hookups I told him I want to use a condom. And he's like, 'No, I'm not going to be hard if I use a condom.' And I was like, 'Well, that's a personal problem.' Nikki was happy to forgo sex with the man if he was unwilling, or unable for some reason, to use a condom.

In addition to using a female form of contraceptive and insisting on condom use, most of these women also did not allow men to come inside them and so withdrawal was a common practice – even with a condom on. As with the women in this group, the practice of using withdrawal with other methods of contraceptives has been shown before to be linked to levels of education and future orientations (Cheney et al. 2014). Courtney, a 22 year old integrative physiology major, described it this way: "Withdrawal is kind of a given." Allison agreed: "I wouldn't let him go inside me…even with a condom." Because these women were

adamant about condom use, as well as using others forms of contraceptives, and often requiring partners to withdraw before ejaculation even with condoms on, real risk-taking did not occur.

Women in this group were sex positive, had parents and peers who were open about sexuality, and were not interested in romantic relationships. They were adamant about protecting themselves from both pregnancy and STIs and had no problem both insisting on condom use and providing condoms if men did not have them. If condom use was not agreed upon, these women typically refused sex. Because they did not see romantic relationships as appropriate for early college and instead focused on self-exploration, they were less likely to worry about what their partners felt about contraceptive use, instead focusing on themselves and their own protection.

Discussion

This chapter documents how the psychosocial context in adolescence influences women's strategies for integration into hookup cultures. A major contribution of this chapter is the influence of adolescent psychosocial context on sexual and contraceptive behavior in emerging adulthood. A second contribution is the examination of the influence of hookup social contexts on contraceptive use beyond condoms and within the relationship context. Current research on hookup cultures looks only very superficially at condom use and does not address other forms of contraceptives, although the documented gender differentials in hookup cultures (Currier 2013) could easily be assumed to influence contraceptive use and risk-taking beyond the use of condoms.

Results show that there is a complicated relationship among the different norms about sex and contraceptive use that women experience in high school, supporting previous findings that focused on norms about entry to sex (Sennott and Mollborn 2011). Women had differing experiences in high school so far as the combinations of competing norms about sex and contraceptive use they were exposed to, and those differing and complex normative environments directly influenced their sexual and contraceptive behavior in college. My interviews with 45 undergraduate women at a large state university, most of whom were white and middle to upper-middle class in their social locations, demonstrates how seemingly small differences in

the competing norms women are exposed to in adolescence can lead to very different behaviors and strategies in college for integrating into the 'hookup culture.'

Recent work by Elizabeth Armstrong and Laura Hamilton (2013) studies women in a party dorm as they enter college and assigns them to groups as I have done here. However, the groups I have arrived at based on motivations for risk-taking are somewhat differently constructed than those found by Armstrong and Hamilton. While Armstrong and Hamilton found strong class lines dividing their groups, the groups I have found are mixed in regards to the self-identified social location of the women I interviewed. While I can identify women in my study who fit the categories identified in the Armstrong and Hamilton research, the types of experiences that motivate different reasons for contraceptive risk-taking appear to be more individually based and less based on social class. For example, regardless of class, women that had experienced open communication with their parents were more likely to contracept effectively.

I also found that the high school experiences of the women in my study had huge impacts on reasons for risk-taking in college, and also impacts on women's willingness to participate in hookups at Mountain University. While Armstrong and Hamilton did on occasion discuss the high school experiences of the women in their study, they did not use high school experiences to generate their groupings. In using high school experiences to create groups I am able to examine women's reasons for contraceptive risk-taking, and those reasons have more to do with gender norms and the degree to which those norms were present and enforced with their families and peer groups than with the social class of the women interviewed.

The differences I find between how Armstrong and Hamilton (2013) grouped the women they studied, and how the women in my study are grouped may be due to differences in research methods. While Armstrong and Hamilton conducted their research by observing and interviewing *all* freshman women on one floor of a known "party" dorm and then following them over time, I recruited women for this study by posting flyers and interviewing women at one point in time. Thus women who participated in my study were self-selected to a greater degree than were the women in the Armstrong and Hamilton study. In addition, because I did not follow the women I interviewed over time, and women were anywhere from 18 to 24 in my

study I gathered a cross sectional sample and used their histories of their high school experiences to examine how women perceived the influence of those experiences.

Women in the first group took the religious teachings of their young lives to heart and, although they participated in sexual relationships in high school and college, were careful to justify those relationships as being long-term and thus different from the casual sex taking place around them. These women challenged the norms of their parents, and often their peers by internalizing only part of the normative message to wait until marriage, instead engaging in sex only within long term relationships that would in theory lead to marriage. While studies have examined how virginity pledges and other overtly religiously based attempts to delay sexual activity (Bearman and Brückner 2001), none of which I am aware have looked at how the normative influence of religious teachings about sex shape later entry into sexuality. My results show that though women may take to heart the idea that a long term romantic relationship is the only appropriate vehicle for sex, and that they should participate in sexual activity with only one man, they eschewed the idea that marriage was a necessary precursor to sexual intimacy, instead seeing sex as a way of demonstrating the purity of their love for their partner. In demonstrating their love, they also took contraceptive chances and felt that it was a reasonable risk because they believed that their partners would not abandon them should a pregnancy occur. These women were similar to class two described in Chapters Four and Five in that they were more religious, and held generally negative views of sex, pregnancy, and contraceptive use, however these women demographically belong to the middle class reference group.

In the second group, women talked about their belief in the traditional gender expectations for men and women which put the men largely in charge of both sexual activity and contraceptive use. These women reported issues with their self-esteem and participated both in sex and in contraceptive risk-taking in order to try to secure a romantic relationship with their partner, behavior which has been documented in the literature (Amaro et al. 2002; Pearson 2006). Behavior within the high schools of these women normatively indicated that sexual behavior in any context was appropriate, and yet they were provided with very little, if any, information about sexuality or contraceptives. Confusing messages from parents resulted in contraceptives

being provided to these women for non-sex purposes, and often accompanied by a sex negative message (Sennott and Mollborn 2011). While women in this group did not see themselves as participants in the casual sex culture in college (or high school) they did in fact participate with the explicit idea that they would be able to obtain a romantic relationship through demonstrating their trust for their partner with unprotected sex (Regan and Dreyer 1999; Thomson and Holland 1998). They frequently engaged in sex with men who actively discouraged condom use, and they were reluctant to carry condoms or bring up contraceptive use with their partners – as they did not feel that this was part of the female's role in the traditional gender sexual script, although research suggests that this not the case (Kelly and Bazzini 2001). Nonetheless, they valued the possibility of love and romance so highly that they would allow contraceptive risk taking to occur even if it made them uncomfortable. This group was most similar to class six as described in Chapters Four and Five, in that they had reduced self-esteem, and high levels of pregnancy risk taking.

The third group of women attended high schools where casual sexual activity was common as was sexual activity within romantic relationships. Combined with this, was a normative environment of contraceptive risk taking, teen pregnancy, and abortion or childbearing. These women participated in both casual sex and romantic relationship sexual activity in high school and by the time they were ready to go to college felt that sex within a romantic relationship was preferable. While they had sex education in their school, their parents were silent on the subject of sex and contraception, and the result was that these women did not have enough correct information about contraceptives to be effective contraceptive users. While they were focused on entering into a romantic relationship when they entered college, they often did so beginning the relationship with a casual sexual encounter. This group of women was also most similar to class six in Chapters Four and Five, in that they had high rates of contraceptive risk-taking, and were fairly middle of the road in terms of their views of sex, pregnancy, and contraceptive use.

The fourth group abstained from sexual activity in high school, and their high school environments and peers were essentially silent on the subject of sex – although many suspected in retrospect that sexual activity was in fact taking place. Despite the general silence about sex their parents were afraid of teen pregnancy occurring and placed them on the birth control pill in an attempt to forestall that outcome.

Because this was accompanied by little conversation about sex or contraceptive risk, these women were inclined to view female forms of birth control as not particularly related to sexual activity and thus saw risk-taking as not using a *second* form of contraceptive. They generally disapproved of hookups but eventually participated in them anyway. They judged themselves for their participation and were very hard on themselves for anything they perceived as a contraceptive risk – such as foregoing a condom in a casual sexual encounter. They did not communicate well with their partners overall, contributing to what they considered contraceptive risk-taking, but consoled themselves with the knowledge that they could take Plan B or have an abortion if their lack of contraceptive use led to risk-taking they were not comfortable with. This group was most similar to class two as described in Chapters Four and Five. They were good contraceptive users but were willing to have an abortion if their contraceptive method (or methods) failed.

Finally, the fifth group, in contrast to all of the others, had a sex positive upbringing where their parents were open to sexual activity as a normal part of adolescence and often helped their daughter's to obtain contraceptives for the purpose of pregnancy prevention. These women were unique in their strong focus on self-development and their college education. They perceived romantic relationships as taking too much time away from their studies and were careful to avoid romantic entanglements. All of these women were in romantic relationships before they came to college, and specifically broke them off in order to have the "freshman experience" which for them included participating in casual sexual encounters. They were excellent contraceptive users and were not afraid to demand condom use in their sexual encounters. They, as did the fourth group, defined contraceptive risk taking as not using *two* (or often *three*) forms of contraceptives, and they had an intense focus on self-protection in their casual sexual encounters. These women were most similar to class one, the reference class described in Chapters Four and Five, and they held generally positive views of contraceptives, and felt that they had their parent's approval of their sexual activity.

Similar in adolescence to the "Young Negatives" and the "Older Negatives" from Chapters Four and Five, "The Religious" and "The Late Bloomers" in this chapter felt that their parents disapproved of adolescent participation in sexual activity, and either did not participate in it or only participated within a

long-term serious romantic relationship. Both groups disapproved of casual sex, preferencing sex within romantic relationships. However, these two groups diverged in college, with those who did participate in sex within a romantic relationship while in high school sticking with those relationships, and those who did not participate in sex at all in high school eventually experimenting with casual sex in college out of curiosity. "The Religious" group maintained their status as "good" through othering women who did participate, while "The Late Bloomer" group participated in casual sex but then were upset with themselves for doing so. Both "The Insecure" group and "The High School Partiers" experienced high school environments where casual sex was normalized and are most similar to the "Older Middles." While both groups participated in casual sex in high school, one group decided that they were done with it and decided to no longer engage in casual sex – although for the most part they did so anyway and ended up in a romantic relationship. The other group continued to participate in casual sexual encounters with the hope that it would lead to a relationship, but did not find one – at least they had not at the time they were interviewed. Finally, "The Career Women" group was most similar to the "Older Middle" and "Older Positive groups from the quantitative analysis – although they did not map directly onto the classes from the quantitative analysis. Women in this group were fine with sex – whether casual or within a romantic relationship – but felt that romantic relationships would be detrimental to their focus on their studies and future careers.

Women in almost all groups felt at least somewhat negatively toward casual sex. Although some previous research on hookup cultures has agreed with the assessment of the women in these groups by defining hookup cultures as entirely negative for women (Bogle 2008; Stepp 2007), the women in the "career women" group described in this data held attitudes and norms more in keeping with research which asserts that casual sex cultures can serve a purpose for women by allowing them to spend time on their studies and planning their future, rather than spending their time on maintaining romantic relationships (Hamilton and Armstrong 2009; Lyons et al. 2014a; Lyons et al. 2014b). Many of the groups identified in the study engaged in slut shaming and used this discourse to distance their own behavior from other women who they felt were "worse" than they were in terms of their sexual behavior (Armstrong et al. 2014). This supports other

literature which has found the slut discourse to be useful in women's maintenance of their own superiority (Armstrong et al. 2014).

Also in accordance with previous research, women interviewed in this study also talked about contraceptive risk-taking as being related to alcohol consumption (Lyons et al. 2014b), both in causal sexual encounters and within their romantic relationships. This was universal in the sample and did not differ between groups. While previous research found that the actions of close friends had the biggest influence on teen sexual behavior in the transition to sex (Sennott and Mollborn 2011) this study finds that normative influences on later behavior is a combination of broader high school level norms, peer norms, and parent communication about sex. How these norms conflict and interact with each other sets up specific strategies which women use to navigate entry into the new normative college environment of casual sex. These normative combinations also influence the degree and type of contraceptive risk taking women engage in during emerging adulthood.

While some groups of women sought out similar peers once in college in keeping with the findings of Schneider & Stevenson (2000), other groups of women engaged themselves in peer groups in which many of their friends were active participants in casual sex even if they themselves were not. If they did participate in casual sex, they used their friends' casual sex activity as a way to justify their own sexual behavior, which they typically classified as more appropriate than the behavior of their friends (Armstrong et al. 2014). This research echoes the conclusions of Sennott and Mollborn (2011) who found that it is important to consider how multiple and often competing norms work together to influence individual sexual behavior. Finally, the young women in this sample recognized the different norms they dealt with in high school and to some extent, but not entirely, recognized the influence of the previous norms on their college sexual and contraceptive behavior.

My study makes several clear contributions to the literature. First, there is a lack of investigation of the influence of hookup cultures on contraceptive risk taking in relationships. My study outlines how the presence of a normative casual sexual environment can encourage women to take risks with romantic partners in some situations. Second, my study demonstrates how often competing and conflicting normative

pressures in adolescence shape both sexual activity and contraceptive use in emerging adulthood. This longitudinal perspective is important for understanding how women deal with the change in normative environment as they transition to college. Third, my research clearly shows that hookup cultures are experienced differently by different groups of women, and that women engage in hookups with varying degrees of positivity. For some women, casual sex is used to bolster their own participation in romantic relationships, where for others it is an activity they feel ashamed of, and for still others it is a way to experience physical pleasure while not distracting them from their focus on school and the future – and importantly, how this occurs is dependent on past social normative environments. Finally, my study clearly demonstrates that for some women, men influence use of contraceptives far beyond the typically studied use of condoms. This data shows that men's desires and attitudes can lead to contraceptive risk taking in both romantic and casual sexual encounters far beyond negotiation of condom use, and even when there is no explicit communication between the woman and her male partner about contraceptive use.

There are also, however, limitations to my study. The women interviewed all graduated high school and are attending college. Casual sex in environments other than college may differ and strategies women use to deal with them are likely to differ as well. The sample of women at the university at which the study was conducted is overwhelming white, and therefore we cannot conclude that the experiences of minority women, whether on the same campus or at different campuses would be the same. Because this is a qualitative study, it cannot be said to be representative of anyone beyond the women interviewed, although the women interviewed in this study were fairly demographically representative of the broader population of the university at which the study was conducted.

Future research into hookup cultures and sexuality in emerging adulthood should take a longitudinal perspective, and examine how norms women are exposed to in high school influence their later experiences and coping strategies in college or other post high school environments. Because the normative environments in high school have such a strong influence on how and when women engage in sex and contraceptive risk taking in college, studying either setting in isolation gives us only part of the story. In addition, most research into sexual activity at the college level does not take into account the continuing influence of parental norms

and communication in the college setting. Future research on hookup cultures should also examine the psychosocial context from which young women enter hookup environments. Finally, studies of sexuality and contraceptive use tend to downplay the influence of men on any contraceptive beyond condoms.

Women's behavior in college was directly shaped by their experiences as younger adolescents. While they majority of these women did not talk about sex or contraceptive use with their parents, they experienced varying norms about sexuality in their high schools, and among their peers – ranging from primarily casual sex, to a complete silence about sex. These differences in how competing norms were perceived in high school created fundamental differences in the women's perceptions of themselves as sexual beings (Sennott and Mollborn 2011). This research demonstrates the importance of psychosocial context over the life course and show how norms one is exposed to in adolescence can dictate how one responds to norms in emerging adulthood, calling for a more explicitly life course perspective in norms research in the future.

CHAPTER SEVEN: "I just wasn't thinking": How women negotiate competing identities in sexual encounters

In this chapter, I examine how elements of the psychosocial context influence how women account for contraceptive risk-taking. I also examine the implications those accounts have for maintenance of their role identities as contraceptive users and as sexual partners. This research delves into the emerging adult psychosocial context and elucidates the ways in which women reconciled the contraceptive risk-taking they had engaged in and their identities as educated women who are knowledgeable about contraceptive use. The psychosocial contexts of adolescence shapes how women explain their contraceptive risk-taking and leads them to attempt to explain contraceptive risk-taking without threatening their identities as middle class women and responsible contraceptive users. To do this, I explore a specific reason many women give for contraceptive risk-taking - "I just wasn't thinking." Women gave this reason when asked to explain why they took contraceptive risks when they did not desire a pregnancy - although what that statement means underneath the surface can vary (James-Hawkins 2015). Women said they were "just not thinking," rather than stating the underlying meaning of their reason for not contracepting, because it provided them with "strategic ambiguity" (Currier 2013, p. 2). Strategic ambiguity allows women to support two conflicting role identities by letting them simultaneously please their partners when faced with having sex when they know they are not protected from pregnancy, while also protecting their identity as middle class women who are knowledgeable about pregnancy prevention and acting as responsible contraceptive users. Thus I argue, women view "just not thinking" as a way to navigate between their identity as a responsible sexually active woman - and therefore a contraceptive user (Fennell 2011) - and their identity as a female sexual partner who defers power within the sexual encounter to the male (Masters et al. 2013; Sanchez, Crocker and Boike 2005; Sanchez, Fetterolf and Rudman 2012; Sanchez, Kiefer and Ybarra 2006).

Women who used "just not thinking" as an excuse for not contracepting described being in situations in which either their male partners did not want them to use a condom, or they were afraid to request use of a condom. In addition, on occasions when women missed taking their birth control pills and knew they were potentially unprotected from pregnancy, they described not wanting to admit that they had

not met their responsibility as the one in charge of pregnancy prevention (Fennell 2011). Thus, when women said that they "just weren't thinking," they were simultaneously absolving themselves from responsibility for pregnancy, should one occur, on occasions in which they "did not think," while at the same time aligning their behavior with traditional sexual scripts which preference male sexual desire over female concerns (Masters et al. 2013; Sanchez, Kiefer and Ybarra 2006; Spengen 2013).

In addition, women made claims throughout the interviews that they knew the dangers of not contracepting, and that they had all of the knowledge they needed in order to successfully avoid an unintended pregnancy. They cited "just knowing" about contraceptives, learning from their parents, learning from peers, and learning from sexual education classes. They drew on the psychosocial context of their adolescence to bolster their moral identities as good, responsible women, contraceptive users, and good sexual and romantic partners.

In this chapter my first goal is to delve into the deeper meanings of "I just wasn't thinking" rather than taking it at face value as an explanation for contraceptive risk-taking. I explore underlying meanings and interrogate what those meanings represent. I discuss "just not thinking" as a non-specific excuse that allows women to reconcile the need to be seen as responsible contraceptive users by themselves and others (Hynie et al. 1998; Masters et al. 2013), with the need to provide sex to their male partners when and how they desire it (Masters et al. 2013). This "catch-22" women face is an example of the ways in which gender inequality plays out in heterosexual encounters (Armstrong, Hamilton and Sweeney 2006). Women are both constrained in their experience of desire and the sexual experience, while at the same time morally responsible for prevention of unprotected sex and pregnancy (Fennell 2011).

My second goal in this chapter is to explore what the women interviewed thought *other* women meant when they used the phrase "just not thinking." I further question if women are able to recognize the types of role identity negotiation they themselves engage in as happening for other women. I find that the women interviewed are more likely to attribute "just not thinking" to inherent personality defects within other women (James-Hawkins 2015), rather than as a strategy other women use for identity construction and maintenance (Ezzell 2009). Thus women see other women as "less" when they use "just not thinking" as a

reason for contraceptive risk-taking, and define the behavior of other women as different from their own behavior (Schwalbe et al. 2000).

The contributions of this work are two-fold. First, I demonstrate that the women in my sample, however unwilling, accept responsibility for pregnancy prevention. Second, I present the concept of the "contraceptive user identity" and suggest that the middle class women in my sample felt a strong responsibility to protect themselves from pregnancy, and as such identified themselves as contraceptive users regardless of their actual contraceptive risk-taking behavior. Third, I show how women used "I just wasn't thinking" to create a strategic ambiguity that allowed them to simultaneously act in accordance with norms suggesting female responsibility for pregnancy prevention, and those suggesting that women submit to their partners' sexual desire and wishes. Forty-five in depth interviews were done on a local college campus. Almost all women presented "I just wasn't thinking" as an excuse for taking contraceptive chances, although many of them were disinclined to see it as a reasonable excuse when it was presented as an excuse given by another woman.

Identities and Accounts

Researchers have shown that individuals can have multiple role identities (Burke and Stets 2009; Gecas and Burke 1995; Kang and Bodenhausen 2015). Multiple role identities can be activated at the same time, but the role identities that are more salient, and which the actor is more committed to, will take over in terms of the individual's behavior in a given situation (Burke and Stets, 2009). Identity verification happens when an individual compares the internal meaning of the role identity they are engaging in, with their behavior to see if the two are congruent (Burke and Stets, 2009). In other words, individuals want their behavior to be in accordance with the identity role they see themselves playing. Role identities exist in reference to other members of the role set (Burke 2004; Merolla et al. 2012; Stets and Serpe 2013), and so, for example, a woman's role identity as a contraceptive user is activated with respect to her role identity as a sexual partner. Both being a contraceptive user and a sexual being require the juxtaposition of another individual with whom the individual will engage in sex and potentially use contraceptives. Role identities may

be disturbed by the actions of others that make verification of multiple identities impossible (Burke and Stets 2009; Stets and Serpe 2013). Research has also found that there are gender differences in identity verification (Greenhaus, Peng and Allen 2012). Salience is also an important component of identity verification (Burke and Stets 2009; Merolla et al. 2012). In some situations one identity can be more salient than another (Callero 1985; Stets and Serpe 2013), and the more prominent a role identity is in a given situation the more salient it will be to the individual (Burke and Stets 2009).

When identity role verification does not occur, individuals must explain to themselves why their actions in a given situation were not congruent with their role identity. The idea of accounts (Scott and Lyman 1968) is useful in examining how women navigate between incongruent role identities. Accounts are a way to avoid censure from others and to bolster the self (Gonzales et al. 1990), and are typically situated in response to specific norms (Rhodes and Cusick 2002; Roche, Neaigus and Miller 2005). When violations of social norms occur, people want to either *excuse* behavior they know is inappropriate while disclaiming full responsibility for their actions, or they want to *justify* engaging in the behavior by arguing that they are not, in fact, violating any norms (Gonzales et al. 1990; Mills 1940; Peralta 2008).

Given the risks that people are likely to engage in over their lives, and especially in adolescence and emerging adulthood (Hoggart and Phillips 2011; Jaccard 2009), accounts for risky behavior help individuals to maintain their role identities. Researchers have found that women find excuses as more appropriate for explanation of failure in general than do men. Excuses are more deferential and imply that the action taken was inappropriate (Cupach, Metts and Hazleton 1986), which is in line with traditional gender scripts (Masters et al. 2013). In addition, accounts allow women to protect themselves as moral when others may judge them as immoral.

Women in this study used excuses to explain why they took contraceptive risks in the face of immense societal and interpersonal pressure for women to control their own fertility by being primarily (if not exclusively) responsible for contraceptive use (Hillier, Harrison and Bowditch 1999). Women are also generally expected to bear the responsibility for any negative consequences that may result from non-use (Sathiparsad 2010). Women dealt with their competing identities as feminine sexual partners, which requires

that they defer to men in initiation of sex and contraceptive use or risk being labeled as "loose" or "a slut" (Armstrong et al. 2014; Sathiparsad 2010), and their contraceptive user identities which require that they protect themselves from unwanted pregnancy by using contraceptives (Hillier, Harrison and Bowditch 1999). Used in this way, "just not thinking" as an account of non-use of contraceptives served an important function for women by helping them to reconcile risky sexual behavior with their identity as a responsible contraceptive user, while at the same time maintaining their identity as a feminine sexual partner. The majority of women in this sample had a vested interest in their identities as contraceptive users, thereby conforming to the norms that surround them as middle class college students (Driscoll et al. 2005; Frisco 2008; Novack and Novack 1996). But the women interviewed did not always act in accordance with the expectations they had for themselves, or the expectations they felt society had for them. Interestingly, when asked to explain "just not thinking" as an account used by other women, women were not able to do so and instead engaged in "defensive othering" (Ezzell 2009; Schwalbe et al. 2000) which allowed them to bolster their own heteronormative identities by creating symbolic boundaries between their own use of 'just not thinking' as an explanation for contraceptive use, and other women's use of it.

This data was collected using semi-structured individual interviews with 45 undergraduate women at a local university. Women were recruited based on being sexually active and *reporting having taken a contraceptive risk* since they became sexually active. That recruitment was based on risk-taking behavior is important to remember, even if that risk-taking was, for some women, somewhat isolated in occurrence. The experiences of the women interviewed are colored by the fact that they themselves have taken a risk that they are trying to both explain and excuse. Women who had never taken contraceptive risks might have been very different in their responses to the interview questions. When interviews were complete, each was transcribed verbatim, and coded by hand. I used a qualitative descriptive design (Merriam 2014) which is a combination of inductive and deductive thematic analysis (Fereday and Muir-Cochrane 2008). I first read each transcript for themes related to risk-taking. I next engaged in a process of memoing in which I wrote my thoughts about the major themes that appeared in the data in regards to risk-taking. I then read the transcripts again and pulled in quotes that supported the major themes I identified.

Results

The women interviewed described role identities in terms of how they should behave as responsible sexually active women, and how they should behave as sexual and romantic partners. Women's sexual partner identity largely stemmed from gender roles in which women are supposed to cater to me in sexual encounters. The contraceptive user identity stemmed from women's acceptance, albeit often reluctant, of the claim that contraceptive use was primarily the female's responsibility and that women must either use a female form of contraceptive or require that their male partners use a condom. This female responsibility for contraceptive use and pregnancy prevention it part of a middle class cultural rhetoric that defines women as smart, and responsible if they do use contraceptives, and stupid and irresponsible if they fail to do so and become pregnant (Huber and Ersek, 2010). While women in these interviews did not make any class or race distinctions in terms of female responsibility for contraceptive use, but instead referred to women more generally, as they were almost all middle class or above in socio-economic status and primarily White, I cannot draw conclusions regarding the existence of contraceptive identities in other classes or raced populations. Brittany, one of the women I interviewed, described female contraceptive responsibility this way: "I feel like it's for the most part like the girl's job to make sure that she doesn't get pregnant. So I guess it's like a girl's responsibility to make sure her boyfriend uses condoms or she's taking birth control or something like that." Taylor agreed with Brittany saying that pregnancy prevention is "more on us… we are the ones that will actually have a baby so I think [men] think it's more on us to prevent it." This feeling of female responsibility for pregnancy prevention was tied to the women's feeling that men were not going to be reliable in providing condoms. Marlee put it this way: "I think that girls feel like if they don't want to get pregnant, they have to be the ones who have the birth control. Like I don't think girls [can] rely on guys to bring a condom at all times." However, when asked if this meant that she thought women had responsibility for pregnancy prevention, Marlee qualified this by saying: "Well, I think that's how people think about it, I don't think that's how it should be." When Marlee and other women interviewed took on contraceptive use as their responsibility, it was usually in conjunction with the feeling that their partners could not be relied upon to provide pregnancy prevention and that they were expected to take care of it. Women also described how

they felt that as educated women, they should use a female form of contraceptive, and use it consistently. For these women, this translated into a contraceptive user identity in which they viewed themselves as contraceptive users regardless of the risk-taking they engaged in. Finally, many women identified their role identity as a sexual partner. Their sexual partner role identity sometimes involved making sure that their male partner's sexual needs were met, even if it meant risking pregnancy. This sense of personal responsibility for pregnancy prevention combined with their identity role as a contraceptive user to at times create a conflict with their role identity as a sexual partner. It was this conflict that led them to take sexual risks and they used "I just wasn't thinking" as an excuse for their risk-taking behavior. First I will illustrate women's perceptions of responsibility for contraceptive use and pregnancy prevention. I will then provide evidence of their role identity as a contraceptive user, and finally, I will present evidence of the use of "just not thinking" as a way to navigate between the two role identities when those role identities were in conflict.

Female Responsibility

Women interviewed felt that the responsibility for contraceptive use was assigned to them by their male partners. Rebecca, who had been with her boyfriend for just over a year at the time of the interview, described feeling that the college setting didn't encourage men to worry about contracepting: "I think a lot of times, in the college-age setting, [men] don't really think about [contraceptives]. And if they do, they are like, well, it's not my problem." While Rebecca felt that within her current relationship there was mutual contraceptive decision-making, she also saw college as a place where female responsibility for contraceptives was particularly pronounced. Most of the women interviewed expressed similar feelings of female responsibility for contraceptive use – whether they believed they should have responsibility or not. Olivia, a 22 year old sophomore, talked about her struggles with her current boyfriend, who was adamant about not using condoms: "I figured obviously [condoms are] not something that he feels comfortable doing, so it's not really worth a huge battle about … I can step up my game and figure my own shit out and prevent it on my own." Olivia was not prepared to fight with her boyfriend about using condoms, and also said that he would take any request from her to use condoms as evidence that she was being unfaithful. The women interviewed felt that contraceptive responsibility was put on them by men, and like Olivia, women generally were not

prepared to fight with their male partners about it, but instead accepted the responsibility given them. Norms about female responsibility for contraceptive use have been found by other researchers in the past (Hillier, Harrison and Bowditch 1999; Sathiparsad 2010).

Other women also expressed concern that they would be responsible should a pregnancy occur based on what they felt was their socially assigned responsibility for pregnancy prevention. In order to attempt to lessen what would be perceived by both herself and her partner as her own fault in the occurrence of an unintended pregnancy, Jessica, a freshman, talked about how she hides the fact that she is taking birth control pills from any new sexual partner as a way to try to lessen her culpability should a pregnancy occur. She said: "If you tell a guy you are on birth control they are going to expect you to be taking it every day and have it under control. And if that's the only kind of birth control you use is the birth control pill, and something happens, I feel like it's, well, it's your fault." However, Jessica also felt that if she hid her use of the pill from her partner, it would result in his being more willing to use condoms, or otherwise participate in pregnancy prevention measures, thus relieving her from at least some portion of her responsibility. Other research has found that the assignment of fault for any unintended pregnancy that may occur was related at least in part to social norms which place the responsibility for regulation of fertility and the consequences of sex on women (Fennell 2011). Ashley, a fifth year senior, described her feelings of responsibility for a potential unintended pregnancy this way:

> I was thinking the other day, if I got pregnant it would be embarrassing almost. Like, I would feel embarrassed about it. To me it would be seen as a mistake, *I* made a mistake. And this is almost shameful that *I allowed* that to happen…I would feel embarrassed to tell other people. I would feel embarrassed to have other people see me pregnant. At this point in my life it would be a mistake [emphasis mine].

Ashley goes on to talk about how she doesn't think men experience this same sense of embarrassment or responsibility for unintended pregnancy: "And so guys don't, their decision about [contraception] maybe doesn't take [pregnancy] into account because their bodies aren't being affected. There is just like a whole slew of transformations that happen once you have kids that guys don't have to take into account, even if they do have kids." Other women also felt that men do not have to take responsibility for either contraceptives or for an unintended pregnancy. Kelsey, a junior, discussed contraceptive responsibility being

pushed onto her by past partners. "It was definitely like, guys don't like using condoms, so we're not going to use condoms. And I guess I will go on the pill. So it's kind of like that transfer of, 'well, now it's on you. You have to take the pill.'" This was frustrating for Kelsey, and when she was directly asked who should be responsible for contraceptives, she said, "I think it's definitely both, [but] mainly a woman's right." Kelsey saw contraceptive use as a responsibility that was pushed onto her, but at the same time as a right she and other women could exercise in order to protect themselves from an unwanted pregnancy. Other research also characterizes contraception as a woman's right and a women's rights issue (Chigbu et al. 2013; Tolleson-Rinehart 2012).

Despite her experiences with her own partners who had almost all relied entirely on her for pregnancy prevention, Kelsey felt that the responsibility for pregnancy prevention should be shared: "As far as responsibility, I think it's equal. Just because I don't feel right blaming women for not using [contraceptives]. It's like, 'oh, it's your fault.' Because you can't victim blame, you can't do that. And especially if you are in a relationship and you are having sex, it's also a man's responsibility to bring it up I think." Kelsey went on to talk about how her current feelings that responsibility for contraceptive use should be shared have taken her a lot of time and work to arrive at. Her change in attitude from accepting responsibility for possible unintended pregnancy to her current attitude of shared responsibility, in her opinion largely stemmed from experiences she had when she was first in college and dated a man ten years older who insisted on using only withdrawal as their method of pregnancy prevention – a method with which she was fundamentally uncomfortable.

Contraceptive User Identities

Although women joined the study by self-identifying as sexually active contraceptive users and saw themselves as smart, educated, and knowledgeable about contraceptives, women were also recruited based on having taken a contraceptive risk. Despite their admitted risk-taking, women interviewed represented themselves as having a positive and proactive contraceptive user identity. In light of this, women had a difficult time explaining why they had taken contraceptive risks. They frequently referred to their contraceptive knowledge and talked about how good they *usually* were at contracepting, when they attempted

to frame explanations for contraceptive risk-taking. In fact, they sometimes used their positive contraceptive user identity *to explain* their contraceptive risk-taking. In other words, women emphasized how responsible and good they usually were in terms of contraceptive use, as a way of downplaying the risks they had taken. Women also emphasized the knowledge they possessed and described feeling guilty about past contraceptive risk-taking events. Rebecca expresses this nicely: "I have regrets that I was irresponsible about having sex. Because I've always been cautious about it and I come from a family that, well, beyond my parents, they are open about sexual relationships and how to be responsible." Rebecca felt strongly that she knew better than to take contraceptive risks, and talked about having had sex education in school in addition to talking with family members about sexual safety and contraceptive use.

For this group of college women, contraceptive use and acceptance of contraceptive responsibility was normalized. In fact many women felt that taking birth control pills, the most common method reported by the women interviewed, was simply a normal occurrence in all women's lives once they became sexually active. Victoria described this feeling: "I view pills as the most common choice, like that's just maybe like a given thing. Like if you're sexually active, just be on the pill." Lana concurred with Victoria's statement: "I think that being on birth control is such a common thing, it's like a second nature, like you go on birth control. As a girl my mom told me that if I wasn't on birth control [pills] by the time I was in college she would have me get on birth control [pills] because 'things happen' was basically what she said. It's better to be safe than sorry." Lana felt that college women in general knew about pregnancy prevention and therefore should be able to be effective contraceptive users. She went on to say: "We all were taught the same thing about condoms, about birth control pills. And since I was already on the pill when I became sexually active, it kind of didn't even cross my mind. And with condoms, I just knew that you were supposed to use those." For a few of the women, being on the birth control pill was such a "natural" thing that they had some trouble seeing birth control pills as effective pregnancy prevention. Taylor put it this way: "Well I still think of unprotected sex as honestly taking the pill, I still think in my mind that the pill is not that great… in the back of my mind the pill is not always effective. I don't know, I don't think of it as a good form of birth control… I don't count it as a secure form." While Taylor took the pill because she felt that it was the normal thing for

young women to do, she also wanted to use other forms of pregnancy prevention – whether it was condoms or withdrawal – as her confidence in the pill wasn't very high. Lack of confidence in the pill and other forms of contraceptives has been found among U.S. youth (Gilliam et al. 2004), and among non-U.S. youth as well (Chacko et al. 2007).

However not all women felt this way. Many women talked about wanting to take the birth control pills because of the feeling of control it gave them. They knew when they had taken the pill, and they also knew if they had missed a pill. Other forms of contraceptives, such as IUDs were scary to them because women felt they had to assume it was working without any verifiable external validation. Contrary to taking the pill every day, women were not able to have this kind of daily verification that their contraceptive method was working. Because IUDs and other such forms of pregnancy protection often cause women to not experience regular periods, women felt that they would be constantly worried about pregnancy because they would not have monthly verification that they were not pregnant. In contrast, most of the women interviewed felt confident in the efficacy of the birth control pill so long as they were taking it every day. Brianna, who is 18 and in her first year of college, felt that her use of the birth control pill was enough to protect her from unintended pregnancy: "I'm pretty confident in the pill and how I take it, so my chances [of pregnancy] are incredibly low." At the same time Brianna acknowledged that not everyone takes the pill correctly: "A lot of people don't take it to perfect use, but I know that I do because I make sure I take it exactly the same time every day." Brianna felt comfortable in her use of the birth control pill and so felt protected from pregnancy. She was not alone in this feeling. Jessica said: "I'm not afraid of getting pregnant right now because I know I take the pill regularly…have not missed a day." Despite their general confidence in their use of the birth control pill and professions of consistent use, both Brianna and Jessica later in their interviews described instances within the last few months where they had sex after having missed taking their pill which was in direct contrast to their earlier claim of having never missed a pill. Both of these women had a positive contraceptive user identity and considered themselves to be contraceptive users, and yet they did not always behave consistently with that identity.

The majority of the women had seemingly strong role identities as contraceptive users. Because they identified themselves as regular birth control pill users, and therefore generally protected from pregnancy, women sometimes had a false sense of safety, in that when they missed pills, they continued to assume that they were protected from pregnancy. This led to contraceptive risk-taking. Alyssa, a freshman, had been taking birth control pills for over a year. She described a vacation near the time when she had first began using the pill, after having used another form of contraceptive for a while: "I guess I was just rationalizing it in my head that I had been on my birth control for a few days already. I didn't actually think about it that much because I'm always on my birth control." Her identity as a good contraceptive user led her to overlook that she had not been on the pill long enough for pregnancy prevention to be assured, and also was in fact not on the pill during that weekend, when she had sex with her boyfriend. Other women experienced similar thought processes, in which the fact that they were generally good contraceptive users overrode the real risks they were taking when they had missed taking multiple pills. Lauren, a sophomore on campus, talked about having sex after missing several pills and then taking them all at the same time once she realized she had missed them: "I had missed my pill for three days in a row… I just was like…well, I still took it. So it's got to be okay, right?" Her role identity as a contraceptive user led her to downplay the risks of missing multiple pills in a row. Olivia expressed the same sentiment about missing pills: "I know with me, I just don't think it would happen to me or that I don't think – like I feel like the chances are so small that [if] it's one or two pills. I think it's not that big of a deal… so then realistically you are still like a little bit covered, kind of." Lauren and Olivia, like many other women interviewed, felt that their general use of birth control pills (or other forms of user dependent contraceptive methods) made them contraceptive users regardless of their actual behavior. In short, they had strong contraceptive user identities. This led to them taking risks, which they dismissed at the time, but often became concerned about afterwards. The contraceptive user identity, then, actually resulted in women seeing themselves as protected from unintended pregnancy, even when they were not using their contraceptive correctly, which led to increased risk of pregnancy.

Some women in the sample acknowledged that they were not good birth control pill users, but the general attempt to use a contraceptive method made them identity as contraceptive users. Because of this,

they rationalized that they were somehow protected from pregnancy, although they identified it as risk-taking in retrospect. When asked if she considered herself a contraceptive user, Olivia had this to say: "Yes…I feel like if I'm at least doing most of the motions I'm like covered. That I'm like using it. Isn't that part of what they calculate into contraceptive use is that most people don't use them really right?" Jasmine echoed this sentiment: "There were some times when I was like, 'Oh my God!' But at the same time, like, even though I was bad about taking the pill I thought maybe it would help - I don't know - to kill anything… I mean I was on the pill but at the same time I was forgetting to take it." While she sometimes worried about forgetting to take her pill, overall Jasmine felt as Olivia did – that simply taking the birth control pill was somehow enough even if she did not always take it correctly.

All of these women had identities as contraceptive users, and those identities were attached to having made some effort to prevent pregnancy. Even when women knew they were not using their contraceptive method correctly, they still saw themselves as contraceptive users. For some women the risks stemmed from pressure from their male partners to allow the use of withdrawal, which the women typically felt was not an effective method of pregnancy prevention, although they often agreed to its use despite their negative feelings. Victoria described how this happened for her: "I was very easy to persuade that he is like – 'no, I'll just use withdrawal.' Oh, okay. I was very easily persuaded… Like I was smart and I know what should be done and I know all the preventative measures but I was dumb. And he was like, withdrawal method. So that's what he did." Sydney agreed with Victoria. She also reported partner pressure to go forward with sex even though there was no contraceptive available: "He would get mad if I got him aroused and we didn't do anything…I felt like maybe I had to follow through with everything because he was pressuring." Both Victoria and Sydney discussed feeling that they "knew better" than to use withdrawal, or have unprotected sex, but pressure from their partner persuaded them into contraceptive risk-taking. Taylor talked about being afraid to ask her partner to use a condom: "When I was hooking up with that guy there were two or three times where I was just like afraid to ask to use a condom and even while we were having sex I was like pretty uncomfortable and kind of nervous the whole time of what was going to happen." Rather than saying anything to her partner, Taylor decided that the best course of action was to get Plan B afterwards. These last

few examples both demonstrate women's feelings of contraceptive identity – knowing that they should be using a contraceptive method, and also demonstrate their reluctance to challenge their male partners. These types of situations were at the heart of the identity conflict they experienced. Next I will show how "just not thinking" helped them to navigate between these identities.

Sexual Partner Identities and Identity Conflict

Admitting to use of withdrawal, having totally unprotected sex, or engaging in other contraceptive risk-taking was not easy for most of the women interviewed. Their middle class backgrounds and knowledge about pregnancy prevention combined with the unspoken assumptions that they were responsible for avoidance of pregnancy put women in a double bind. They generally accepted that pregnancy prevention was their responsibility, usually because they did not feel that they could rely on their male partners to take action. However, entwined with this was the feeling that their partner's happiness and desires should be put above their own –and many of their partners did not want to use condoms and so relied on their female partners to take the pill or use another form of female contraceptive. When women forgot to take the pill, they sometimes felt uncomfortable asking their partner to use a condom because it was tantamount to admitting they had not fulfilled their responsibility. Thus, some women expressed the desire to both please their partner, and the desire to hide the fact that sometimes they forgot their contraceptive method and therefore were not living up to male (and their own) expectations of their responsibility for pregnancy prevention. Given this context, women felt that they needed a way to explain the contraceptive risks they admitted to - both personally to themselves, and socially to me as the interviewer. Claims of not thinking and being swept away by 'the moment' were commonly used to navigate this clash between their enforced responsibility for contraceptives, their resulting contraceptive identities which stemmed from long-term responsibility for pregnancy prevention, and their identities as good sexual partners who deferred to the wishes of men who did not want to use condoms. Interestingly, STI protection seemed to be of little consequence to the majority of women interviewed who typically felt that they were familiar with their partner (often a member of their extended friendship group) and thus that the man could not possibly have an STI.

Claiming that sex "just happened" or that it was "not planned" provided strategic ambiguity which allowed women to participate in sexual encounters - and take contraceptive risks while doing so - while at the same time denying responsibility for that risk-taking. Jessica, an 18 year old freshman talked about her risk-taking in this context: "Yeah I thought about it, like it could happen but we never, hardly ever, had sex without a condom. I don't know. And when we did, *we didn't plan on*, 'Okay, we'll have sex without a condom this time.' *It would just happen*…because you want to be with them and you want to share that experience together" [emphasis mine]. Jessica starts out by saying that she thought about the possibility of pregnancy, but then she says that sex without a condom "would just happen." She is attempting to claim that she did think about preventing pregnancy, as an educated middle class woman "should," but also that she was carried away by the sexual interaction with her partner and so at the same time, unprotected sex "just happened." Jessica emphasized that her willingness to have sex without a condom was about her desire to have sex with her partner regardless of the availability of contraceptives. But because she 'didn't plan on' having sex – and certainly not having it without a condom - she is able to deny her culpability for the contraceptive risk-taking that occurred when she and her partner used withdrawal. Brooke described how 'just not thinking' is sometimes related to her romantic feelings for her long-time boyfriend:

> It wasn't until maybe our second year [that we used withdrawal] because the first year that we were together, we always made sure. And it was kind of like, I think it was the second year it was kind of more like, I guess, *not fully thinking* through about it, *just it happening*…I guess when you're in love with somebody like it just kind of like it doesn't really matter to you. Like *you just let things happen without thinking through them* [emphasis added].

While initially in their relationship, Brooke and her boyfriend were careful about contraception, later on once they had become more emotionally entangled with one another, Brooke said sex 'just happened.' Her feeling that she and her partner were in love contributed to her account of her risk-taking. For Brooke, being in love with her partner made her role identity as a partner more salient to her than her contraceptive user identity. She also felt certain that if a pregnancy were to occur her partner would stay with her and help her deal with the consequences: "So if anything did happen it wouldn't be like he would leave." Her claim of love, and her view of the constancy of her boyfriend, allowed Brooke to explain - both to herself and to me - why she risked pregnancy with her boyfriend, without having to fully acknowledge the responsibility she felt for

contraceptive use and pregnancy prevention. Saying that she "just wasn't thinking" provided a way for her to navigate these two identities, and she did so on a long-term basis, reporting that she and her boyfriend had used withdrawal repeatedly and recently.

Other women used the same strategy, although they admitted to more thought behind "just not thinking" than did Brooke. Ellie, an 18 year old freshman, talked about her encounter with a man with whom she was interested in having a romantic relationship:

> I had slept over, but we still never had sex. But the next morning when his roommate wasn't there, he asked if I wanted to take a shower. So I was like, 'okay, I know what that means, sure.' And this was the first time that I had sex without a condom… It wasn't a mutual thing of, do you want to do this without a condom? *It just kind of happened.* And to be honest I wasn't really opposed. I guess *I didn't have the time to sit down and think*, should I do this or should I not? It was just kind of in the moment [emphasis mine].

In Ellie's case, she first admits to knowing that their sexual encounter would not include condoms, but then later qualifies that knowledge – and relieves herself of the responsibility of risk-taking - by claiming that it just happened and that she did not have time to think. In this way, Ellie was able to navigate between her identity as a contraceptive user and her identity as a sexual partner successfully – although it led her to take a contraceptive risk. In Ellie's case this was a one-time occurrence which she says she never repeated. But that was not the case for all of the women interviewed, as some, like Brooke, reported taking repeated risks of long periods of time.

Other women cited their inexperience and trust in a more experienced partner as a reason for "just not thinking." Vicky, a junior, had her first sexual experience with an older man and described it this way: "We didn't really talk about [using withdrawal]. [He just did it], I guess *I didn't think about it*…I guess I figured the guy would have [condoms]… I don't know, *I didn't really think*" [emphasis mine]. Because Vicky was quite a bit younger than her partner, she made the assumption that if condoms were necessary he would have used them. While Vicky says she wasn't concerned about pregnancy at the time, she now feels that she had the right to request use of contraceptives even in light of her partner's greater experience. She resolved her willingness to take this contraceptive risk with her belief in her own responsibility for pregnancy prevention by saying that she didn't think about pregnancy or pregnancy prevention at the time, and that she assumed that the man would do something about it if it was really necessary. Her use of the excuse that she "just

wasn't thinking" also allowed her to explain her use of withdrawal on a long-term basis within her first relationship without violating her identity as a responsible woman who was aware that she needed to make sure she was protected from pregnancy. Other research has identified the dominance of the male partner in contraceptive decision-making (Vasilenko, Kreager and Lefkowitz 2015).

Other women were afraid that a demand for use of contraceptives – while satisfying their contraceptive user identity – would jeopardize their sexual encounter or their relationship. These women also used "just not thinking" as a way to explain their willingness to take contraceptive risks with their partners. Brittany, a junior, put it this way: "Yeah, I guess it was just like, you know, we were already kind of here, and going out to buy condoms might just ruin the mood and we might not want to do it later on. So we might as well do it now and then *worry about it later*" [emphasis mine]. Her concern about ruining the mood for herself and for her partner led her to take risks, but she then explained those risks in terms of not thinking about the risk during the sexual encounter but instead putting off thinking about it until later on – after the sexual encounter was over. In Brittany's case, worrying about it later constituted waiting for her period to arrive, which she described as being very stressful.

Hannah also decided not to think about the risk of pregnancy: "I pushed it out of my mind because we have sex less often than we did when we weren't living together, and it's partially because I have body issues. So sex is more rare and I had to jump on it while it was an opportune moment. So *I just didn't think about it*. I was like, 'alright, *we will deal with it later*'" [emphasis mine]. However, in Hannah's case she took Plan B the next morning when she realized that pregnancy was possible. As with both Brittany and Hannah, pushing thoughts about risk taking out of their minds was a common explanation women used as they tried to navigate between their perceived responsibility for contraception, and their own – and their partner's – desire for sex. It is interesting that women felt comfortable in expressing desire – typically phrased as being 'in the moment' - as a reason for contraceptive risk-taking in light of research suggesting that under most circumstances women feel that they are not supposed to admit to sexual desire (Tolman 1991; Tolman 1994; Tolman 2002). However, in this case, admitting to sexual desire or romantic love provided an explanation for contraceptive risk-taking, thus relieving women of the responsibility for that risk-taking in their own minds.

Other women cited reliance on their own perceptions of themselves as contraceptive users – their contraceptive user identity – to explain why they engaged in risk-taking. Lauren, a sophomore, said this: "*I didn't even think* about the fact that I had missed three pills until afterwards. Like, I was aware of it. I was like, wow – because it was at night and I take my birth control at night. And so I had mentally been aware that I hadn't taken it. But in my mind it wasn't like a risk… *I honestly wasn't [thinking]* [emphasis mine]." She went on to explicitly connect "not thinking" to her desire for a romantic relationship with her casual sexual partner: "I think at that point it was – I think from him especially, I craved, so – like I just wanted him to see me in a different way so bad." This illustrated how Lauren's desire to please her partner, and to not deny him sex, led to her taking a contraceptive risk. Lauren also described how this same conflict led to risk-taking in an earlier relationship:

> It was just like one of those things where it was like the end of high school, and I don't even – *I don't really think I had a lot of thought process with it*. Looking back on it, I don't think I did. I think just in the moment, I was like, 'yeah, okay, that's fine.' Like he had just asked me [about using withdrawal] and …*I didn't really think about it* because I didn't know how to say no to him [emphasis mine].

Lauren described having concerns about withdrawal but nevertheless allowed it to occur primarily because she didn't "know how to say no" to her partner – her role identity as a contraceptive user was overcome by her need to please her partner – her role identity as a sexual partner.

Abby, who had been in a relationship for four years at the time of her interview, had a boyfriend who had had erectile dysfunction in the past. She described a situation in which her identity as a sexual and romantic partner to her boyfriend overshadowed her desire to prevent pregnancy – her contraceptive user identity:

> I think I was like, I don't know, I was pretty horny because we had been like [doing] foreplay for a really long time and nothing was happening. So that was a problem. And also I was just like excited that he was hard and not getting soft and that he was happy. He was so happy. So that was my thought process. And then when it came to the condom thing, I was just, I guess, *that was a little bit on the back burner because of everything else. I didn't think about pregnancy*... I thought about it after, but not [before] [emphasis mine].

She also talked about how she knew in retrospect that taking contraceptive risks wasn't a great idea. "I'm like, yeah, we really should've used a condom though, that wasn't very smart." Even though she knew having unprotected sex wasn't a great idea, she still to some extent felt protected by her contraceptive user identity.

Because she saw herself as a good and responsible contraceptive user she felt that she would be protected even on the occasions when she failed to use a contraceptive. She described it this way: "I was really optimistic I guess and just really thinking it wasn't going to happen to us because we didn't really do it that often without a condom or anything." Abby used "just wasn't thinking" to navigate between the feeling that she should have used a condom, and also to explain why she didn't use one. While Abby indicated her desire to prevent pregnancy earlier in the interview, in that particular case she was more worried about her boyfriend's happiness, then she was about contraceptive use or pregnancy prevention. Her concern for her boyfriend's happiness led to totally unprotected sex – something that occurred in several additional encounters shortly after the one she described – before her contraceptive user identity became predominant and she began taking birth control pills.

Other women also described participating in contraceptive risk-taking due to their partner's influence – whether it was purposeful influence or not – for a period of time and then realizing that they needed to be more proactive in protecting themselves from pregnancy. Rebecca discusses use of withdrawal within a long-term relationship:

> I think it wasn't necessarily like it was my choice, because [withdrawal] was kind of like his method. And I guess during the time I was … *I didn't really think much about it*. And then … after a while, I was like, 'why am I doing this?' I think there was more of an uneven power balance in the beginning because I was being naïve and it was just all new experiences and I didn't really know how to react. And so I just felt that he was always making that decision [to use withdrawal] and it was not really like a choice or not really something that I could do. And then after going through what I was going through and feeling anxiety [about pregnancy], I knew that I had to stand up for myself and I had to protect myself in whatever way [I could] [emphasis mine].

Rebecca at first acquiesced to her partners preferred contraception – withdrawal – although she described how she worried about pregnancy and felt fundamentally uncomfortable using withdrawal as their only pregnancy protection. She attributed this, at least in part, to being young and less sexually experienced than her partner. She also felt that as the relationship progressed, her ability and desire to protect herself won out over just going along with her partner wishes.

Like Rebecca, most women in this sample eventually found a way to protect themselves from pregnancy, although it should be noted that women who did not manage to do this may have become pregnant and dropped out and thus would not be included in this sample. Some of the women in the sample

resolved their role identity conflict by going on the birth control pill, while for others the conflict was resolved by them leaving the relationship they were in. Nonetheless, instances of unprotected sex continued to occur for these women in almost all of their romantic relationships, and many of their casual sexual relationships as well. Most told me stories of past risk-taking accompanied by narratives of how they would not do such a thing in the future – even when the described risk-taking had been within weeks of their interview. Many of the women did not recognize that they were using "just not thinking" as an excuse for risk-taking. One woman, Kim, a 20 year old, did explicitly recognize "just not thinking" as an excuse. She said: "If [male partners] didn't bring it up – 'oh, I have a condom,' then *I wouldn't think anything about it.* …I was giving excuses and reasons [for using withdrawal] when really it just came down to me not being safe in general." However, Kim was an exception to the general rule. Most women did not recognize their use of "just not thinking" as a way to explain risk-taking behavior and to successfully navigate their need to maintain their own contraceptive user identity while explaining behavior which often preferenced the needs and desires of their male partners.

Defensive Othering

Women had a great need to excuse their behavior in comparison to other women, and they used symbolic boundaries to differentiate their contraceptive risk-taking from that of other women. This kind of "defensive othering" (Ezzell 2009; Schwalbe et al. 2000) was used as a way to bolster women's feelings that they were good contraceptive users *and* good sexual partners. While "just not thinking" was unsolicited throughout most of the interview, women independently volunteered it as an excuse for contraceptive risk-taking. However, one of the very last questions I asked in the interview was "What do you think other women mean when they say they 'just weren't thinking' about contraceptives?" When directly asked this question many women had a difficult time answering. They also were often somewhat hesitant in crafting their response. In general, women interviewed were dismissive and negative about women who would "just not think" even when they themselves had used "just not thinking" as an excuse for their own contraceptive risk-taking earlier in their interview. By drawing this line in the sand between their own personal use of "just not thinking" and

the motivations of other women for using the same excuse, women interviewed were able to maintain their sense of themselves as moral and acting appropriately within the sexual situation.

Some women drew on their identities as middle class college women who were educated to explain the difference between themselves and other women. These women generally said that other women who said they 'just weren't thinking' must be *uneducated.* Alyssa, an 18 year old freshman, was quick to say "It could be not being educated that that could put you at risk" when she was asked about other women's meanings for just not thinking - although her phrasing of her response was somewhat hesitant in that she suggested that "*it could be*" lack of education for other women. Rebecca agreed with Alyssa, saying: "Maybe she is ignorant and doesn't really know about birth control. Because there are people who are not educated about it." In both cases, these women and the others who gave this explanation for other women's use of "just not thinking" as an excuse for contraceptive risk-taking, drew on perceived differences between themselves as middle class, educated women and the "other" women they felt would use "just not thinking" as a reason for risk-taking. Obviously – to the women interviewed - these "other" women must be uneducated. This reinforced the boundary between the women interviewed as "us" and there for good contraceptive users regardless of the risks they had talked about taking, and "them" – women who were uneducated and thus prone to taking contraceptive risks out of ignorance.

Some of the women interviewed insisted that for other women "just not thinking" was code for having made a decision to be risky – even when they themselves had claimed that not thinking was about being "in the moment." Ellie said that other women who said they were "just not thinking" were:

> Just kind of making her own decisions I guess. If she ends up being pregnant and she really doesn't want it then that's – it was her decision… She would have to think about if she were saying no to using a condom and still having sex while she knew she didn't take her birth control. So it's kind of like, how can you do such a – how can you act – how can you have sex and be aware of all of those things and then still get upset if you get pregnant? Like someone knows exactly what they're doing… you're like 100% well aware of what you're doing.

Ellie felt strongly that other women were very aware that they were risk-taking – although she also had said earlier in the interview that her own "just not thinking" risk-taking was related to sexual pleasure - implying that she was not aware of the risk-taking until after the sexual encounter. Ellie also clearly states that other women who take risks and end up getting pregnant, have to accept responsibility for their actions. Jenn, a 19

year sophomore, felt similarly, although she attributed 'just not thinking' to a "subconscious decision" rather than a deliberate one, as Ellie did.

A few of the women interviewed spoke more strongly about other women's meanings. Marlee, a senior, said bluntly "I think she's lying," when she was asked what other women meant by "just not thinking." However, later on Marlee softened her tone a bit and said that it could be that "they didn't want to admit that they had sex without a condom because they really liked him and wanted a relationship." Abby agreed with Marlee, saying "I think 'I wasn't thinking' is also a really good excuse for like 'I didn't want to ask him to do that.'" In Abby's case, her explanation for other women's risk taking was in line with her own contraceptive risk-taking which was related to wanting to please her partner. The women interviewed were able to make sense of their reasons for saying "I just wasn't thinking," while at the same time not giving other women the same benefit of the doubt. In fact, they were generally dismissive of other women, and attributed their risk-taking to being ignorant and uneducated - perhaps partly because they felt that they could make the claim to knowledge and education themselves, as college women, and this gave them a basis for differentiating themselves from the "other."

Women interviewed also suggested that other women using the "just not thinking" explanation for risk-taking must not, as Cassie put it: "care about using any condoms or birth control." Lacey, a 20 year old, agreed with Cassie: "It's like sex – that's how you get pregnant. Like that's the only way you can – so I think it's never the matter of you're not thinking about – oh, I didn't think." This was a common reason offered for *other* women's use of "just not thinking," with many of the same women who said that they took risks because they "weren't thinking," suggesting that not thinking was not possible. Melissa, a senior, said: "I just think that you can't really ignore the fact that you are a woman and biologically pregnancy is like a very likely outcome of sex. I mean, I just don't really see anyone being like that self-unaware. No, I don't think that that [happens]." The women interviewed were dismissive of other women's claims to "not thinking" about pregnancy prevention during sex, despite their use of the same excuse earlier in their interviews.

In general, women responded to the question about what other women mean when they say they "just weren't thinking" with underlying reasons that suggested inherent character defects in those "other"

women. Lack of education, ignorance, bad/risky decision-making, lying, not caring, and lack of self-awareness were among the reasons given for *other* women saying "just not thinking." In contrast, women's own use of "just not thinking" tended to be attributed to specific situations. For example, many women cited partner related issues such as desire to form a more solid relationship, desire to make their partner happy, or being in love with their partner as explanations for just not thinking. Other women discussed plans to take Plan B after sex, usually being a good contraceptive user, or sexual desire, as underlying reasons for "just not thinking." What all of these reasons have in common is that they are situational, partner specific, and to some degree, represent knowledge of the risks of not contracepting. This suggests that the situations in which the women interviewed "just didn't think" were transitory and thus, that they were not likely to do it again. On the other hand, the dispositional reasons given for *other* women using *the same reason* for not contracepting (i.e. just not thinking), were attributed to personality and other permanent characteristics that suggest risk-taking for those "other" women would continue to occur. This "defensive othering" reinforces women's own identities as good contraceptive users and their place as educated middle class women within society, thus they are able to explain their own risk-taking in ways that provide them with strategic ambiguity – which they work hard to maintain – but they refuse to allow other women to do so.

Discussion

This chapter looked at how elements of the psychosocial context influenced both women's accounts of contraceptive risk-taking and their identity management. I argued that giving "I just wasn't thinking" as a reason for contraceptive risk-taking provides a way for middle class women to navigate between their identities as good contraceptive users and their desire to be good sexual partners by being submissive within sexual encounters and pleasing their male partners. Women freely and frequently use "just not thinking" as an explanation for risk-taking, although many underlying meanings are given when they are asked to explain what they mean by "just not thinking." Interestingly, when they explain what other women mean when they use "just not thinking" as an excuse for contraceptive risk-taking, the women interviewed had more difficulty in deciding what was meant, and were more likely to attribute "just not thinking" to inherent personality

characteristics. In contrast, for themselves, women gave non-permanent explanations of situationally related behavior as their meaning for "just not thinking" about contraceptives.

Overall, women expressed great discomfort with contraceptive risk-taking, and none of them indicated that they had any intention of becoming pregnant before they completed college. Given this fundamental objection to pregnancy in the college years, during which time it may interrupt their studies and education and reduce future opportunities (Cheney et al. 2014), women sought a way to explain why they took risks. Some women took risks predicated on their adherence to traditional gender roles in which women allow men to make decisions related to sex (Sanchez, Kiefer and Ybarra 2006) while other women attributed to being "in the moment." Women sought strategic ambiguity (Currier 2013) in their use of the excuse "I just wasn't thinking." By suggesting that they were too involved in the sexual encounter to think about contraceptives, they implied that the sexual encounter overwhelmed rational thought and thus led to contraceptive risk-taking. Within this context, women were able to argue both that they were responsible women and contraceptive users, and at the same time also responsive partners who were concerned with their male partner's sexual needs.

Women interviewed described how, during sex, the role identity of sexual partner was verified through the actions and responses of her partner. However, their role identity as a contraceptive user was often less salient during the sexual encounter, especially if the woman was a pill user and was not actively practicing her contraceptive user role identity as she would if she and her partner were using a condom. On top of this, in the end, women's role identity as a good contraceptive user was verified if a pregnancy did *not* occur – and so could be verified even when contraceptives were *not used.* In addition, the role identity of contraceptive user was not verified until sometime after a sexual encounter had taken place and the woman determined that she was not pregnant. Thus the role identity of contraceptive user was verified by the *absence* of a pregnancy over time, while, in contrast, the identity of sexual and romantic partner was verified by the *presence* of positive feedback from sexual and romantic partners during each sexual encounter. Adding to the dilemma women faced in dealing with competing identities of contraceptive user and sexual and romantic partner, women subscribed to the public health paradigm that perpetuates "the myth of the rational self as

risk averse" (Rhodes and Cusick 2002, p. 220), even when risk-taking – and especially contraceptive risk-taking – is widespread.

"Just not thinking" as an excuse for contraceptive risk-taking was particularly useful for women in identity construction and maintenance since it allowed them to disassociate themselves from their actions. While desire in women is constrained overall (Tolman 1994; Tolman 2002), desire was a useful excuse for women who wished to explain why they did not protect themselves from pregnancy. By accounting for their lack of contraceptive use using excuses which explain the risk-taking as couched in terms of their own overwhelming sexual desire, women were able to reconcile two their conflicting role identities. They were also able to assert that their risk-taking was understandable in light of American cultural norms (Rhodes and Cusick 2002) that women should allow men to direct sexual encounters (Sanchez, Crocker and Boike 2005; Sanchez, Fetterolf and Rudman 2012; Sanchez, Kiefer and Ybarra 2006).

"I just wasn't thinking" is only one example of how women navigate between their role identities as responsible women and thus contraceptive users (Masters et al. 2013) and their role identities as feminine sexual partners (Pearson 2006). Women felt great pressure to explain their behavior, and as such engaged in an identity performance (Stets and Serpe 2013) for me as the interviewer. When pressed to explain what they meant by "just not thinking" after spontaneously offering "I just wasn't thinking" as an excuse, many women had a very difficult time. They often paused as they tried to determine what their own meaning was. In fact, when it was pointed out to them that they had said that they "just weren't thinking," some women could not identify what they meant, nor, in some cases, were they sure why they had said it. It seems then, that women used the phrase to seek strategic ambiguity and reconcile their competing identities without being entirely aware that they were doing so. However, most women were able to identify the underlying meaning, which ranged from belief in unique invulnerability to pregnancy ("It won't happen to me"), to ambivalence about contraceptives to fear of side effects (James-Hawkins 2015).

In considering the limitations of this work it is important to note that the information presented here cannot be generalized beyond the women who participated. Although, demographically the women interviewed were quite similar to women on the campus as a whole. Also, because women were recruited on

the basis of contraceptive risk-taking, the views they expressed are likely somewhat different than those of women who are in fact quite careful about contracepting and never take risks. Also, women who became pregnant as a result of repeated risk-taking and carried to term were likely not included in this sample because they were no longer on the campus, or because they felt uncomfortable participating in a study where contraceptive risk-taking was the primary topic. It is also important to remember that these interviews represent the findings of one group of female undergraduates on one college campus. Women who never attended college were not included, nor were men - either in or not in college. Despite these limitations, this research does provide us with a rich and detailed account of one way in which women deal with conflicting role identities in the sexual arena. Women in this sample felt a tremendous conflict between their role as the party responsible for contraceptive use and pregnancy prevention (their contraceptive user identity) and their role as the party responsible for male happiness and sexual satisfaction (their sexual partner identity). In the end, "just not thinking" provided women with an acceptable way to negotiate identity conflict when they were at risk of pregnancy, either due to male refusal to wear a condom, or because they felt uncomfortable admitting to their partner that they had missed pills and were therefore not living up to their responsibility for pregnancy prevention.

CHAPTER EIGHT: Conclusion

The primary goal of this dissertation was to explore how the psychosocial context from adolescence impacts behavior in emerging adulthood in the realms of sexuality and contraceptive use. A secondary goal was to take a closer look at how women talk about and excuse contraceptive risk-taking. To achieve this goal, I used a mixed methods approach. Quantitative analysis showed that the psychosocial context from adolescence is predictive of sexual, reproductive, and contraceptive outcomes in emerging adulthood. Qualitative interviews with 45 undergraduate women explored how women talk about and excuse contraceptive risk-taking, recognizing the degree to which their lived experiences of the psychosocial context in adolescence and emerging adulthood influences their later behavior and choices. This project illustrates the need to look at social norms and their influences longitudinally. To do so, all analyses were set in a life course framework (Elder 1994) to support my contention that we need to look at norms and attitudes over time and see how they connect and influence us across different life course stages. Both quantitatively, in chapter five, and qualitatively, in chapter six, I demonstrated that social norms, along with attitudes that one is exposed to in adolescence have implications for behavior and outcomes in emerging adulthood. I examined different aspects of the fundamental question of why women who *do* have access to (and *can* afford) contraceptives sometimes chose not to use them.

This research presents evidence that there is more work needed on contraceptive non-use in populations of women who consider themselves to be contraceptive users. While much research has been done on populations that don't use contraceptives at all (Adler, Moore and Tschann 2014; Masinter, Feinglass and Simon 2013; Peipert et al. 2012), there is much less work looking at women who take contraceptive chances even when access and cost are not an issue (Ayoola, Nettleman and Brewer 2007; Nettleman, Brewer and Ayoola 2007). The answer is complex and the analyses presented here are just a first step in understanding the social and individual influences on this seemingly irrational behavior. My data shows effects of the social environment in one stage of life on behaviors and decisions made in a subsequent stage and calls for more longitudinal research on social norms, especially as they pertain to sexuality and contraceptive use (Carpenter and DeLamater 2012). In addition, my data allows me to explore how women in

hookup cultures, regardless of the strategy they used to adapt to it, are affected by the predominant psychosocial context on campus, and how they account for contraceptive risk-taking within this psychosocial context.

In Chapter Four of this dissertation, I used factor analysis and latent class analysis to identify specific profiles of psychosocial context in adolescence. I found that there were fundamental differences in how items grouped together for men in so far as teen pregnancy, teen sex, and contraceptive use. For teen pregnancy, factors for men differentiated between instrumental effects of a teen pregnancy on their lives (such as dropping out of school to care for a baby) and the negative social norms that might be applied to them if they were involved in a teen pregnancy (as represented by embarrassment felt by a pregnancy). For women, however, both normative and instrumental consequences group together as parts of a single construct .In addition, the patterns in the data are indicative of grouping by topic, such as what parents think about teen sexuality, or the respondent's own attitude about teen sex or pregnancy. As such, respondents are answering in ways that suggest that the attitudes they hold and the attitudes that other people hold, go together with social norms, and even with moral and instrumental issues. From this perspective, while it is of course important to research specific social norms and attitudes separately to more fully understand each in its own right, it is also important to consider that individuals do not tend to see norms, attitudes and instrumental consequences as entirely separate concepts. Rather, interventions and programs designed to increase contraceptive use, for example, might be more effective if they simultaneously address social norms and the attitudes of the self and others. Results indicated that adolescent psychosocial items do not cluster in such a way as to differentiate between parental messages suggesting that teens wait to begin sexual activity, and parental messages suggesting that teens use contraceptives if they do have sex. This likely leads to miscommunication between parents and teens about the importance of contraceptive use, and may lead to increased contraceptive risk-taking (Hyde et al. 2013; Schalet 2011b). Further research is needed to solidify the potential contributions of a more cross-disciplinary approach to these topics.

I also found that both age and socioeconomic class differences were apparent in the construction of the latent profiles. For both men and women, there were latent profiles that were clearly more advantaged in

terms of resources – reporting higher parental incomes at Wave I and higher personal incomes at Wave III – along with more years of completed schooling. In contrast, other latent classes were clearly less advantaged in these areas. Latent classes also had different profiles in terms of their psychosocial context. There were also apparent age differences in average age across the latent classes, with two classes for women and two classes for men having an average age about just below 15 at Wave I. Subsequent analyses determined that this was due to those who were 15 at either Wave I or II (depending on which wave their norms and attitude data was pulled from) grouped together, while those who were 16 or 17 at the time they responded to the survey grouped in other classes. As mentioned in the discussion of chapter four, I suspect that this is due to developmental changes over the teen years; teens who are 15 and less likely to be sexually experienced have different sets of norms than older teens, who are more likely to be having sex themselves or to have friends who are doing so. These results support previous research that argues there are fundamental differences in how between younger and older teens in how they view sexual activity (Regnerus 2007).

In Chapter Five, I used the latent classes identified in chapter four to predict outcomes for emerging adults ages 18-24. Specifically I looked at how the adolescent psychosocial context was related to sexual, reproductive, and contraceptive behavioral outcomes in emerging adulthood. I found that the psychosocial context from adolescence does in fact predict behavior in emerging adulthood, above and beyond common socio-demographic control factors. Researchers have long debated whether differences in sexual, pregnancy, and contraceptive outcomes by race, socio-economic status, and religion (among other socio-demographic factors) were due to selection into, for example, unintended childbearing among other outcomes. My analysis included the factors that are most commonly found to be associated with differential outcomes related to reproductive health such as age, race and ethnicity, marital status, and poverty level among others[38] (Brown and Eisenberg 1995; Henshaw 1998; Kost, Finer and Singh 2012).

I found the psychosocial context in adolescence was more predictive of outcomes above and beyond these commonly cited factors. More specifically, the reference group for both men and for women was

[38] See chapter three for a complete listing of socio-demographic factors included.

determined to be the socioeconomic class with the most middle of the road psychosocial context, which was largely white. For women, this group was middle class, whereas for men they were working class – somewhere in between the most advantaged class and the least advantaged class. For both men and women, the reference class was the largest class and the oldest, on average, at Wave I (16.5 years of age for women, and 16.6 for men). Predictive ability of the psychosocial classes for sexual and reproductive behaviors overall was stronger for women than for men. This may be attributed to gender norms that give men more power in sexual encounters and in terms of contraceptive use (Sanchez, Crocker and Boike 2005; Sanchez, Fetterolf and Rudman 2012), or it may be the result of social norms that stigmatize women who have "too many" sexual partners (Armstrong et al. 2014). Sexuality in women is subject to a higher level of social control (Bay-Cheng 2010; Bay-Cheng 2015) and associated with greater levels of stigmatization for behavior(s) that society has labeled as "immoral" in women (although often not in men) (Costa, Nogueira and Lopez 2009). Under these conditions, it is likely that women would be in a position that forces them to internalize cultural morality about sex and experience higher levels of guilt when they deviate from that morality (Else-Quest et al. 2012; Jones 2014; Woo, Brotto and Gorzalka 2011). Some specific and important gender differences are suggested in this data, including those strong norms about women as responsible for both the prevention of and consequences from unintended pregnancy (Fennell 2011). That these issues have a greater impact on women is supported by the weaker results found for men in the quantitative data. Social norms about women's responsibility to protect both herself and her partner from pregnancy put almost all of the responsibility on the female partner in heterosexual sexual encounters (Moore, Singh and Bankole 2011).

One interesting gender difference was found in the psychosocial context's ability to predict condom use for women but not men, and female forms of contraceptives for men but not women. This suggests that past psychosocial environment is more likely to come into play in a situation in which communication about contraception is needed. For men, adolescent psychosocial context is predictive of use of female forms of contraceptives, while for women it is predictive of condom use. This supports the concept that social norms and attitudes about gender come into play most strongly when one is engaging in social situations such as contraceptive negotiation (Fantasia et al. 2014; Pearson 2006). For example, when women are negotiating for

condom use or men have to ascertain if their female partner is using a form of contraceptive. The most significant effects found were for live birth between 18 and 24 and for having had sex by Wave III. In both cases, after adjusting for age, the reference group was the most likely to have had sex and given birth at a relatively young age. Effects for men were less pronounced on almost all outcomes. In fact, several outcomes showed no effect of adolescent psychosocial context on later behavior for men, including frequency of sex, recent condom use, and unintended birth between 18 and 24. Although it should be noted that the sample size was somewhat constrained for unintended birth and thus lack of effects could be due to insufficient power. Several other outcomes also showed only a minimal relationship between adolescent psychosocial context and later outcomes and behavior.

The most consistent effects were found between the male working class, largely white reference group and the "young positives," the male group that was largely positive about sex and pregnancy. However, the results were the opposite of what you would expect on most outcomes. For example, the male young positive group is less likely to have had sex by Wave III, they reported fewer sexual partners, more use of pregnancy prevention (both at most recent sex, and in the last twelve months), and fewer births and abortions than the reference class. Given the positive stance professed at Wave I about pregnancy and sex, this result seems counter-intuitive. "Young positives" were more likely to report having used no contraceptive at all in the last twelve months, indicating that they were engaging in casual sexual encounters in which they were unaware of the use of female forms of contraceptive. Interestingly, the "young positives" are both the most demographically similar to the reference group (apart from their lower average age at Wave I), but also the most consistently *different* in outcomes. This suggests that there may be something about the age differences between the groups that was not captured by this analysis. One possibility to consider is that Add Health inadvertently captured an actual cultural shift in norms and attitudes about sexuality in which those teens who were 16 and 17 at Wave I had different views about sex and reproduction overall compared to those teens that were younger at Wave I. If this were the case, data collected from the two groups that were younger at Wave I when they reached the ages of 16 or 17 should be similar in content to the responses they gave at the younger age. Unfortunately, as the questions used to construct the psychosocial context were not asked in

Waves III and IV, I cannot determine if there was, in fact, a shift in culture that may be driving the differences in outcomes between these two demographically similar groups.

Chapter Six explored how women perceive the relationship between their past and present psychosocial contexts. While the women themselves did not appear to explicitly see the connection between their past experiences and their present strategies for adaptation to hookup cultures on campus, patterns in their responses suggested that women's previous experiences with romantic and sexual relationships are important for the strategies they use. Five groups of women emerged, and each group had a different way of looking at contraceptive use and at hookup cultures in general. One group primarily had only one long term sexual partner and tied their sexuality closely to that relationship, and this pattern has been identified before in a study of college women (Armstrong and Hamilton, 2013). These women tended to come from religious backgrounds and they took contraceptive risks to please their long-term male partners. The second group was insecure about themselves and, while they engaged in casual sex, it was usually in friends with benefits situations, which they fundamentally disapproved of. They explained both their risk taking and their participation in casual sex by explaining that they hoped these actions would lead to a long-term romantic relationship. The third group engaged in casual sex and hookups in high school and decided that they were done with casual sex by the time they reached college. The women in this group came from backgrounds where there was generally silence on the topic of sexuality. At the same time, they described being surrounded by teen pregnancy in their schools and communities, and expressed great relief that they themselves had avoided that outcome. The fourth group did not participate in sexual activity of any kind in high school. They received conflicting messages from their parents about sex and contraceptive use, and often were put on contraceptives in high school when they were not sexually active, while at the same time being told to not have sex. These findings building on the work of Sennott and Mollborn (2011) concerning conflicting norms such as norms communicated to adolescents about refraining from sexual intercourse, but also to use condoms if they do have sex, must be further addressed to begin to change social norms about sexuality. Once in college this group engaged in casual sex but did not feel very good about their participation. These women were good contraceptors, and considered risk-taking not using condoms during casual sex. Finally,

the fifth group were focused on their schooling and future careers. They engaged only in casual sex and had no problem with that fact. They were also very good contraceptors who had experienced an open and communicative family environment when growing up in which sex and contraception was discussed as normal parts of growing up.

Gendered power dynamics were also evident in this data, particularly the "slut" discourse in which women were stigmatized for wearing suggestive clothing, having multiple partners, and engaging in "too much" casual sex (Ringrose 2011; Ringrose and Renold 2012). All but one group, the career women, espoused the slut discourse to some degree. Most of the women used this discourse to distance themselves from other women who engaged in ostensibly the same behaviors the women themselves engaged in. This data calls for new attention to be paid to gendered power in contraceptive use within *long-term sexual relationships* in emerging adulthood, something that almost all current research on hookup cultures ignores, as its focus is entirely on casual sexual encounters. For the most part, the women I interviewed did not indicate that it was difficult for them to demand a condom be used in purely sexual encounters. It was within the "friends with benefits" relationships and the romantic relationships where contraceptive risk-taking was most likely to occur.

The little research that exists on condom use in hookups ignores other forms of contraceptives and also does not examine how the presence of hookup cultures may impact contraceptive use within a "friends with benefits" or romantic relationship setting. My interviews with emerging adult women uncovered contraceptive risk-taking taking place within romantic relationships, a population that is usually excluded from research on hookup cultures. However, women's narratives indicated that at least in part their contraceptive risk-taking was often related to the fact that their relationships existed within a hookup culture in which sex is thought to be freely available. Women indicated that they had more reservations about denying a male romantic partner sex, when they felt he could leave the relationship and find sex elsewhere. While this was not true of all women, it demonstrates the impact that hookup cultures have on those in relationships, suggesting that we as researchers are missing a crucial piece of the puzzle when we omit this population from study. Sexual consent issues came up in many interviews and have been studied in

relationship to hookup cultures before (Jozkowski et al. 2014; Kettrey 2014). The topic of alcohol use related to both sex and contraceptive use were predominant in women's narratives. Although those issues were beyond the scope of this dissertation, additional work on alcohol, consent to sex, and contraceptive use should be undertaken in the future. Indeed other researchers have called for the inclusion of those in relationships in hookup culture research (Olmstead et al. 2013). These findings support the claim that, by far, the most risk-taking was going on in the context of a romantic relationship, or due to the desire for romantically furthering a relationship, rather than in the context of a hookup. Given the results of this dissertation, I would argue for more research on those in relationships within casual sex cultures. Further, this research should inquire about female forms of contraceptives, which this dissertation has shown to be impacted by the hookup social context. According to the narratives of women reported here, this impact appears to be primarily due to enhanced gender power differentials stemming from male advantage in hookup cultures which other researchers have also found (England and Thomas 2006; Owen and Fincham 2011), although some dispute that males have advantages in casual sex environments (Armstrong, Hamilton and England 2010).

In Chapter Seven, I explored the effects of the psychosocial context on contraceptive risk-taking behavior and focus in on one stage of the life course – emerging adulthood. Specifically, I explore how women use "I just wasn't thinking" as a way to navigate between their own identity as a contraceptive user, and their identity as a female sexual partner. "Just not thinking" offered women an excuse for behavior with which they were uncomfortable. All of the women, except the career women, expressed concern with their own behavior, and used the slut discourse to distance themselves and draw a boundary between their own behavior and that of other, less moral, women. They worried they would become pregnant, although most said they would seek an abortion if they did become pregnant. A big part of this excuse for risk-taking lay in the desire to please their partner, or to show trust in their partner in hopes of moving toward a romantic relationship. Saying that they were 'just not thinking' helped women to explain why they neglected to protect themselves from pregnancy and/or STIs in favor of pleasing their partner in some way while not threatening their own identities as good contraceptive users. This chapter calls attention to the gender power differences

that exist, and how the hookup cultures present on many college campuses may be exacerbating that power differential. For women interviewed, "I just wasn't thinking" provided them with strategic ambiguity (Currier 2013) allowing them to account for both their risk-taking behavior without taking on full responsibility for behaving in ways that are not culturally sanctioned – such as risking an unintended pregnancy. "I just wasn't thinking," then, was a way for women to reconcile two competing components of the psychosocial context.

Theoretical Implications

The findings of this dissertation support the call to examine sexuality from a life course perspective (Carpenter and DeLamater 2012; Carpenter 2010; Rossi 1994). It also calls for more nuanced examination of the influence of social norms and attitudes from one life course stage to the next. Social norms theory has in the past often divided norms into the individual (micro) level and the societal (macro) level (Fine 2001). This dissertation calls for additional investigation of the meso-level – or individual action within the social world (Fine 2001). The degree of contraceptive risk-taking, and often women's reluctance to admit up front that they had engaged in it, suggests the "norms" surrounding sexuality and contraceptive use are not *descriptive* of what is actually happening, but rather *injunctive* or moral norms – the way society thinks things should be. Middle class women present themselves as contraceptive users and yet many take contraceptive risks. Public health norms suggest that protecting oneself from pregnancy is the appropriate thing to do and frame unintended pregnancy as a public health problem – the injunctive norm in our culture (Finer and Zolna 2011; Peipert et al. 2012). Yet, the United States has the highest unintended pregnancy rate in the developed world (Maxson and Miranda 2011). Clearly, despite norms that call for women to prevent pregnancy, the descriptive norms in society about contraceptive use – or what is actually happening - are quite different. This research illustrates this tension between the injunctive norms and the descriptive norms, pointing to a fundamental dilemma in our society – if norms about contraceptive use are in fact injunctive norms then they must be taught (Fine 2001). How does one teach norms about sexuality and contraceptive use in a culture that is fundamentally silent on healthy sexual relations in an environment inundated with sex and sexual images – often ones that reinforce gendered power differentials? This research supports previous work that suggests

that the United States as a culture needs to change our approach to sexuality and sex education, if we aim to reduce unintended pregnancy (Santelli et al. 2006b; Schalet 2010; Schalet 2000). Indeed, in other countries in which the culture is not silent about sex, the difference between what is taught and what the "ought" of the society is, is not large (Schalet 2011b). In these cultures, contraceptive use is higher and unintended pregnancy rates lower (Schalet 2010; Schalet 2000; Schalet 2011b).

Chapters Four and Five and Six have implications for how we address risk behavior for emerging adults. Different backgrounds will influence the likelihood of engaging in some behaviors, but there is more to the story, as there also appears to be an effect of the social norms and attitudes we were immersed in as teens on our later outcomes. This suggest that to effectively counter risky behavior, in emerging adulthood, or at later ages, it is important to address what the psychosocial background of the individual is so that interventions can be tailored with consideration of previous psychosocial contexts.

Chapter Seven findings also have implications for identity research. This research showed that women who identify themselves as contraceptive users sometimes take risks simply because of that identity – because they were usually good contraceptive users they discounted the contraceptive risk-taking they engaged in. This research suggests there is a need for more work on strategic ambiguity and how it provides people with a bridge between "supposed to" and "are able to" – which often are contradictory. For example, this research demonstrates this for women who use "just not thinking" as a way to bridge the "supposed to" of contraceptive use, and what they are actually able to do. Data suggest that identity and use of excuses that provide strategic ambiguity may be closely linked, as ambiguous excuses provide individuals with an explanation of seemingly irrational behavior that other people will usually not interrogate too closely, often because they themselves engage in the same behavior. If individuals use strategic ambiguity to navigate between conflicting identities, they are explaining behavior without providing any real meaningful answer to the question of why they engaged in risk – either to themselves or to those around them.

Conclusion

This dissertation demonstrates the importance of cross-disciplinary and longitudinal studies of health behaviors, specifically contraceptive risk-taking. Even though women are clearly influenced by previous psychosocial contexts, they often do not see this influence their own lives and behavior. Many of the women interviewed saw themselves as contraceptive users and as such took more contraceptive risks than they felt comfortable with. Contradictory social norms about sexuality, particularly in the teen years, appear to create a set of normative and attitudinal contradictions which adolescents and emerging adults find it difficult to navigate. This research raises the call for the inclusion of contraceptive use and romantic relationships within research focused on hookup cultures. More importantly, this work calls for more cross-disciplinary research into health and risk behaviors. Current research tends to be siloed across different disciplines, and as such, may be missing important connections between concepts traditionally studied separately. Deeper social psychological inquiry into health behaviors is also warranted. This type of research will provide researchers with the "why" in addition to the "do they" question behind demographic research.

Contraceptive risk-taking is widespread in the United States as evidenced by our approximately 50% unintended pregnancy rate, and high rates of abortion compared to other developed countries. While there is certainly social psychological research on health risk behaviors, it tends to not be directly combined with more demographic research that identifies larger patterns in risk behavior. A cross-disciplinary approach that incorporates the perspectives of such disciplines as sociology, psychology, public health, behavioral economics, and behavioral genetic has the potential to enrich our understanding of health risks and offer guidance towards new ways to intervene and protect the health and safety of the population. In order to reduce the unintended pregnancy and abortion rates in the United States our culture must examine how we approach the underlying cause of these phenomena – inconsistent and incorrect contraceptive use.

References

Adams, Troy, and DawnElla Rust 2006. ""Normative Gaps" in Sexual Behaviors among A National Sample of College Students." *American Journal of Health Education* 37(1):27-34.

Adler, Nancy E., Philip J. Moore, and Jeanne M. Tschann. 2014. "Planning Skills in Adolescence: The Case of Contraceptive Use." *The Developmental Psychology of Planning: Why, How, and When Do We Plan?* :321.

Afable-Munsuz, Aimee, and Claire D. Brindis. 2006. "Acculturation and the Sexual and Reproductive Health Of Latino Youth in the United States: A Literature Review." *Perspectives on Sexual and Reproductive Health* 38(4):208-19.

Ajzen, Icek. 2001. "Nature and operation of attitudes." *Annual review of psychology* 52(1):27-58.

Ajzen, Icek, and Martin Fishbein. 1980. "Understanding attitudes and predicting social behaviour."

Akers, Aletha Y., Melanie A. Gold, James E. Bost, Ada A. Adimora, Donald P. Orr, and J. Dennis Fortenberry. 2011. "Variation in sexual behaviors in a cohort of adolescent females: the role of personal, perceived peer, and perceived family attitudes." *Journal of Adolescent Health* 48(1):87-93.

Albanesi, Heather. 2010. *Gender and sexual agency: How young people make choices about sex*: Rowman & Littlefield.

Alexander, Cheryl S., Mark R. Somerfield, Margaret E. Ensminger, Karin E. Johnson, and Young J. Kim. 1993. "Consistency of adolescents' self-report of sexual behavior in a longitudinal study." *Journal of Youth and Adolescence* 22(5):455-71.

Allen, Joseph P., Joanna Chango, David Szwedo, Megan Schad, and Emily Marston. 2012. "Predictors of Susceptibility to Peer Influence Regarding Substance Use in Adolescence." *Child Development* 83(1):337-50.

Allhoff, Fritz, Heather Corinna, Michael Bruce, and Robert M. Stewart. 2011. *College Sex-Philosophy for Everyone: Philosophers With Benefits*: John Wiley & Sons.

Allison, Rachel, and Barbara J. Risman. 2013. "A double standard for "Hooking Up": How far have we come toward gender equality?" *Social science research* 42(5):1191-206.

Altshuler, Anna L., Helen L. Gerns Storey, and Sarah W. Prager. 2014. "Exploring abortion attitudes of US adolescents and young adults using social media." *Contraception*.

Amaro, H. 1995. "Love, sex, and power - Considering womens realities in HIV prevention." *American Psychologist* 50(6):437-47.

Amaro, H., and I. Gornemann. 1992. "HIV/AIDS related knowledge, attitudes, beliefs, and behaviors among Hispanics: Report of findings and recommendations." *Boston: Boston University School of Public Health and Northeast Hispanic Consortium*.

Amaro, Hortensia, Amanda M. Navarro, Kerith Jane Conron, and Anita Raj. 2002. "Cultural influences on women's sexual health." Pp. 71-92 in *Handbook of women's sexual and reproductive health*: Springer.

Ariza, Carles, Manel Nebot, Zoa Tomás, Emmanuel Giménez, Sara Valmayor, Visitación Tarilonte, and Hein De Vries. 2008. "Longitudinal effects of the European smoking prevention framework approach (ESFA) project in Spanish adolescents." *The European Journal of Public Health* 18(5):491-97.

Armstrong, Elizabeth A., Paula England, and Alison C. K. Fogarty. 2012. "Accounting for Women's Orgasm and Sexual Enjoyment in College Hookups and Relationships." *American Sociological Review* 77(3):435-62.

Armstrong, Elizabeth A., and Laura Hamilton. 2013. *Paying for the Party*. Harvard University Press.

Armstrong, Elizabeth A., Laura Hamilton, and Paula England. 2010. "Is Hooking Up Bad for Young Women?" *Contexts* 9(22):22-27.

Armstrong, Elizabeth A., Laura Hamilton, and Brian Sweeney. 2006. "Sexual assault on campus: A multilevel, integrative approach to party rape." *Social Problems* 53(4):483-99.

Armstrong, Elizabeth A., Laura T. Hamilton, Elizabeth M. Armstrong, and J. Lotus Seeley. 2014. "'"Good Girls" Gender, Social Class, and Slut Discourse on Campus." *Social Psychology Quarterly* 77(2):100-22.

Arnett, Jeffrey Jensen. 2005. "The developmental context of substance use in emerging adulthood." *Journal of drug issues* 35(2):235-54.

Arnett, Jeffrey Jensen. 2014. *Emerging adulthood: The winding road from the late teens through the twenties*: Oxford University Press.

Attwood, Feona. 2007. "Sluts and riot grrrls: Female identity and sexual agency." *Journal of Gender Studies* 16(3):233-47.

Ayoola, AB, M Nettleman, and J Brewer. 2007. "Reasons for unprotected intercourse in adult women." *Journal of Womens Health* 16(3):302-10.

Babbie, Earl. 2004. *The Practice of Social Research*. Belmont, CA: Wadsworth/Thomson Learning.

Bailey, Beth L. 1989. *From front porch to back seat: Courtship in twentieth-century America*: JHU Press.

Baker, Sarah Elsie, and Rosalind Edwards. 2012. "How many qualitative interviews is enough."

Bakken, Rosalie J., and Mary Winter. 2002. "Family characteristics and sexual risk behaviors among black men in the United States." *Perspectives on Sexual and Reproductive Health*:252-58.

Baldwin, Wendy. 2000. "Information no one else knows: The value of self-report." *The science of self-report: Implications for research and practice* 10:3-9.

Banker, Jamie E., Christine E. Kaestle, and Katherine R. Allen. 2010. "Dating is Hard Work: A Narrative Approach to Understanding Sexual and Romantic Relationships in Young Adulthood." *Contemporary Family Therapy* 32:173-91.

Barber, J. S., W. G. Axinn, and A. Thornton. 1999. "Unwanted childbearing, health, and mother-child relationships." *J Health Soc Behav* 40(3):231-57.

Barber, Jennifer S., Heather H. Gatny, and Yasamin Kusunoki. 2012. "The results of an experiment: effects of intensive longitudinal data collection on pregnancy and contraceptive use." PSC Research Report.

Barber, Jennifer S., Heather H. Gatny, Yasamin Kusunoki, and Jennifer Yarger. 2010. *Attitudes Predicting Pregnancies Reported in an Online Weekly Survey: Preliminary Results*: Population Studies Center, University of Michigan.

Barr, Ashley B., Ronald L. Simons, Leslie Gordon Simons, Frederick X. Gibbons, and Meg Gerrard. 2013. "Teen Motherhood and Pregnancy Prototypes: The Role of Social Context in Changing Young African American Mothers' Risk Images and Contraceptive Expectations." *Journal of youth and adolescence* 42(12):1884-97.

Barriger, M, and CJ Velez-Blasini. 2013. "Descriptive and Injunctive Social Norm Overestimation in Hooking Up and Their Role as Predictors of Hook-Up Activity in a College Student Sample." *Journal of Sex Research* 50(1):84-94.

Bauermeister, Jose A., Katherine Elkington, Elizabeth Brackis-Cott, Curtis Dolezal, and Claude Ann Mellins. 2009. "Sexual behavior and perceived peer norms: Comparing perinatally HIV-infected and HIV-affected youth." *Journal of youth and adolescence* 38(8):1110-22.

Bay-Cheng, Laina Y. 2010. "Justifying sex: The place of women's sexuality on a social justice agenda." *Families in Society: The Journal of Contemporary Social Services* 91(1):97-103.

Bay-Cheng, Laina Y. 2012. "Recovering empowerment: De-personalizing and re-politicizing adolescent female sexuality." *Sex Roles* 66(11-12):713-17.

Bay-Cheng, Laina Y. 2015. "The agency line: A neoliberal metric for appraising young women's sexuality." *Sex Roles*:1-13.

Bearak, Jonathan Marc. 2014. "Casual Contraception in Casual Sex: Life-Cycle Change in Undergraduates' Sexual Behavior in Hookups." *Social Forces*:sou091.

Bearman, Peter S., and Hannah Brückner. 2001. "Promising the Future: Virginity Pledges and First Intercourse." *American Journal of Sociology* 106(4):859-912.

Bell, Jo. 2009. "Why embarrassment inhibits the acquisition and use of condoms: a qualitative approach to understanding risky sexual behaviour." *Journal of Adolescence* 32(2):379-91.

Bem, Daryl J. 1970. "Beliefs, attitudes, and human affairs."

Bendor, J, and P Swistak. 2001. "The evolution of norms." *American Journal of Sociology* 106(6):1493-545.

Berger, Amanda, Kristen Peterson, Jennifer Manlove, and Lina Guzman. 2013. "Knowledge, Motivations to Avoid Pregnancy, and Avoidance of Hormonal Methods: A Mixed Methods Approach ", edited by Child Trends. Bethesda, Maryland.

Bernardi, L, S Keim, and H von der Lippe. 2007. "Social Influences on Fertility A Comparative Mixed Methods Study in Eastern and Western Germany." *Journal of Mixed Methods Research* 1(1):23-47.

Berne, Linda A., and Barbara K. Huberman. 2000. "Lessons learned: European approaches to adolescent sexual behavior and responsibility." *Journal of Sex Education and Therapy* 25(2-3):189-99.

Berntson, Marit Ann, Kristi L. Hoffman, and Tracy L. Luff. 2014. "College as context: Influences on interpersonal sexual scripts." *Sexuality & Culture* 18(1):149-65.

Bersamin, Melina M., Mallie J. Paschall, Robert F. Saltz, and Byron L. Zamboanga. 2012. "Young adults and casual sex: The relevance of college drinking settings." *Journal of sex research* 49(2-3):274-81.

Bertens, Madelief G. B. C., Anja Krumeich, Bart van den Borne, and Herman P. Schaalma. 2008. "Being and feeling like a woman: respectability, responsibility, desirability and safe sex among women of Afro-Surinamese and Dutch Antillean descent in the Netherlands." *Culture, health & sexuality* 10(6):547-61.

Bessett, Danielle, Joanna Prager, Julia Havard, Danielle J. Murphy, Madina Agénor, and Angel M. Foster. 2015. "Barriers to Contraceptive Access after Health Care Reform: Experiences of Young Adults in Massachusetts." *Women's Health Issues*.

Bicchieri, Cristina. 2005. *The grammar of society: The nature and dynamics of social norms*: Cambridge University Press.

Billy, JOG, WR Grady, and ME Sill. 2009. "Sexual Risk-Taking Among Adult Dating Couples In the United States." *Perspectives on Sexual and Reproductive Health* 41(2):74-83.

Bogle, Kathleen A. 2007. "The shift from dating to hooking up in college: What scholars have missed." *Sociology Compass* 1(2):775-788.

Bogle, Kathleen A. 2008. *Hooking Up: Sex, Dating, and Relationships on Campus*. New York: NY: New York University Press.

Boone, Tanya L., Eva S. Lefkowitz, Laura Romo, Rosalie Corona, Marian Sigman, and Terry Kit-Fong Au. 2003. "Mothers' and adolescents' perceptions of AIDS vulnerability." *International Journal of Behavioral Development* 27(4):347-54.

Booth, Alan, Elisa Rustenbach, and Susan McHale. 2008. "Early family transitions and depressive symptom changes from adolescence to early adulthood." *Journal of Marriage and Family* 70(1):3-14.

Bordini, Gabriela Sagebin, and Tania Mara Sperb. 2013. "Sexual double standard: A review of the literature between 2001 and 2010." *Sexuality & Culture* 17(4):686-704.

Bowleg, Lisa, Kenya J. Lucas, and Jeanne M. Tschann. 2004. "'"The ball was always in his court": An exploratory analysis of relationship scripts, sexual scripts, and condom use among African American women." *Psychology of Women Quarterly* 28(1):70-82.

Brauner-Otto, Sarah, Jennifer Yarger, and Joyce Abma. 2012. "Does it matter how you ask? Question wording and males' reporting of contraceptive use at last sex." *Social science research* 41(5):1028-36.

Brechwald, Whitney A., and Mitchell J. Prinstein. 2011. "Beyond Homophily: A Decade of Advances in Understanding Peer Influence Processes." *Journal of Research on Adolescence* 21(1):166-79.

Brewster, Karin L., Elizabeth C. Cooksey, David K. Guilkey, and Ronald R. Rindfuss. 1998. "The changing impact of religion on the sexual and contraceptive behavior of adolescent women in the United States." *Journal of Marriage and the Family*:493-504.

Brewster, KL, JOG Billy, and WR Grady. 1993. "Social-Context and Adolescent Behavior - The impact of community on the transition to sexual-activity." *Social Forces* 71(3):713-40.

Brimeyer, TM, and WL Smith. 2012. "Religion, Race, Social Class, and Gender Differents in Dating and Hooking Up Among College Students." *Sociological Spectrum* 32(5):462-73.

Brown, Jane D., Jeanne R. Steele, and Kim Walsh-Childers. 2001. *Sexual teens, sexual media: Investigating media's influence on adolescent sexuality*: Routledge.

Brown, Sarah S., and Leon Eisenberg. 1995. *The best intentions: Unintended pregnancy and the well-being of children and families*: National Academies Press.

Browning, Christopher R., and Edward O. Laumann. 1997. "Sexual contact between children and adults: A life course perspective." *American Sociological Review*:540-60.

Bryant, Joanne. 2006. "Rights, responsibilities and citizenship in heterosexual women's talk about sex: promoting women's sexual health and safety." *Health Sociology Review* 15(3):277-86.

Bryman, Alan. 2006. "Integrating quantitative and qualitative research: how is it done?" *Qualitative research* 6(1):97-113.

Brückner, Hannah, Anne Martin, and Peter S. Bearman. 2004. "Ambivalence and pregnancy: adolescents' attitudes, contraceptive use and pregnancy." *Perspectives on sexual and reproductive health* 36(6):248-57.

Brückner, Hannah, and Karl Ulrich Mayer. 2005. "De-standardization of the life course: What it might mean? And if it means anything, whether it actually took place?" *Advances in Life Course Research* 9:27-53.

Buhi, Eric R., and Patricia Goodson. 2007. "Predictors of adolescent sexual behavior and intention: A theory-guided systematic review." *Journal of Adolescent Health* 40(1):4-21.

Bumpass, Larry, and Charles F. Westoff. 1969. "The prediction of completed fertility." *Demography* 6(4):445-54.

Burdette, AM, CG Ellison, TD Hill, and ND Glenn. 2009. ""Hooking Up" at College: Does Religion Make a Difference ?" *Journal For the Scientific Study of Religion* 48(3):535-51.

Burdette, Amy M., and Terrence D. Hill. 2009. "Religious Involvement and Transitions into Adolescent Sexual Activities*." *Sociology of Religion*:srp011.

Burke, Peter J., and Jan E. Stets. 2009. *Identity theory*: Oxford University Press.

Burke, PJ. 2004. "Identities and social structure: The 2003 Cooley-Mead Award address." *Social Psychology Quarterly* 67(1):5-15.

Burton, Linda M. 1996. "Age norms, the timing of family role transitions, and intergenerational caregiving among aging African American women." *The Gerontologist* 36(2):199-208.

Busse, Peter, Martin Fishbein, Amy Bleakley, and Michael Hennessy. 2010. "The role of communication with friends in sexual initiation." *Communication research*.

Bute, J. J., and R. E. Jensen. 2010. "Low-income women describe fertility-related expectations: descriptive norms, injunctive norms, and behavior." *Health Commun* 25(8):681-91.

Callero, Peter L. 1985. "Role-identity salience." *Social Psychology Quarterly*:203-15.

Campbell, CA. 1995. "Male Gender-Roles and Sexuality - Implications for Women's AIDs Risk and Prevention." *Social Science & Medicine* 41(2):197-210.

Campo, Shelly, Natoshia M. Askelson, Erica L. Spies, and Mary Losch. 2012. "Ambivalence, communication and past use: Understanding what influences women's intentions to use contraceptives." *Psychology, health & medicine* 17(3):356-65.

Campo-Engelstein, Lisa. 2012. "Gender Norms and Contraceptive Trust." *Alb. LJ Sci. & Tech.* 23:581.

Carbone-Lopez, Kristin. 2012. "The life course consequences of childhood sexual assault: Effects on relationship formation and intimate violence across relationships." Pp. 88-106 in *Sex for Life: From Virginity to Viagra, How Sexuality Changes Throughout Our Lives*, edited by Laura M. Carpenter and John DeLamater. New York, NY: New York University Press.

Carpenter, L., and J. DeLamater. 2012. "Studying gendered sexuality over the life course: A conceptual framework." NYU Press New York, NY.

Carpenter, Laura M. 2005. *Virginity lost: An intimate portrait of first sexual experiences*: NYU Press.

Carpenter, Laura M. 2010. "Gendered sexuality over the life course: A conceptual framework." *Sociological Perspectives* 53(2):155-77.

Carter, JA, LD McNair, WR Corbin, and M Williams. 1999. "Gender differences related to heterosexual condom use: The influence of negotiation styles." *Journal of Sex & Marital Therapy* 25(3):217-25.

Casterline, John B. 1989. "Collecting Data on Pregnancy Loss: A Review of Evidence from the World Fertility Survey." *Studies in Family Planning* 20(2):81-95.

Castronova, E. 2004. "Social norms and sexual activity in US high schools." *Journal of Human Resources* 39(4):912-37.

Cattell, Raymond B. 1966. "The scree test for the number of factors." *Multivariate behavioral research* 1(2):245-76.

Centers for Disease Control and Prevention. 2012. "Sexual experience and contraceptive use among female teens-United States, 1995, 2002, and 2006-2010." *MMWR. Morbidity and mortality weekly report* 61(17):297.

Chacko, Sunita, Walter Kipp, Lory Laing, and Geoffrey Kabagambe. 2007. "Knowledge of and perceptions about sexually transmitted diseases and pregnancy: a qualitative study among adolescent students in Uganda." *Journal of health, population, and nutrition* 25(3):319.

Cheney, Ann M., Bayla Ostrach, Ruthanne Marcus, Cynthia Frank, Cassandra Ball, and Pamela I. Erickson. 2014. "A Culture of Future Planning Perceptions of Sexual Risk Among Educated Young Adults." *Qualitative health research* 24(10):1451-62.

Cheng, M. M. 2010. "Relationship and Fertility Data: Wave IV." in *Add Health Users Conference*. Chapel Hill, NC: University of North Carolina at Chapel Hill.

Cherlin, A, C Cross-Barnet, LM Burton, and R Garrett-Peters. 2008. "Promises They Can Keep: Low-Income Women's Attitudes Toward Motherhood, Marriage, and Divorce." *Journal of Marriage and Family* 70(4):919-33.

Chia, SC. 2006. "How peers mediate media influence on adolescents' sexual attitudes and sexual behavior." *Journal of Communication* 56(3):585-606.

Chia, SC, and WP Lee. 2008. "Pluralistic ignorance about sex: The direct and the indirect effects of media consumption on college students misperception of sex-related peer norms." *International Journal of Public Opinion Research* 20(1):52-73.

Chigbu, Chibuike O., Azubuike K. Onyebuchi, Elijah N. Onwudiwe, and Stella E. Iwuji. 2013. "Denial of women's rights to contraception in southeastern Nigeria." *International Journal of Gynecology & Obstetrics* 121(2):154-56.

Chuang, CH, CS Weisman, MM Hillemeier, FT Camacho, and AM Dyer. 2009. "Predictiing Pregnancy From Pregnancy Iintentions: Prospective Findings from the Central Pennsylvania Women's Health Study (CePAWHS)." *Womens Health Issues* 19(3):159-66.

Clark, Liana R., Cynthia Brasseux, Donna Richmond, Pamela Getson, and Lawrence J. D'Angelo. 1997. "Are adolescents accurate in self-report of frequencies of sexually transmitted diseases and pregnancies?" *Journal of Adolescent Health* 21(2):91-96.

Clark, Vicki L. Plano. 2010. "The adoption and practice of mixed methods: US trends in federally funded health-related research." *Qualitative Inquiry*.

Claxton, Shannon E., and Manfred HM van Dulmen. 2013. "Casual sexual relationships and experiences in emerging adulthood." *Emerging Adulthood* 1(2):138-150.

Cook, Catherine. 2012. "'Nice girls don't': women and the condom conundrum." *Journal of clinical nursing* 21(3-4):535-43.

Corcoran, Kevin J., and Laura R. Thomas. 1991. "The influence of observed alcohol consumption on perceptions of initiation of sexual activity in a college dating situation." *Journal of Applied Social Psychology* 21(6):500-07.

Costa, Cecila, Conceicao Nogueira, and Felix Lopez. 2009. "'My sexual self, I stifled it': sexual subjectivities among young Portuguese women." *Culture, health & sexuality* 11(4):431-42.

Cotton, Sian, Lisa Mills, Paul A. Succop, Frank M. Biro, and Susan L. Rosenthal. 2004. "Adolescent girls' perceptions of the timing of their sexual initiation:"too young" or "just right"?" *Journal of Adolescent Health* 34(5):453-58.

Cowley, Amanda D. 2014. "'Let's Get Drunk and Have Sex" The Complex Relationship of Alcohol, Gender, and Sexual Victimization." *Journal of interpersonal violence* 29(7):1258-78.

Cox, Ronald B., Karina M. Shreffler, Michael J. Merten, Kami L. Schwerdtfeger Gallus, and Jamie L. Dowdy. 2014. "Parenting, Peers, and Perceived Norms: What Predicts Attitudes Toward Sex Among Early Adolescents?" *The Journal of Early Adolescence*:0272431614523131.

Craig, Amaranta D., Christine Dehlendorf, Sonya Borrero, Cynthia C. Harper, and Corinne H. Rocca. 2014. "Exploring Young Adults' Contraceptive Knowledge and Attitudes: Disparities by Race/Ethnicity and Age." *Women's Health Issues* 24(3):e281-e89.

Crawford, Mary, and Danielle Popp. 2003. "Sexual double standards: A review and methodological critique of two decades of research." *Journal of sex research* 40(1):13-26.

Creswell, John W., Ann Carroll Klassen, Vicki L. Plano Clark, and Katherine Clegg Smith. 2011. "Best practices for mixed methods research in the health sciences." *Bethesda (Maryland): National Institutes of Health*.

Crosbie, PV, and D Bitte. 1982. "A Test of Luker's Theory of Contraceptive Risk-Taking." *Studies in Family Planning* 13(3):67-78.

Cupach, William R., Sandra Metts, and Vincent Hazleton. 1986. "Coping with embarrassing predicaments: Remedial strategies and their perceived utility." *Journal of Language and Social Psychology* 5(3):181-200.

Currier, Danielle M. 2013. "Strategic Ambiguity Protecting Emphasized Femininity and Hegemonic Masculinity in the Hookup Culture." *Gender & Society*:0891243213493960.

Daley, Alison Moriarty. 2011. "Contraceptive Services in SBHCs A Community Experience in Creating Change." *Policy, Politics, & Nursing Practice* 12(4):208-14.

de Visser, Richard O., Paul B. Badcock, Judy M. Simpson, Andrew E. Grulich, Anthony M. A. Smith, Juliet Richters, and Chris Rissel. 2014. "Attitudes toward sex and relationships: the Second Australian Study of Health and Relationships." *Sexual health* 11(5):397-405.

di Mauro, Diane, and Carole Joffe. 2007. "The religious right and the reshaping of sexual policy: an examination of reproductive rights and sexuality education." *Sexuality Research & Social Policy* 4(1):67-92.

Dolezal, Curtis, Stephanie L. Marhefka, E. Karina Santamaria, Cheng-Shiun Leu, Elizabeth Brackis-Cott, and Claude Ann Mellins. 2012. "A comparison of audio computer-assisted self-interviews to face-to-face interviews of sexual behavior among perinatally HIV-exposed youth." *Archives of sexual behavior* 41(2):401-10.

Downing-Matibag, TM, and B Geisinger. 2009. "Hooking Up and Sexual Risk Taking Among College Students: A Health Belief Model Perspective." *Qualitative Health Research* 19(9):1196-209.

Driscoll, Anne K., Barbara W. Sugland, Jennifer Manlove, and Angela R. Papillo. 2005. "Community opportunity, perceptions of opportunity, and the odds of an adolescent birth." *Youth & Society* 37(1):33-61.

Dunteman, George H. 1989. *Principal components analysis*: Sage.

Durant, Lauren E., and Michael P. Carey. 2000. "Self-administered questionnaires versus face-to-face interviews in assessing sexual behavior in young women." *Archives of sexual behavior* 29(4):309-22.

Dye, T. D., M. A. Wojtowycz, R. H. Aubry, J. Quade, and H. Kilburn. 1997. "Unintended pregnancy and breast-feeding behavior." *Am J Public Health* 87(10):1709-11.

Eagly, Alice H., and Shelly Chaiken. 1993. *The psychology of attitudes*: Harcourt Brace Jovanovich College Publishers.

Echeverría, Sandra E., Daniel A. Gundersen, Michelle T. B. Manderski, and Cristine D. Delnevo. 2015. "Social norms and its correlates as a pathway to smoking among young Latino adults." *Social Science & Medicine* 124:187-95.

Edin, Kathryn, and Maria Kefalas. 2007. *Promises I can keep: Why poor women put motherhood before marriage*. Berkeley, California: University of California Press.

Eggermont, Steven. 2005. "Young adolescents' perceptions of peer sexual behaviours: the role of television viewing." *Child: care, health and development* 31(4):459-68.

Ehrhardt, Anke A., and Judith N. Wasserheit. 1991. "Age, gender, and sexual risk behaviors for sexually transmitted diseases in the United States." *Research issues in human behavior and sexually transmitted diseases in the AIDS era*:97-121.

Eisenberg, David L., Jennifer E. Allsworth, Qiuhong Zhao, and Jeffrey D. Peipert. 2012. "Correlates of dual-method contraceptive use: an analysis of the National Survey of Family Growth." *Infectious Diseases in Obstetrics and Gynecology* 2012:1-6.

Eisenberg, David L., Gina M. Secura, Tessa E. Madden, Jenifer E. Allsworth, Qiuhong Zhao, and Jeffrey F. Peipert. 2012. "Knowledge of contraceptive effectiveness." *American journal of obstetrics and gynecology* 206(6):479-e1.

Ekstrand, Maria, Tanja Tydén, Elisabeth Darj, and Margareta Larsson. 2007. "Preventing pregnancy: a girls' issue. Seventeen-year-old Swedish boys' perceptions on abortion, reproduction and use of contraception." *European J. of Contraception and Reproductive Healthcare* 12(2):111-18.

Elder, GH. 1994. "Time, Human Agency, and Social-Change - Perspectives on the Life-Course." *Social Psychology Quarterly* 57(1):4-15.

Elliott, Sinikka. 2010. "Parents' constructions of teen sexuality: Sex panics, contradictory discourses, and social inequality." *Symbolic Interaction* 33(2):191-212.

Elliott, Sinikka. 2012. *Not my kid: What parents believe about the sex lives of their teenagers*: NYU Press.

Else-Quest, Nicole M., Ashley Higgins, Carlie Allison, and Lindsay C. Morton. 2012. "Gender differences in self-conscious emotional experience: a meta-analysis." *Psychological bulletin* 138(5):947.

England, Paula, and Jonathan Bearak. 2014. "The sexual double standard and gender differences in attitudes toward casual sex among US university students." *Demographic Research* 30(46):1327-38.

England, Paula, and Reuben J. Thomas. 2006. "The decline of the date and the rise of the college hook up." *Families in transition* 14:151-62.

England, Paula, and Reuben J. Thomas. 2009. "The Decline of the Date and the Rise of the College Hook Up." Pp. 141-52 in *Family in Transition*, edited by Arlene S. Skolnick and Jerome H. Skolnick. Boston, MA: Pearson Education, Inc.

Epstein, Marina, Jennifer A. Bailey, Lisa E. Manhart, Karl G. Hill, and J. David Hawkins. 2014. "Sexual Risk behavior in young adulthood: Broadening the scope beyond early sexual initiation." *The Journal of sex research* 51(7):721-30.

Epstein, Marina, Jerel P. Calzo, Andrew P. Smiler, and L. Monique Ward. 2009. "“Anything from making out to having sex”: Men's negotiations of hooking up and friends with benefits scripts." *Journal of sex research* 46(5):414-424.

Ezzell, Matthew B. 2009. "" Barbie Dolls" on the Pitch: Identity Work, Defensive Othering, and Inequality in Women's Rugby." *Social problems* 56(1):111-31.

Fantasia, Heidi Collins, Melissa A. Sutherland, Holly Fontenot, and Janet A. Ierardi. 2014. "Knowledge, attitudes and beliefs about contraceptive and sexual consent negotiation among college women." *Journal of forensic nursing* 10(4):199-207.

Fennell, Julie Lynn. 2011. "Men Bring Condoms, Women Take Pills: Men’s and Women’s Roles in Contraceptive Decision Making." *Gender & Society* 25(4):496-521.

Fereday, Jennifer, and Eimear Muir-Cochrane. 2008. "Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development." *International journal of qualitative methods* 5(1):80-92.

Fielder, RL, KB Carey, and MP Carey. 2013. "Are Hookups Replacing Romantic Relationships? A Longitudinal Study of First-Year Female College Students." *Journal of Adolescent Health* 52(5):657-59.

Fielder, RL, and MP Carey. 2010. "Predictors and Consequences of Sexual "Hookups" Among College Students: A Short-term Prospective Study." *Archives of Sexual Behavior* 39(5):1105-19.

Fine, Gary Alan. 2001. "Enacting norms: Mushrooming and the culture of expectations and explanations." *Social norms*:139-64.

Finer, L. B., and J. M. Philbin. 2013. "Sexual initiation, contraceptive use, and pregnancy among young adolescents." *Pediatrics* 131(5):886-91.

Finer, L. B., and M. R. Zolna. 2011. "Unintended pregnancy in the United States: incidence and disparities, 2006." *Contraception* 84(5):478-85.

Flack, William F., Kimberly A. Daubman, Marcia L. Caron, Jenica A. Asadorian, Nicole R. D’Aureli, Shannon N. Gigliotti, Anna T. Hall, Sarah Kiser, and Erin R. Stine. 2007. "Risk factors and consequences of unwanted sex among university students hooking up, alcohol, and stress response." *Journal of Interpersonal Violence* 22(2):139-157.

Flood, M. 2003. "Lust, trust and latex: why young heterosexual men do not use condoms." *Culture Health & Sexuality* 5(4):353-69.

Flood, Michael. 2013. "Male and female sluts: Shifts and stabilities in the regulation of sexual relations among young heterosexual men." *Australian Feminist Studies* 28(75):95-107.

Forrest, J. D., and J. J. Frost. 1996. "The family planning attitudes and experiences of low-income women." *Fam Plann Perspect* 28(6):246-55, 77.

Freitas, Donna. 2008. *Sex and the soul: Juggling sexuality, spirituality, romance, and religion on America's college campuses*: Oxford University Press.

Frisco, Michelle L. 2008. "Adolescents' Sexual Behavior and Academic Attainment." *Sociology of Education* 81(3):284-311.

Frost, J. J., L. D. Lindberg, and L. B. Finer. 2012. "Young adults' contraceptive knowledge, norms and attitudes: associations with risk of unintended pregnancy." *Perspect Sex Reprod Health* 44(2):107-16.

Furstenberg, FF. 2003. "Teenage childbearing as a public issue and private concern." *Annual Review of Sociology* 29:23-39.

Garwick, Ann, Peggy Nerdahl, Rachel Banken, Lynn Muenzenberger-Bretl, and Renee Sieving. 2004. "Risk and protective factors for sexual risk taking among adolescents involved in Prime Time." *Journal of pediatric nursing* 19(5):340-50.

Gazmararian, Julie A., Melissa M. Adams, Linda E. Saltzman, Christopher H. Johnson, F. Carol Bruce, James S. Marks, S. Christine Zahniser, and Prams Working Group. 1995. "The relationship between pregnancy intendedness and physical violence in mothers of newborns." *Obstetrics & Gynecology* 85(6):1031-38.

Gecas, Viktor, and Peter J. Burke. 1995. "Self and identity." *Sociological perspectives on social psychology*:41-67.

Geronimus, A. T., and S. Korenman. 1993. "The socioeconomic costs of teenage childbearing: evidence and interpretation." *Demography* 30(2):281-90; discussion 91-6.

Gilliam, M. L., M. Warden, C. Goldstein, and B. Tapia. 2004. "Concerns about contraceptive side effects among young Latinas: a focus-group approach." *Contraception* 70(4):299-305.

Gilliam, ML, SD Davis, AB Neustadt, and EJ Levey. 2009. "Contraceptive Attitudes among Inner-City African American Female Adolescents: Barriers to Effective Hormonal Contraceptive Use." *Journal of Pediatric and Adolescent Gynecology* 22(2):97-104.

Gilmartin, SK. 2006. "Changes in college women's attitudes toward sexual intimacy." *Journal of Research on Adolescence* 16(3):429-54.

Glaser, B.G., and A.L. Strauss. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago, IL: Aldine.

Goesling, Brian, Silvie Colman, Christopher Trenholm, Mary Terzian, and Kristin Moore. 2014. "Programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors: a systematic review." *Journal of Adolescent Health* 54(5):499-507.

Goldberg, Julie H., Bonnie L. Halpern-Felsher, and Susan G. Millstein. 2002. "Beyond invulnerability: the importance of benefits in adolescents' decision to drink alcohol." *Health Psychology* 21(5):477.

Gonzales, Marti Hope, Julie Haugen Pederson, Debra J. Manning, and David W. Wetter. 1990. "Pardon my gaffe: Effects of sex, status, and consequence severity on accounts." *Journal of Personality and Social Psychology* 58(4):610.

Green, Gill, Robert Pool, Susan Harrison, Graham J. Hart, Joanie Wilkinson, Stella Nyanzi, and James A. G. Whitworth. 2001. "Female control of sexuality: illusion or reality? Use of vaginal products in south west Uganda." *Social Science & Medicine* 52(4):585-98.

Greene, Jennifer C., Valerie J. Caracelli, and Wendy F. Graham. 1989. "Toward a conceptual framework for mixed-method evaluation designs." *Educational evaluation and policy analysis* 11(3):255-74.

Greenhaus, Jeffrey H., Ann C. Peng, and Tammy D. Allen. 2012. "Relations of work identity, family identity, situational demands, and sex with employee work hours." *Journal of Vocational Behavior* 80(1):27-37.

Gregson, Joanna. 2009. *The Culture of Teenage Mothers.* Albany, NY: State University of New York Press.

Grello, Catherine M., Deborah P. Welsh, and Melinda S. Harper. 2006. "No strings attached: The nature of casual sex in college students." *Journal of sex research* 43(3):255-67.

Grindlay, Kate, Diana Greene Foster, and Daniel Grossman. 2014. "Attitudes Toward Over-the-Counter Access To Oral Contraceptives Among a Sample Of Abortion Clients in the United States." *Perspectives on sexual and reproductive health* 46(2):83-89.

Grussu, P., R. M. Quatraro, and M. T. Nasta. 2005. "Profile of Mood States and parental attitudes in motherhood: comparing women with planned and unplanned pregnancies." *Birth* 32(2):107-14.

Hamilton, L, and EA Armstrong. 2009. "Gendered Sexuality in Young Adulthood: Double Binds and Flawed Options." *Gender & Society* 23(5):589-616.

Harding, DJ. 2007. "Cultural context, sexual behavior, and romantic relationships in disadvantaged neighborhoods." *American Sociological Review* 72(3):341-64.

Harris, Kathleen Mullan. 2009. "The National Longitudinal Study of Adolescent to Adult Health (Add Health), Waves I & II, 1994–1996; Wave III, 2001–2002; Wave IV, 2007-2009 [machine-readable data file and documentation].", edited by University of North Carolina at Chapel Hill. Carolina Population Center. Chapel Hill, NC.

Harvey, S. M., S. T. Bird, C. Galavotti, E. A. Duncan, and D. Greenberg. 2002. "Relationship power, sexual decision making and condom use among women at risk for HIV/STDS." *Women Health* 36(4):69-84.

Hayton, JC, DG Allen, and V Scarpello. 2004. "Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis." *Organizational Research Methods* 7(2):191-205.

Hechter, Michael, and Karl-Dieter Opp. 2001. *Social norms*: Russell Sage Foundation.

Heckman, James J. 1979. "Sample selection bias as a specification error." *Econometrica: Journal of the econometric society*:153-61.

Heldman, C, and L Wade. 2010. "Hook-Up Culture: Setting a New Research Agenda." *Sexuality Research and Social Policy* 7(4):323-33.

Henshaw, S. K. 1998. "Unintended pregnancy in the United States." *Fam Plann Perspect* 30(1):24-9, 46.

Herold, ES. 1981. "Contraceptive Embarrassment and Contraceptive Behavior Among Young Single Women." *Journal of Youth and Adolescence* 10(3):233-42.

Higgins, J. A., R. A. Popkin, and J. S. Santelli. 2012. "Pregnancy ambivalence and contraceptive use among young adults in the United States." *Perspect Sex Reprod Health* 44(4):236-43.

Higgins, Jenny A., and Irene Browne. 2008. "Sexual needs, control, and refusal: how "doing" class and gender influences sexual risk taking." *Journal of Sex Research* 45(3):233-45.

Hillier, Lynne, Lyn Harrison, and Kate Bowditch. 1999. "Neverending love and 'blowing your load': the meanings of sex to rural youth." *Sexualities* 2(1):69-88.

Hillier, Lynne, Lyn Harrison, and Deborah Warr. 1998. "'When you carry condoms all the boys think you want it': negotiating competing discourses about safe sex." *Journal of adolescence* 21(1):15-29.

Hoggart, Lesley, and Joan Phillips. 2011. "Teenage pregnancies that end in abortion: what can they tell us about contraceptive risk-taking?" *Journal of Family Planning and Reproductive Health Care* 37(2):97-102.

Homco, J. B., J. F. Peipert, G. M. Secura, V. A. Lewis, and J. E. Allsworth. 2009. "Reasons for ineffective pre-pregnancy contraception use in patients seeking abortion services." *Contraception* 80(6):569-74.

Horne, C. 2003. "The internal enforcement of norms." *European Sociological Review* 19(4):335-43.

Huber, LRB, and JL Ersek. 2009. "Contraceptive Use among Sexually Active University Students." *Journal of Womens Health* 18(7):1063-70.

Hyde, Abbey, Jonathan Drennan, Michelle Butler, Etaoine Howlett, Marie Carney, and Maria Lohan. 2013. "Parents' constructions of communication with their children about safer sex." *Journal of clinical nursing* 22(23-24):3438-46.

Hynie, Michaela, John E. Lydon, Sylvana Cote, and Seth Wiener. 1998. "Relational sexual scripts and women's condom use: The importance of internalized norms." *Journal of Sex Research* 35(4):370-80.

Hynie, Michaela, Regina A. Schuller, and Lisa Couperthwaite. 2003. "Perceptions of sexual intent: The impact of condom possession." *Psychology of Women Quarterly* 27(1):75-79.

Iuliano, A. D., I. S. Speizer, J. Santelli, and C. Kendall. 2006. "Reasons for contraceptive nonuse at first sex and unintended pregnancy." *Am J Health Behav* 30(1):92-102.

Jaccard, J, PJ Dittus, and VV Gordon. 1998. "Parent-adolescent congruency in reports of adolescent sexual behavior and in communications about sexual behavior." *Child Development* 69(1):247-61.

Jaccard, J, T Dodge, and P Dittus. 2003. "Do adolescents want to avoid pregnancy? Attitudes toward pregnancy as predictors of pregnancy." *Journal of Adolescent Health* 33(2):79-83.

Jaccard, James. 2009. "Unlocking the Contraceptive Conundrum: Reducing Unplanned Pregnancy in Emerging Adulthood." Pp. 1-221. Washington, D.C.: The National Campaign to Reduce Teen and Unplanned Pregnancy.

Jackson, Kristina M., Megan E. Roberts, Suzanne M. Colby, Nancy P. Barnett, Caitlin C. Abar, and Jennifer E. Merrill. 2014. "Willingness to drink as a function of peer offers and peer norms in early adolescence." *Journal of studies on alcohol and drugs* 75(3):404.

Jagannathan, Radha. 2001. "Relying on Surveys to Understand Abortion Behavior: Some Cautionary Evidence." *American Journal of Public Health* 91(11):1825-31.

James-Hawkins, Laurie, and Christie Sennott. 2014. "Low-Income Women's Navigation of Childbearing Norms Throughout the Reproductive Life Course." *Qualitative Health Research* In Press.

James-Hawkins, Laurie. 2015. "Why Female College Students Risk Pregnancy: I Just Wasn't Thinking." *Journal of Midwifery & Women's Health* 60(2):169-74.

Johnson, R. Burke, and Anthony J. Onwuegbuzie. 2004. "Mixed methods research: A research paradigm whose time has come." *Educational researcher* 33(7):14-26.

Johnson, R. Burke, Anthony J. Onwuegbuzie, and Lisa A. Turner. 2007. "Toward a definition of mixed methods research." *Journal of mixed methods research* 1(2):112-33.

Johnson, R. J., K. D. McCaul, and W. M. Klein. 2002. "Risk involvement and risk perception among adolescents and young adults." *J Behav Med* 25(1):67-82.

Jonason, Peter K., and Michael J. Marks. 2009. "Common vs. uncommon sexual acts: Evidence for the sexual double standard." *Sex Roles* 60(5-6):357-65.

Jones, Ann E. 2014. "Moderating effects of religious orientation on the relationship between sexual self-discrepancies and guilt and anxiety." http://hdl.handle.net/10484/5576.

Jones, EF, and JD Forrest. 1992. "Contraceptive Failure Rates Based on the 1988 NSFG." *Family Planning Perspectives* 24(1):12-19.

Joyce, T., R. Kaestner, and S. Korenman. 2000. "The stability of pregnancy intentions and pregnancy-related maternal behaviors." *Matern Child Health J* 4(3):171-8.

Joyce, T., R. Kaestner, and S. Korenman. 2002. "On the validity of retrospective assessments of pregnancy intention." *Demography* 39(1):199-213.

Joyner, Kara, H. Elizabeth Peters, Kathryn Hynes, Asia Sikora, Jamie Rubenstein Taber, and Michael S. Rendall. 2012. "The Quality of Male Fertility Data in Major U.S. Surveys." *Demography* 49(1):101-24.

Jozkowski, Kristen N., Zoë D. Peterson, Stephanie A. Sanders, Barbara Dennis, and Michael Reece. 2014. "Gender differences in heterosexual college students' conceptualizations and indicators of sexual consent: Implications for contemporary sexual assault prevention education." *The Journal of Sex Research* 51(8):904-16.

Kalil, Ariel, and James Kunz. 1999. "First births among unmarried adolescent girls: Risk and protective factors." *Social Work Research* 23(3):197-208.

Kalish, R, and M Kimmel. 2011. "Hooking Up." *Australian Feminist Studies* 26(67):137-51.

Kang, Sonia K., and Galen V. Bodenhausen. 2015. "Multiple identities in social perception and interaction: challenges and opportunities." *Annual review of psychology* 66:547-74.

Kapadia, F., M. H. Latka, Y. Wu, S. A. Strathdee, M. E. Mackesy-Amiti, S. M. Hudson, H. Thiede, and R. S. Garfein. 2011. "Longitudinal determinants of consistent condom use by partner type among young injection drug users: the role of personal and partner characteristics." *AIDS and Behavior* 15(7):1309-18.

Katz, Jennifer, and Monica E. Schneider. 2013. "Casual hook up sex during the first year of college: Prospective associations with attitudes about sex and love relationships." *Archives of sexual behavior* 42(8):1451-62.

Kaye, Kelleen, Katherine Suellentrop, and Corinna Sloup. 2009. "The Fog Zone: How Misperceptions, Magical Thinking, and Ambivalence put Young Adults at Risk for Unplanned Pregnancy." Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy.

Kegler, Michelle Crozier, Sheryl Thorburn Bird, Kristen Kyle-Moon, and Sharon Rodine. 2001. "Understanding teen pregnancy from the perspective of young adolescents in Oklahoma City." *Health Promotion Practice* 2(3):242-54.

Kelley, K, G Smeaton, D Byrne, DPJ Przybyla, and WA Fisher. 1987. "Sexual Attitudes and Contraception Among Females Across 5 College Samples." *Human Relations* 40(4):237-53.

Kelly, Jacqueline, and Doris G. Bazzini. 2001. "Gender, sexual experience, and the sexual double standard: Evaluations of female contraceptive behavior." *Sex Roles* 45(11-12):785-99.

Kendall, C, A Afable-Munsuz, I Speizer, A Avery, N Schmidt, and J Santelli. 2005. "Understanding pregnancy in a population of inner-city women in New Orleans - results of qualitative research." *Social Science & Medicine* 60(2):297-311.

Kershaw, TS, KA Ethier, LM Niccolai, JB Lewis, and JR Ickovics. 2003. "Misperceived risk among female adolescents: Social and psychological factors associated with sexual risk accuracy." *Health Psychology* 22(5):523-32.

Kettrey, Heather Hensman. 2014. "It 'Just Happened' One Night: Gender Norms and Consent to Unwanted Sexual Activity on College Hookups."

Kinsman, S. B., D. Romer, F. F. Furstenberg, and D. F. Schwarz. 1998. "Early sexual initiation: the role of peer norms." *Pediatrics* 102(5):1185-92.

Kirby, D. 2002. "Antecedents of adolescent initiation of sex, contraceptive use, and pregnancy." *American Journal of Health Behavior* 26(6):473-85.

Kong, Xiangrong, Godfrey Kigozi, Fred Nalugoda, Richard Musoke, Joseph Kagaayi, Carl Latkin, Robert Ssekubugu, Tom Lutalo, Betty Nantume, Iga Boaz, Maria Wawer, David Serwadda, and Ronald Gray. 2012. "Assessment of Changes in Risk Behaviors During 3 Years of Posttrial Follow-up of Male Circumcision Trial Participants Uncircumcised at Trial Closure in Rakai, Uganda." *American Journal of Epidemology* doi: 10.1093/aje/kws179.

Koss, Mary P., and Christine A. Gidycz. 1985. "Sexual experiences survey: reliability and validity." *Journal of consulting and clinical psychology* 53(3):422.

Kost, K., L. B. Finer, and S. Singh. 2012. "Variation in state unintended pregnancy rates in the United States." *Perspect Sex Reprod Health* 44(1):57-64.

Kraft, Joan Marie, Aniket Kulkarni, Jason Hsia, Denise J. Jamieson, and Lee Warner. 2012. "Sex education and adolescent sexual behavior: do community characteristics matter?" *Contraception* 86(3):276-80.

Kreager, Derek A., and Jeremy Staff. 2009. "The sexual double standard and adolescent peer acceptance." *Social Psychology Quarterly* 72(2):143-64.

Lamont, Michele, and Mario Luis Small. 2008. "How Culture Matters: Enriching Our Understanding of Poverty " Pp. 76-102 in *The Colors of Poverty: Why Racial and Ethnic Disparities Persist* edited by Ann Lin and David Harris. New York: Russell Sage Foundation.

Landry, David J., and Theresa M. Camelo. 1994. "Young unmarried men and women discuss men's role in contraceptive practice." *Family Planning Perspectives*:222-27.

Lapsley, Daniel K., and Patrick L. Hill. 2010. "Subjective invulnerability, optimism bias and adjustment in emerging adulthood." *Journal of youth and adolescence* 39(8):847-57.

Lau, May, Hua Lin, and Glenn Flores. 2014. "Pleased to be Pregnant? Positive Pregnancy Attitudes among Sexually Active Adolescent Females in the United States." *Journal of pediatric and adolescent gynecology* 27(4):210-15.

Lawlor, D. A., and M. Shaw. 2002. "Too much too young? Teenage pregnancy is not a public health problem." *Int J Epidemiol* 31(3):552-4.

Laws, Judith Long, and Pepper Schwartz. 1977. *Sexual scripts: The social construction of female sexuality*: Harcourt College Pub.

Ledesma, Rubén Daniel, and Pedro Valero-Mora. 2007. "Determining the Number of Factors to Retain in EFA: an easy-to-use computer program for carrying out Parallel Analysis." *Practical Assessment, Research & Evaluation* 12(2):1-11.

Lefkowitz, Eva S., and Graciela Espinosa-Hernandez. 2007. "Sex-related communication with mothers and close friends during the transition to university." *Journal of Sex Research* 44(1):17-27.

Lefkowitz, Eva S., Cindy L. Shearer, Meghan M. Gillen, and Graciela Espinosa-Hernandez. 2014. "How Gendered Attitudes Relate to Women's and Men's Sexual Behaviors and Beliefs." *Sexuality & Culture*:1-14.

Lemay, C. A., S. B. Cashman, D. S. Elfenbein, and M. E. Felice. 2007. "Adolescent mothers' attitudes toward contraceptive use before and after pregnancy." *J Pediatr Adolesc Gynecol* 20(4):233-40.

Liang, Kun. 2014. "A descriptive study of age identity among older adults in China." *China Journal of Social Work* 7(3):305-17.

Liefbroer, AC, and FC Billari. 2010. "Bringing Norms Back In: A Theoretical and Empirical Discussion of Their Importance for Understanding Demographic Behaviour." *Population Space and Place* 16(4):287-305.

Lim, Megan S., Campbell K. Aitken, Jane S. Hocking, and Margaret E. Hellard. 2009. "Discrepancies between young people's self-reported sexual experience and their perceptions of'normality'." *Sexual health* 6(2):171-72.

Lingard, Lorelei, Mathieu Albert, and Wendy Levinson. 2008. "Grounded theory, mixed methods, and action research." *Bmj* 337(aug07_3):a567-a67.

Linzer, Drew A., and Jeffrey Lewis. 2006. "poLCA: Polytomous Variable Latent Class Analysis Version 1.1."

Littleton, Heather, Holly Tabernik, Erika J. Canales, and Tamika Backstrom. 2009. "Risky situation or harmless fun? A qualitative examination of college women's bad hook-up and rape scripts." *Sex Roles* 60(11-12):793-804.

Loewenstein, G, and F Furstenberg. 1991. "Is Teenage Sexual-Behavior Rational." *Journal of Applied Social Psychology* 21(12):957-86.

Logan, Cassandra, Emily Holcombe, Jennifer Manlove, and Suzanne Ryan. 2007. "The Consequences of Unintended Childbearing: A White Paper." Washington, D.C.: Child Trends.

Lohan, M., S. Cruise, P. O'Halloran, F. Alderdice, and A. Hyde. 2010. "Adolescent men's attitudes in relation to pregnancy and pregnancy outcomes: a systematic review of the literature from 1980-2009." *J Adolesc Health* 47(4):327-45.

Luker, Kristin. 2006. "When sex goes to school." New York: WW Norton.

Lyons, Antonia C., and Sara A. Willott. 2008. "Alcohol consumption, gender identities and women's changing social positions." *Sex roles* 59(9-10):694-712.

Lyons, Heidi A., Wendy D. Manning, Monica A. Longmore, and Peggy C. Giordano. 2014a. "Gender and Casual Sex from Adolescence to Young Adulthood: Social and Life Course Correlates."

Lyons, Heidi A., Wendy D. Manning, Monica A. Longmore, and Peggy C. Giordano. 2014b. "Young Adult Casual Sexual Behavior Life-Course-Specific Motivations and Consequences." *Sociological Perspectives* 57(1):79-101.

Lyons, Heidi Ann. 2009. "Casual sex in adolescence and young adulthood: A mixed methods approach." http://rave.ohiolink.edu/etdc/view?acc_num=bgsu1256749422.

Lyons, Heidi, Peggy C. Giordano, Wendy D. Manning, and Monica A. Longmore. 2011. "Identity, peer relationships, and adolescent girls' sexual behavior: An exploration of the contemporary double standard." *Journal of sex research* 48(5):437-49.

Macmillan, Ross. 2005. "The structure of the life course: Classic issues and current controversies." *Advances in life course research* 9:3-24.

Manlove, J., E. Wildsmith, E. Ikramullah, E. Terry-Humen, and E. Schelar. 2012. "Family environments and the relationship context of first adolescent sex: Correlates of first sex in a casual versus steady relationship." *Soc Sci Res* 41(4):861-75.

Manning, Wendy D., Monica A. Longmore, and Peggy C. Giordano. 2005. "Adolescents' involvement in non-romantic sexual activity." *Social Science Research* 34(2):384-407.

Marcell, Arik V., Tina Raine, and Stephen L. Eyre. 2003. "Where does reproductive health fit into the lives of adolescent males?" *Perspectives on sexual and reproductive health* 35(4):180-86.

Marini, Margaret Mooney. 1984a. "Age and sequencing norms in the transition to adulthood." *Social Forces* 63(1):229-44.

Marini, Margaret Mooney. 1984b. "The order of events in the transition to adulthood." *Sociology of education*:63-84.

Marsiglio, W, and CL Shehan. 1993. "Adolescent Males Abortion Attitudes - Data from a national survey." *Family Planning Perspectives* 25(4):162-69.

Masinter, Lisa M., Joe Feinglass, and Melissa A. Simon. 2013. "Pregnancy Intention and Use of Contraception Among Hispanic Women in the United States: Data from the National Survey of Family Growth, 2006–2010." *Journal of Women's Health* 22(10):862-70.

Masters, N. Tatiana, Erin Casey, Elizabeth A. Wells, and Diane M. Morrison. 2013. "Sexual scripts among young heterosexually active men and women: Continuity and change." *Journal of sex research* 50(5):409-20.

Maxson, P., and M. L. Miranda. 2011. "Pregnancy intention, demographic differences, and psychosocial health." *J Womens Health (Larchmt)* 20(8):1215-23.

McClintock, Elizabeth Aura. 2010. "When Does Race Matter? Race, Sex, and Dating at an Elite University." *Journal of Marriage and Family* 72(1):45-72.

McFarlane, Mary, and Janet S. St Lawrence. 1999. "Adolescents' recall of sexual behavior: consistency of self-report and effect of variations in recall duration." *Journal of Adolescent Health* 25(3):199-206.

Meier, Ann M. 2003. "Adolescents' transition to first intercourse, religiosity, and attitudes about sex." *Social Forces* 81(3):1031-52.

Merolla, David M., Richard T. Serpe, Sheldon Stryker, and P. Wesley Schultz. 2012. "Structural precursors to identity processes the role of proximate social structures." *Social Psychology Quarterly* 75(2):149-72.

Merriam, Sharan B. 2014. *Qualitative research: A guide to design and implementation*: John Wiley & Sons.

Messer, Lynne C., Erin Shoe, Megan Canady, Barbara K. Sheppard, and Amy Vincus. 2011. "Reported adolescent sexual norms and the development of a social marketing campaign to correct youth misperceptions." *Journal of Children and Poverty* 17(1):45-63.

Meston, Cindy M., Julia R. Heiman, Paul D. Trapnell, and Delroy L. Paulhus. 1998. "Socially desirable responding and sexuality self-reports."

Miller, Lisa, and Merav Gur. 2002. "Religiousness and sexual responsibility in adolescent girls." *Journal of Adolescent Health* 31(5):401-06.

Mills, CW. 1940. "Situated Actions and Vocabularies of Motive." *American Sociological Review* 5(6):904-13.

Millstein, SG, and BL Halpern-Felsher. 2002. "Judgments about risk and perceived invulnerability in adolescents and young adults." *Journal of Research on Adolescence* 12(4):399-422.

Milnes, Kate. 2010. "III. Challenging the Sexual Double Standard: Constructing Sexual Equality Narratives as a Strategy of Resistance." *Feminism & Psychology* 20(2):255-59.

Mollborn, S. 2007. "Making the best of a bad situation: Material resources and teenage parenthood." *Journal of Marriage and Family* 69(1):92-104.

Mollborn, S. 2009. "Norms About Nonmarital Pregnancy and Willingness to Provide Resources to Unwed Parents." *Journal of Marriage and Family* 71(1):122-34.

Mollborn, S. 2010. "Predictors and Consequences of Adolescents' Norms Against Teenage Pregnancy." *Sociological Quarterly* 51(2):303-28.

Mollborn, S, and PJ Lovegrove. 2011. "How Teenage Fathers Matter for Children: Evidence From the ECLS-B." *Journal of Family Issues* 32(1):3-30.

Mollborn, S, and E Morningstar. 2009. "Investigating the Relationship between Teenage Childbearing and Psychological Distress Using Longitudinal Evidence." *Journal of Health and Social Behavior* 50(3):310-26.

Mollborn, Stefanie, Benjamin W. Domingue, and Jason D. Boardman. 2014a. "Norms as Group-Level Constructs: Investigating School-Level Teen Pregnancy Norms and Behaviors." *Social Forces* 93(1):241-67.

Mollborn, Stefanie, Benjamin W. Domingue, and Jason D. Boardman. 2014b. "Understanding multiple levels of norms about teen pregnancy and their relationships to teens' sexual behaviors." *Advances in life course research* 20:1-15.

Mollborn, Stefanie, and Christie Sennott. 2014. "Bundles of Norms About Teen Sex and Pregnancy." *Qualitative health research*:1049732314557086.

Mollen, C. J., F. K. Barg, K. L. Hayes, M. Gotcsik, N. M. Blades, and D. F. Schwarz. 2008. "Assessing attitudes about emergency contraception among urban, minority adolescent girls: an in-depth interview study." *Pediatrics* 122(2):e395-401.

Montgomery, MR. 1996. "Comments on men, women, and unintended pregnancy." *Population and Development Review* 22:100-06.

Moore, Ann M., Susheela Singh, and Akinrinola Bankole. 2011. "Do women and men consider abortion as an alternative to contraception in the United States? An exploratory study." *Global public health* 6(sup1):S25-S37.

Moore, Nancy, Rachel Powell, Jessie Barnett, Christina Proctor, Katy Hein, and Jessica Muilenburg. 2013. "Let's talk about sex: The impact of relationship type on sexual communication." in *APHA*. Boston, MA.

Moore, Susan, and Doreen Rosenthal. 1991. "Adolescents' perceptions of friends' and parents' attitudes to sex and sexual risk-taking." *Journal of Community & Applied Social Psychology* 1(3):189-200.

Moreau, C., J. Bouyer, H. Goulard, and N. Bajos. 2005. "The remaining barriers to the use of emergency contraception: perception of pregnancy risk by women undergoing induced abortions." *Contraception* 71(3):202-7.

Morrison, Todd G., Joshua Bertram, Travis A. Ryan, and C. J. Bishop. 2014. "You Know Who the Sluts Are": A Qualitative Analysis of the "SlutWalk." *Advances in Applied Sociology* 2014.

Mosher, W. D., and J. Jones. 2010. "Use of contraception in the United States: 1982-2008." *Vital Health Stat 23* (29):1-44.

Mosher, W. D., J. Jones, and J. C. Abma. 2012. "Intended and unintended births in the United States: 1982-2010." *Natl Health Stat Report* (55):1-28.

Musick, Kelly, Paula England, Sarah Edgington, and Nicole Kangas. 2009. "Education differences in intended and unintended fertility." *Social Forces* 88(2):543-72.

Mustanski, Brian, Tom Lyons, and Steve C. Garcia. 2011. "Internet use and sexual health of young men who have sex with men: A mixed-methods study." *Archives of Sexual Behavior* 40(2):289-300.

Nettleman, M., J. Brewer, and A. Ayoola. 2007. "Reasons for unprotected intercourse in adult women: a qualitative study." *J Midwifery Womens Health* 52(2):148-52.

Nettleman, M. D., J. Brewer, and A. Ayoola. 2009. "Why women risk unintended pregnancy." *J Fam Pract* 58(4):E1-5.

Novack, LesleyLazin, and DavidR Novack. 1996. "Being female in the eighties and nineties: Conflicts between new opportunities and traditional expectations among white, middle class, heterosexual college women." *Sex Roles* 35(1-2):57-77.

O'Donnell, L., A. Myint-U, C. R. O'Donnell, and A. Stueve. 2003. "Long-term influence of sexual norms and attitudes on timing of sexual initiation among urban minority youth." *J Sch Health* 73(2):68-75.

Oddens, BJ, and P Lehert. 1997. "Determinants of contraceptive use among women of reproductive age in Great Britain and Germany .1. Demographic factors." *Journal of Biosocial Science* 29(4):415-35.

Okin, Susan Moller. 1998. "Gender, the Public and the Private." *Feminism and politics*:116-41.

Olmstead, SB, RM Billen, KA Conrad, K Pasley, and FD Fincham. 2013. "Sex, Commitment, and Casual Sex Relationships Among College Men: A Mixed-Methods Analysis." *Archives of Sexual Behavior* 42(4):561-71.

Olmstead, SB, K Pasley, and FD Fincham. 2013. "Hooking Up and Penetrative Hookups: Correlates that Differentiate College Men." *Archives of Sexual Behavior* 42(4):573-83.

Owen, J, and FD Fincham. 2011. "Effects of Gender and Psychosocial Factors on "Friends with Benefits" Relationships Among Young Adults." *Archives of Sexual Behavior* 40(2):311-20.

Owen, JJ, GK Rhoades, SM Stanley, and FD Fincham. 2010. ""Hooking Up" Among College Students: Demographic and Psychosocial Correlates." *Archives of Sexual Behavior* 39(3):653-63.

Paik, A. 2010. ""Hookups," dating, and relationship quality: Does the type of sexual involvement matter?" *Social Science Research* 39(5):739-53.

Paul, Elizabeth L., Brian McManus, and Allison Hayes. 2000. "'Hookups': Characteristics and correlates of college students' spontaneous and anonymous sexual experiences." *Journal of Sex Research* 37(1):76-88.

Paul, EL, and KA Hayes. 2002. "The casualties of 'casual' sex: A qualitative exploration of the phenomenology of college students' hookups." *Journal of Social and Personal Relationships* 19(5):639-61.

Payne Purvis, Caroline, Rosemary V. Barnett, and Larry Forthun. 2014. "Parental Involvement during Adolescence and Contraceptive Use in College." *Journal of Adolescent and Family Health* 6(2):3.

Pearson, J. 2006. "Personal control, self-efficacy in sexual negotiation, and contraceptive risk among adolescents: The role of gender." *Sex Roles* 54(9-10):615-25.

Pearson, Jennifer Darlene. 2008. *Young Women's Sexual Agency in the Transition to Adulthood*: ProQuest.

Peipert, Jeffrey F., Tessa Madden, Jenifer E. Allsworth, and Gina M. Secura. 2012. "Preventing unintended pregnancies by providing no-cost contraception." *Obstetrics and gynecology* 120(6):1291.

Penhollow, Tina, Michael Young, and William Bailey. 2007. "Relationship between religiosity and "hooking up" behavior." *American Journal of Health Education* 38(6):338-45.

Peralta, Robert L. 2008. "'Alcohol Allows You to Not Be Yourself': Toward a Structured Understanding of Alcohol Use and Gender Difference among Gay, Lesbian, and Heterosexual Youth." *Journal of Drug Issues* 38(2):373-99.

Petersen, Jennifer L., and Janet Shibley Hyde. 2011. "Gender differences in sexual attitudes and behaviors: A review of meta-analytic results and large datasets." *Journal of Sex Research* 48(2-3):149-65.

Petersen, Nicole, Lawrence Patihis, and Shawn E. Nielsen. 2014. "Decreased susceptibility to false memories from misinformation in hormonal contraception users." *Memory* (ahead-of-print):1-10.

Pierro, Antonio, Lucia Mannetti, Arie W. Kruglanski, Kristen Klein, and Edward Orehek. 2012. "Persistence of attitude change and attitude–behavior correspondence based on extensive processing of source information." *European Journal of Social Psychology* 42(1):103-11.

Pleck, Joseph H., Freya L. Sonenstein, and Leighton C. Ku. 1993. "Masculinity ideology: Its impact on adolescent males' heterosexual relationships." *Journal of Social Issues* 49(3):11-29.

Pratt, R., J. Stephenson, and S. Mann. 2014. "What influences contraceptive behaviour in women who experience unintended pregnancy? A systematic review of qualitative research." *Journal of Obstetrics & Gynaecology* 34(8):693-99.

Quadrel, MJ, B Fischhoff, and W Davis. 1993. "Adolescent (In)Vulnerability." *American Psychologist* 48(2):102-16.

R Core Team. 2015. "R: A language and environment for statistical computing." url: http://www.R-project.org/, Vienna, Austria: R Foundation for Statistical Computing.

Raine, T. R., J. C. Gard, C. B. Boyer, S. Haider, B. A. Brown, F. A. Ramirez Hernandez, and C. C. Harper. 2010. "Contraceptive decision-making in sexual relationships: young men's experiences, attitudes and values." *Cult Health Sex* 12(4):373-86.

Ravert, Russell D., Seth J. Schwartz, Byron L. Zamboanga, Su Yeong Kim, Robert S. Weisskirch, and Melina Bersamin. 2009. "Sensation seeking and danger invulnerability: Paths to college student risk-taking." *Personality and Individual Differences* 47(7):763-68.

Regan, Pamela C., and Carla S. Dreyer. 1999. "Lust? Love? Status? Young adults' motives for engaging in casual sex." *Journal of Psychology & Human Sexuality* 11(1):1-24.

Regnerus, Mark D. 2007. *Forbidden fruit: Sex & religion in the lives of American teenagers*: Oxford University Press.

Reid, Julie A., Sinikka Elliott, and Gretchen R. Webber. 2011. "Casual Hookups to Formal Dates Refining the Boundaries of the Sexual Double Standard." *Gender & Society* 25(5):545-68.

Reiss, Ira L. 1956. "The double standard in premarital sexual intercourse: A neglected concept." *Social Forces*:224-30.

Reiss, Ira L. 1960. *Premarital sexual standards in America: a sociological investigation of the relative social and cultural integration of American sexual standards*: Free Press Glencoe, IL.

Reiss, Ira L. 1967. *The social context of premarital sexual permissiveness*: Holt, Rinehart and Winston New York.

Resnick, Michael D., Stephanie A. Chambliss, and Robert W. Blum. 1993. "Health and risk behaviors of urban adolescent males involved in pregnancy." *Families in Society*.

Rhodes, Tim, and Linda Cusick. 2002. "Accounting for unprotected sex: stories of agency and acceptability." *Social Science & Medicine* 55(2):211-26.

Richard, Alan J., David C. Bell, and Isaac D. Montoya. 2000. "Normative influence on condom use in the personal networks of female cocaine smokers." *AIDS education and prevention: official publication of the International Society for AIDS Education* 12(4):357-74.

Rimal, RN, and K Real. 2003a. "Perceived risk and efficacy beliefs as motivators of change: Use of the risk perception attitude (RPA) framework to understand health behaviors." *Human Communication Research* 29(3):370-99.

Rimal, RN, and K Real. 2003b. "Understanding the influence of perceived norms on behaviors." *Communication Theory* 13(2):184-203.

Ringrose, Jessica. 2011. "Are you sexy, flirty, or a slut? Exploring 'sexualization'and how teen girls perform/negotiate digital sexual identity on social networking sites." *New femininities: Postfeminism, neoliberalism and subjectivity*:99-116.

Ringrose, Jessica, and Emma Renold. 2012. "Slut-shaming, girl power and 'sexualisation': Thinking through the politics of the international SlutWalks with teen girls." *Gender and Education* 24(3):333-43.

Risman, Barbara, and Pepper Schwartz. 2002. "After the sexual revolution: Gender politics in teen dating." *Contexts* 1(1):16-24.

Roberts, A., and J. Noyes. 2009. "Contraception and women over 40 years of age: mixed-method systematic review." *J Adv Nurs* 65(6):1155-70.

Roche, Brenda, Alan Neaigus, and Maureen Miller. 2005. "Street Smarts and Urban Myths: Women, Sex Work, and the Role of Storytelling in Risk Reduction and Rationalization." *Medical Anthropology Quarterly* 19(2):149-70.

Rogel, M. J., M. E. Zuehlke, A. C. Petersen, M. Tobin-richards, and M. Shelton. 1980. "Contraceptive behavior in adolescence: a decision-making perspective." *J Youth Adolesc* 9(6):491-506.

Rossi, Alice S. 1994. *Sexuality across the life course*: University of Chicago Press.

Rude, Jesse D., Gregory C. Wolniak, and Ernest T. Pascarella. 2012. "Racial Attitude Change during the College Years." Annual Meeting of the American Educational Research Association. Vancouver, Canada.

Sable, MR, MK Libbus, and JE Chiu. 2000. "Factors affecting contraceptive use in women seeking pregnancy tests: Missouri, 1997." *Family Planning Perspectives* 32(3):124-31.

Sable, MR, and DS Wilkinson. 2000. "Impact of perceived stress, major life events and pregnancy attitudes on low birth weight." *Family Planning Perspectives* 32(6):288-94.

Sale, Joanna E. M., Lynne H. Lohfeld, and Kevin Brazil. 2002. "Revisiting the quantitative-qualitative debate: Implications for mixed-methods research." *Quality and quantity* 36(1):43-53.

Sanchez, Diana T., Jennifer Crocker, and Karlee R. Boike. 2005. "Doing gender in the bedroom: Investing in gender norms and the sexual experience." *Personality and Social Psychology Bulletin* 31(10):1445-55.

Sanchez, Diana T., Janell C. Fetterolf, and Laurie A. Rudman. 2012. "Eroticizing inequality in the United States: The consequences and determinants of traditional gender role adherence in intimate relationships." *Journal of sex research* 49(2-3):168-83.

Sanchez, Diana T., Amy K. Kiefer, and Oscar Ybarra. 2006. "Sexual submissiveness in women: Costs for sexual autonomy and arousal." *Personality and Social Psychology Bulletin* 32(4):512-24.

Santelli, J., R. Rochat, K. Hatfield-Timajchy, B. C. Gilbert, K. Curtis, R. Cabral, J. S. Hirsch, L. Schieve, and Unintended Pregnancy Working Group. 2003. "The measurement and meaning of unintended pregnancy." *Perspect Sex Reprod Health* 35(2):94-101.

Santelli, J. S., J. Abma, S. Ventura, L. Lindberg, B. Morrow, J. E. Anderson, S. Lyss, and B. E. Hamilton. 2004a. "Can changes in sexual behaviors among high school students explain the decline in teen pregnancy rates in the 1990s?" *J Adolesc Health* 35(2):80-90.

Santelli, J. S., J. Kaiser, L. Hirsch, A. Radosh, L. Simkin, and S. Middlestadt. 2004b. "Initiation of sexual intercourse among middle school adolescents: the influence of psychosocial factors." *J Adolesc Health* 34(3):200-8.

Santelli, J. S., B. Morrow, J. E. Anderson, and L. D. Lindberg. 2006a. "Contraceptive use and pregnancy risk among U.S. high school students, 1991-2003." *Perspect Sex Reprod Health* 38(2):106-11.

Santelli, John, Mary A. Ott, Maureen Lyon, Jennifer Rogers, Daniel Summers, and Rebecca Schleifer. 2006b. "Abstinence and abstinence-only education: a review of US policies and programs." *Journal of Adolescent Health* 38(1):72-81.

Sathiparsad, Reshma. 2010. "Young Rural Males in South Africa Speak on Teenage Pregnancy:"It's Really Her Problem"." *Journal of psychology in Africa* 20(4):537-46.

Schalet, Amy. 2010. "Sexual Subjectivity Revisited The Significance of Relationships in Dutch and American Girls' Experiences of Sexuality." *Gender & Society* 24(3):304-29.

Schalet, Amy T. 2000. "Raging hormones, regulated love: Adolescent sexuality and the constitution of the modern individual in the United States and the Netherlands." *Body & Society* 6(1):75-105.

Schalet, Amy T. 2011a. "Beyond abstinence and risk: A new paradigm for adolescent sexual health." *Women's Health Issues* 21(3):S5-S7.

Schalet, Amy T. 2011b. *Not under my roof: Parents, teens, and the culture of sex*: University of Chicago Press.

Schilt, Kristen, and Laurel Westbrook. 2009. "Doing Gender, Doing Heteronormativity "Gender Normals," Transgender People, and the Social Maintenance of Heterosexuality." *Gender & Society* 23(4):440-64.

Schmidt, L. 2008. "Risk preferences and the timing of marriage and childbearing." *Demography* 45(2):439-60.

Schneider, Barbara L., and David Stevenson. 2000. *The ambitious generation: America's teenagers, motivated but directionless*: Yale University Press.

Scholly, K., A. R. Katz, J. Gascoigne, and P. S. Holck. 2005. "Using social norms theory to explain perceptions and sexual health behaviors of undergraduate college students: an exploratory study." *J Am Coll Health* 53(4):159-66.

Schuster, Randi Melissa, Robin Mermelstein, and Laurie Wakschlag. 2013. "Gender-specific relationships between depressive symptoms, marijuana use, parental communication and risky sexual behavior in adolescence." *Journal of youth and adolescence* 42(8):1194-209.

Schwalbe, Michael, Daphne Holden, Douglas Schrock, Sandra Godwin, Shealy Thompson, and Michele Wolkomir. 2000. "Generic processes in the reproduction of inequality: An interactionist analysis." *Social Forces* 79(2):419-52.

Schwalbe, Michael, and Michelle Wolkomir. 2001. "The Masculine Self As Problem and Resource in Interview Studies of Men." *Men and Masculinities* 4:90-103.

Schwarz, Norbert, and Gerd Bohner. 2001. "Chapter Twenty." *Blackwell handbook of social psychology: Intraindividual processes*:436.

Schünmann, C., and A. Glasier. 2006. "Measuring pregnancy intention and its relationship with contraceptive use among women undergoing therapeutic abortion." *Contraception* 73(5):520-4.

Scott, Marvin B., and Stanford M. Lyman. 1968. "Accounts." *American sociological review*:46-62.

Seal, D. W., and G. Agostinelli. 1996. "College students' perceptions of the prevalence of risky sexual behaviour." *AIDS Care* 8(4):453-66.

Sedgh, G., S. Singh, I. H. Shah, E. Ahman, S. K. Henshaw, and A. Bankole. 2012. "Induced abortion: incidence and trends worldwide from 1995 to 2008." *Lancet* 379(9816):625-32.

Sennott, C, and S Mollborn. 2011. "College-bound teens' decisions about the transition to sex: Negotiating competing norms." *Advances in Life Course Research* 16(2):83-97.

Settersten, Richard A., Jr. 2003. *Age structuring and the rhythm of the life course*: Springer.

Shanahan, MJ. 2000. "Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective." *Annual Review of Sociology* 26:667-92.

Sheeder, J., K. Tocce, and C. Stevens-Simon. 2009. "Reasons for ineffective contraceptive use antedating adolescent pregnancies part 1: an indicator of gaps in family planning services." *Matern Child Health J* 13(3):295-305.

Shelton, Beth Anne, and Daphne John. 1993. "Does marital status make a difference? Housework among married and cohabiting men and women." *Journal of family Issues* 14(3): 401-420.

Siegel, David M., Marilyn J. Aten, and Klaus J. Roghmann. 1998. "Self-reported honesty among middle and high school students responding to a sexual behavior questionnaire." *Journal of Adolescent Health* 23(1):20-28.

Sieving, Renee E., Marla E. Eisenberg, Sandra Pettingell, and Carol Skay. 2006. "Friends' influence on adolescents' first sexual intercourse." *Perspectives on Sexual and Reproductive Health* 38(1):13-19.

Silk, Jessica, and Diana Romero. 2014. "The Role of Parents and Families in Teen Pregnancy Prevention An Analysis of Programs and Policies." *Journal of Family Issues* 35(10):1339-62.

Silver, EJ, and LJ Bauman. 2006. "The association of sexual experience with attitudes, beliefs, and risk behaviors of inner-city adolescents." *Journal of Research on Adolescence* 16(1):29-45.

Small, ML. 2009. "'How many cases do I need?' On science and the logic of case selection in field-based research." *Ethnography* 10(1):5-38.

Smigel, Erwin O., and Rita Seiden. 1968. "The decline and fall of the double standard." *The Annals of the American Academy of Political and Social Science* 376(1):6-17.

Snapp, Shannon, Ehri Ryu, and Jade Kerr. 2014. "The Upside to Hooking Up: College Students' Positive Hookup Experiences." *International Journal of Sexual Health* (ahead-of-print):1-14.

Sneed, Rodlescia S., Sheldon Cohen, Ronald B. Turner, and William J. Doyle. 2012. "Parenthood and host resistance to the common cold." *Psychosomatic Medicine* 74(6): 567.

Sokkary, Nancy, Roshanak Mansouri, Jennie Yoost, Mariel Focseneanu, Tania Dumont, Meera Nathwani, Lisa Allen, S. Paige Hertweck, and Jennifer E. Dietrich. 2013. "A multicenter survey of contraceptive knowledge among adolescents in North America." *Journal of pediatric and adolescent gynecology* 26(5):274-76.

Song, Juwon, and Thomas R. Belin. 2008. "Choosing an appropriate number of factors in factor analysis with incomplete data." *Computational Statistics & Data Analysis* 52(7):3560-69.

Spengen, Anna E. 2013. "The Gendered Nature of Sexuality." *Sociological Imagination: Western's Undergraduate Sociology Student Journal.*

Sprecher, Susan. 2013. "Predictors of condom use in first sexual intercourse: a consideration of individual, situational, relational, and cohort effects." *Journal of Applied Social Psychology* 43(S1):E71-E84.

Stanger-Hall, Kathrin F., and David W. Hall. 2011. "Abstinence-only education and teen pregnancy rates: why we need comprehensive sex education in the US." *PLoS One* 6(10):e24658.

STATA Corp. 2013a. "STATA statistical software: Release 13." College Station, TX: StataCorp LP.

STATA Corp. 2013b. "STATA Multiple Imputation Reference Manual: Release 13." College Station, TX: STATA Press.

Stautz, Kaidy, and Andrew Cooper. 2014. "Brief report: Personality correlates of susceptibility to peer influence in adolescence." *Journal of adolescence* 37(4):401-05.

Steinberg, Laurence. 2007. "Risk Taking in Adolescence: New Perspectives From Brain and Behavioral Science." *Current Directions in Psychological Science* 16(2):55-59.

Stepp, Laura Sessions. 2007. *Unhooked: How young women pursue sex, delay love and lose at both*: Penguin.

Stets, Jan E., and Richard T. Serpe. 2013. "Identity theory." Pp. 31-60 in *Handbook of Social Psychology*: Springer.

Stevens-Simon, C., J. Sheeder, R. Beach, and S. Harter. 2005. "Adolescent pregnancy: do expectations affect intentions?" *J Adolesc Health* 37(3):243.

Stevens-Simon, C., J. Sheeder, and S. Harter. 2005. "Teen contraceptive decisions: childbearing intentions are the tip of the iceberg." *Women Health* 42(1):55-73.

Stinson, Rebecca D. 2010. "Hooking up in young adulthood: A review of factors influencing the sexual behavior of college students." *Journal of College Student Psychotherapy* 24(2):98-115.

Stone, Nicole, and Roger Ingham. 2002. "Factors affecting British teenagers' contraceptive use at first intercourse: The importance of partner communication." *Perspectives on sexual and reproductive health*:191-97.

Strauss, Anselm L., and Juliet Corbin. 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques* Newbury Park, CA: Sage.

Suhr, Diana D. 2006. *Exploratory or confirmatory factor analysis?*: SAS Institute Cary.

Sung, Jungyeon, and Kwangsu Cho. 2012. "The influence of media type on attitude toward mobile advertisements over time." *Cyberpsychology, Behavior, and Social Networking* 15(1):31-36.

Thompson, Sharon. 1996. *Going all the way: Teenage girls' tales of sex, romance, and pregnancy*: Macmillan.

Thomson, Rachel, and Janet Holland. 1998. "Sexual Relationships, Negotiation and Decision Making." Pp. 59-80 in *Teenage Sexuality: Health, Risk and Decision Making*, edited by John Coleman and Debbie Roker. Amsterdam, The Netherlands: Overseas Publishers Association.

Thornton, Bill, Frederick X. Gibbons, and Meg Gerrard. 2002. "Risk perception and prototype perception: Independent processes predicting risk behavior." *Personality and Social Psychology Bulletin* 28(7):986-99.

Tolleson-Rinehart, Sue. "Women's Rights and the Politics of Health: Contraception, Health Reform, and the 2012 Election."

Tolman, Deborah L. 1991. "Adolescent girls, women and sexuality: Discerning dilemmas of desire." *Women & Therapy* 11(3-4):55-69.

Tolman, Deborah L. 1994. "Doing Desire: Adolescent Girls' Struggles for/with Sexuality." *Gender & Society* 8(3):324-42.

Tolman, Deborah L. 2002. *Dilemmas of desire: Teenage girls talk about sexuality*: Harvard University Press.

Tourangeau, Roger. 1992. "Context effects on responses to attitude questions: Attitudes as memory structures." Pp. 35-47 in *Context effects in social and psychological research*: Springer.

Townsend, JM, and TH Wasserman. 2011. "Sexual Hookups Among College Students: Sex Differences in Emotional Reactions." *Archives of Sexual Behavior* 40(6):1173-81.

Treas, Judith, and Deirdre Giesen. 2000. "Sexual infidelity among married and cohabiting Americans." *Journal of Marriage and Family* 62(1): 48-60.

Trussell, James. 2011. "Contraceptive efficacy." in *Contraceptive Technology: Twentieth Revised Edition*, edited by Hatcher RA, Trussell J, Nelson AL, Cates W, Kowal D, and Policar M. New York, NY: Ardent Media.

Tschann, Jeanne M., and Nancy E. Adler. 1997. "Sexual self-acceptance, communication with partner, and contraceptive use among adolescent females: A longitudinal study." *Journal of Research on Adolescence* 7(4):413-30.

Tsitsika, Artemis, Elisabeth Andrie, Efthymios Deligeoroglou, Chara Tzavara, Irene Sakou, Donald Greydanus, Vassiliki Papaevangelou, Mariza Tsolia, George Creatsas, and Chryssa Bakoula. 2014. "Experiencing sexuality in youth living in Greece: contraceptive practices, risk taking, and psychosocial status." *Journal of pediatric and adolescent gynecology* 27(4):232-39.

Turkkan, Jaylan S. 2000. "General issues in self-report." *The science of self-report: Implications for research and practice*:1-2.

Turner, CF, L Ku, SM Rogers, LD Lindberg, JH Pleck, and FL Sonenstein. 1998. "Adolescent sexual behavior, drug use, and violence: Increased reporting with computer survey technology." *Science* 280(5365):867-73.

Uecker, JE, and MD Regnerus. 2010. "Bare Market: Campus Sex Ratios, Romantic Relationships, and Sexual Behavior." *Sociological Quarterly* 51(3):408-35.

Uecker, Jeremy E. 2015. "Social Context and Sexual Intercourse among First-Year Students at Selective Colleges and Universities in the United States." *Social Science Research*.

Unger, J. B., and G. B. Molina. 2000. "Acculturation and attitudes about contraceptive use among Latina women." *Health Care Women Int* 21(3):235-49.

Ussher, Jane M. 1994. "Theorizing female sexuality: Social constructionist and post-structuralist accounts." *Female sexuality: Psychology, biology and social context*:149-73.

Valenti, Jessica. 2009. *The purity myth: How America's obsession with virginity is hurting young women*: Seal Press.

van Wersch, Anna, Judith Eberhardt, and F. Stringer. 2012. "Attitudes towards the male contraceptive pill: psychosocial and cultural explanations for delaying a marketable product." *Andrologie* 22(3):171-79.

Vasilenko, Sara A., Derek A. Kreager, and Eva S. Lefkowitz. 2015. "Gender, Contraceptive Attitudes, and Condom Use in Adolescent Romantic Relationships: A Dyadic Approach." *Journal of Research on Adolescence* 25(1):51-62.

Vermunt, Jeroen K., Joost R. Van Ginkel, Van Der Ark, L. Andries, and Klaas Sijtsma. 2008. "Multiple imputation of incomplete categorical data using latent class analysis." *Sociological Methodology* 38(1):369-97.

Vrangalova, Zhana, and Ritch C. Savin-Williams. 2011. "Adolescent sexuality and positive well-being: A group-norms approach." *Journal of youth and adolescence* 40(8):931-44.

Ward, LM. 2002. "Does television exposure affect emerging adults' attitudes and assumptions about sexual relationships? Correlational and experimental confirmation." *Journal of Youth and Adolescence* 31(1):1-15.

Whaley, A. L. 2000. "Differential risk perceptions for unintended pregnancy, STDs, and HIV/AIDS among urban adolescents: some preliminary findings." *J Genet Psychol* 161(4):435-52.

White, Katherine M., Deborah J. Terry, and Michael A. Hogg. 1994. "Safer sex behavior: The role of attitudes, norms, and control factors." *Journal of applied social psychology* 24(24):2164-92.

Wilkins, AC, and C Dalessandro. 2013. "Monogamy Lite: Cheating, College, and Women." *Gender & Society* 27(5):728-51.

Wilkins, Amy C. 2014. "Race, Age, and Identity Transformations in the Transition from High School to College for Black and First-generation White Men." *Sociology of Education* 87(3):171-87.

Willoughby, Brian J., and Jodi Dworkin. 2008. "The relationships between emerging adults' expressed desire to marry and frequency of participation in risk-taking behaviors." *Youth & Society*.

Wilson, Timothy D., and Sara D. Hodges. 2013. "Attitudes as Emporary Constructions." *The construction of social judgments*:37.

Woo, Jane S. T., Lori A. Brotto, and Boris B. Gorzalka. 2011. "The role of sex guilt in the relationship between culture and women's sexual desire." *Archives of Sexual Behavior* 40(2):385-94.

Wu, Larry, and Barbara Wolfe. 2001. *Out of wedlock: Causes and consequences of nonmarital fertility*: Russell Sage Foundation.

Yanovitzky, Itzhak, and Jo Stryker. 2001. "Mass media, social norms, and health promotion efforts a longitudinal study of media effects on youth binge drinking." *Communication Research* 28(2):208-39.

Zolna, Mia, and Laura Duberstein Lindberg. 2012. Unintended pregnancy: Incidence and outcomes among young adult unmarried women in the United States, 2001 and 2008. Alan Guttmacher Institute.

Appendix A: Means for cases missing data on underlying factor items versus cases with complete data

Variable	Missing	Complete	
Female	51.2%	48.0%	***
White	47.5%	57.4%	***
Black	29.4%	14.2%	***
Hispanic	16.5%	17.6%	
Other Race	6.6%	10.8%	***
Born in the United States	92.0%	89.3%	***
Age at Wave I	15.6	16.6	***
Below 100% of the Federal Poverty Line at Wave I	26.6%	12.1%	***
100-199% of the Federal Poverty Line at Wave I	25.9%	21.3%	***
200-299% of the Federal Poverty Line at Wave I	19.8%	22.3%	***
300-399% of the Federal Poverty Line at Wave I	12.2%	18.4%	***
400+% of the Federal Poverty Line at Wave I	15.6%	25.9%	***
No religion	13.6%	11.3%	***
Baptist	25.1%	18.6%	***
Other Christian	34.3%	35.3%	
Catholic	22.9%	29.9%	***
Other Religion	4.2%	5.0%	**
Grade Point Average below 2.5	48.1%	41.8%	***
Grade Point Average between 2.5-3.49	25.1%	28.2%	***
Grade Point Average 3.5 or above	26.8%	30.0%	***
Had sex by Wave I	38.1%	39.5%	*
Had sex by Wave III	85.5%	87.3%	**
Birth between 18-24	22.9%	21.2%	**
Abortion between 18-24	5.9%	5.0%	**
Unitended Birth between 18-24	13.2%	12.6%	
No. of sex partners, 12 months prior to Wave III interview	1.8	1.7	**
No. times intercourse, 12 months prior to Wave III interview	64.8	74.1	***
Condom used all the time, 12 months prior to Wave III interview	24.4%	20.9%	***
Pregnancy Prevention used all the time, 12 months prior to Wave III interview	44.6%	47.9%	***
Condom used at most recent sex	45.6%	41.0%	***
Pregnancy Prevention used at most recent sex	66.1%	69.2%	***
No birth control used, 12 months prior to Wave III interview	18.4%	19.1%	

Appendix B: Qualitative Sample Demographics and Demographic Questionnaire

Name	Age	Race/ Ethnicity	Major	Year in School	Type of Area From	Self Ranked Socio-economic Status	Partner/Marital Status
Abby	19	white	Sociology/Women's Studies	Sophomore	Suburban	Upper Middle Class	Exclusive Relationship
Alexa	19	White	Psychology	Sophomore	Rural	Middle Class	Single
Allison	18	White	Undecided	Freshman	Suburban	Middle Class	Single
Alyssa	18	white	Marketing	Freshman	Suburban	Middle Class	Exclusive Relationship
Amber	19	Black	Jewish Studies	Sophomore	Urban	Upper Middle Class	Single
Anna	20	White	Sociology	Sophomore	Suburban	Working Class	Living With Partner
Ashley	23	White	Integrative Physiology	Senior	Suburban/Rural	Working Class	Single
Brianna	18	White	Chemical/Biological Engineering	Freshman	Suburban	Middle Class	Exclusive Relationship
Brittany	20	Asian	Evolutionary Biology/Psychology	Junior	Suburban	Middle Class	Exclusive Relationship
Brooke	18	Latino	Undecided	Freshman	Urban	Lower Middle Class	Exclusive Relationship
Cassie	20	Other	Business	Sophomore	Urban	Working Class	Single
Courtney	22	White	Integrative Physiology	Senior	Suburban	Middle Class	Exclusive Relationship
Ellie	18	Latino	Studio Art	Freshman	Urban	Upper Middle Class	Single
Emmy	18	White	Economics	Sophomore	Suburban	Upper Middle Class	Single
Erin	19	White	Advertising	Sophomore	Suburban	Upper Middle Class	Single
Haley	19	Latino	Sociology	Sophomore	Urban	Upper Class	Single
Hannah	21	White	Sociology	Sophomore	Suburban	Lower Middle Class	Living With Partner
Jasmine	19	Asian	Political Science	Sophomore	Suburban	Upper Middle Class	Single
Jenn	19	White	Integrative Physiology	Sophomore	Suburban	Lower Middle Class	Single
Jessica	18	Latino	Undecided	Freshman	Urban	Upper Middle Class	Single
Jordan	18	White	Undecided	Freshman	Urban	Lower Middle Class	Single

Name	Age	Race/ Ethnicity	Major	Year in School	Type of Area From	Self Ranked Socio-economic Status	Partner/Marital Status
Kaitlin	20	White	Philosophy	Sophomore	Suburban	Upper Middle Class	Single
Kelsey	24	White	Psychology	Junior	Suburban	Middle Class	Exclusive Relationship
Kim	20	White	Psychology/French	Junior	Rural	Middle Class	Exclusive Relationship
Lacey	20	White	Fine Arts	Junior	Suburban	Upper Class	Single
Lana	21	White	Anthropology	Senior	Rural	Upper Middle Class	Single
Lauren	19	White	Sociology	Sophomore	Suburban	Middle Class	Single
Liz	20	white	Sociology	Sophomore	Urban	Working Class	Exclusive Relationship
Madison	19	White	Psychology	Sophomore	Urban/Suburban	Upper Middle Class	Single
Maria	18	White	Undecided	Freshman	Urban	Upper Middle Class	Single
Marlee	21	White	Evolutionary Biology	Senior	Suburban	Upper Class	single
Megan	19	White	Advertising	Sophomore	Suburban	Middle Class	Exclusive Relationship
Melissa	21	White	Psychology/Sociology	Senior	Rural	Upper Middle Class	Single
Natalie	21	White	Psychology/Sociology	Senior	Urban	Upper Middle Class	Single
Nicole	21	Asian	Asian Studies/Business	Sophomore	Suburban	Lower Middle Class	Single
Olivia	22	White	Communications	Sophomore	Suburban	Upper Middle Class	Divorced
Rebecca	22	Latino	Architecture	Junior	Urban	Middle Class	Single
Samantha	18	White	International Affairs	Freshman	Urban	Upper Middle Class	Exclusive Relationship
Shelby	20	White	Sociology	Junior	Suburban	Middle Class	Exclusive Relationship
Stephanie	19	White	Sociology	Sophomore	Suburban	Upper Middle Class	Exclusive Relationship
Sydney	19	White	Psychology	Freshman	Suburban	Upper Middle Class	Exclusive relationship
Taylor	21	White	Evolutionary Biology/Psychology	Senior	Suburban	Upper Middle Class	Single
Tiffany	19	White	Business	Sophomore	Rural/Suburban	Middle Class	Exclusive Relationship
Vicky	20	Asian	Psychology/Sociology	Junior	Suburban	Lower Middle Class	Single
Victoria	20	White	Journalism	Junior	Suburban	Upper Class	Single

Demographic Questionnaire

Age: _____

Race/Ethnicity (Circle One): White Black Latino Asian Other

Major: _____

Year in College: _____

Are you/your family from (circle one): An Urban Area A Suburban Area A Rural Area

Do you consider your family to be (check the one most like your family):

_____Upper Class
_____Upper Middle Class
_____Middle Class
_____Lower Middle Class
_____Working Class
_____Poor

When you were growing up, did you family ever have trouble paying household bills? ____Yes ____No

Did your family ever receive government benefits such as Temporary Assistance for Needy Families, Medicaid, or other Government Family subsidies? ____Yes ____No

How are you paying for college (mark **ONLY** the **LARGEST SOURCE OF FUNDS**):

_____Scholarships/Grants
_____Student Loans
_____Work-Study On Campus
_____Family/Parents
_____Working Off Campus
_____Other _____

How often would you say you typically use any form of contraceptive?

_____Every time I have sex
_____Most times I have sex
_____About half the times I have sex
_____Less than half the times I have sex
_____Almost never
_____I don't use contraceptives

Have you ever had an unplanned pregnancy? _____Yes _____No

Have you ever had an abortion? _____Yes _____No

Do you have any biological children? _____Yes _____No

If yes, how many biological children do you have? _____

What is your partner/marital status (Check one)?

_____Single
_____Married
_____Living with partner (but not married)
_____In exclusive relationship with someone but not living together or married
_____Divorced
_____Separated (but not divorced)
_____Widowed

How often do you have sex on average?

_____More than once a week
_____About once a week
_____Less than once a week but more than once a month
_____About once a month
_____Less than once a month but at least 2 times in 6 months
_____I have sex very infrequently (less than once every 6 months)

What type of contraceptive have you used most often in the last year?

_____Birth Control Pills
_____Condoms
_____Withdrawal
_____Other form of contraceptive _____

What type of birth control did you use the last time you had sex?

_____Birth Control Pills
_____Condoms
_____Withdrawal
_____Other form of contraceptive _____

Are you currently able to get pregnant? _____Yes _____No

Are you currently pregnant? _____Yes _____No

How important is it to you to NOT get pregnant at this time in your life (circle a number on the scale below)?

1 2 3 4 5
Very important Not very important

If you found out you were pregnant tomorrow how would you feel (circle a number on the scale below)?

1	2	3	4	5
Very Upset				Very Happy

Appendix C: Screening Questions

1. Are you between the ages of 18 and 29? (NEED YES RESPONSE TO QUALIFY)
2. Are you female and capable of getting pregnant (i.e. not sterile)? (NEED YES RESPONSE TO QUALIFY)
3. Have you had sex with a man in the last 6 months? (NEED YES RESPONSE TO QUALIFY)
4. Have you ever had sex without using any type of birth control or contraceptive- including condoms- when you did not want to become pregnant? This would include times which you forgot to use birth control in one instance even if you generally do use birth control. (NEED A YES RESPONSE TO QUALIFY)
5. Are you currently pregnant? (NEED NO RESPONSE TO QUALIFY)

Appendix D: Interview Questionnaires

Pilot Interview Questions

Thank you for agreeing to participate in my study on pregnancy and contraceptive use. All of your responses will be completely anonymous and confidential. I'm going to begin with a few general questions about you and your relationships.

Introductory Questions
What year are you in school?

What's your major?

Do you have a current partner (boyfriend)?

How many romantic relationships have you been in?

Can you tell me a bit about your relationships?

Personal Norms and Risk as a Teen

Tell me about the relationships you had in high school. (Probe for sex, contraceptives, partner relationship/ influence on sex and contraceptives, age at first sex etc.)

Were your friends having sex in high school as well?

Did you talk about contraception with them at that point? What did they think about sex?

What did your parents think about you having sex? Did they know? Did they help you obtain contraceptives? Why or why not?

Was your family religious? (Probe for religious affiliation, church attendance, their perceptions of their religions stance on contraceptives)

Did you worry about pregnancy as a teen?

What your parents have said/done if you had gotten pregnant while you were in high school? What would your friends have said/done?

How would you have reacted? Would you have kept the baby? Had an abortion? Given the baby up for adoption?

How would your partner(s) at that time have reacted? Did he/they worry about pregnancy? Did you talk about it?

How did you and your partner(s) in high school talk about contraceptive use? (Probe for just not thinking and in the moment)

Personal Norms and Risk as an Emerging Adult

Tell me about the relationships you've had in college. (Probe for sex, contraceptives, partner relationship/ influence on sex and contraceptives)

How do your friends view sex now that you're in college?

Did you talk about contraception with them now? Tell me about your conversations. What do they think about sex? Do most of them have long term relationships?

What about hook ups or other short term primarily sexual relationships?

Do you talk with your parents about sex now that you are in college? What do they think about relationships you've had? Do you feel like they expect you to be having sex now that you are an adult?

Do you worry about pregnancy now? Do think differently about pregnancy now than you did as a teen?

What your parents have said/done if you had gotten pregnant while you were in high school? What would your friends have said/done?

How would you have reacted? Would you have kept the baby? Had an abortion? Given the baby up for adoption?

How would your partner(s) at that time have reacted? Did he/they worry about pregnancy? Did you talk about it?

How did you and your partner(s) in high school talk about contraceptive use? (Probe for just not thinking and in the moment)

Personal Sexual and Birth Control History

Can you tell me a bit more about your personal experiences with birth control? Think about all the types of birth control you've used since you became sexually active. What and when have you tried something to prevent a pregnancy? Why did you start and stop using each method? (Probe for side effects, memory, types considered, doctors input, partners input, parental Input, friends input)

Have you ever had sex without birth control? Can you tell me about that experience(s)
-probe for worry about pregnancy, STI's, relationship issues

Have you ever had a surprise pregnancy or thought you were pregnant when you weren't?
If yes: Can you tell me about that experience? What did you do? How did you feel?
-probe for regret, just not thinking, stupidity, other explanations for why birth control was not used

Do you feel you are at risk for getting pregnant right now? Why or why not? (Are there times when you feel you could become pregnant even when you are not planning a pregnancy?)

What would it mean for you if you got pregnant right now?

Does that influence your use of birth control? What about the type of birth control you use?

Friend Influences
Have you ever had a friend who's had a pregnancy scare, or has gotten pregnant when she didn't want to? Can you tell me about her experience?

How about a friend who is really good with birth control? Can you tell me what motivates her to use birth control consistently?

Do you talk with your friends about birth control? What kinds of conversations do you have?
Probe: are they serious conversations, jokes, etc.

Do the experiences that your friends have had with birth control affect your decisions about what to use? What have you learned from them? What have they learned from you?

Partner Influences
Can you tell me how you talk about birth control with your boyfriend/most recent sexual partner?

Have you had different experiences with different partners? Can you tell me about your experiences?

How have your birth control decisions making experiences differed with romantic partners as compared to hook-ups or short term partners?

Can you tell me about how you and your most recent romantic partner made decisions about birth control? (If they indicate they have or have had one)

How about you and a shorter term sexual partner? (If they indicate that they have had such a relationship)

Would changing the way you make decisions about birth control affect your current/most recent relationship?

Can you tell me about a time in the past when you were uncomfortable with how you and your partner made birth control decisions? What made you uncomfortable and how did you handle it?

Ideally, what should each partner contribute to birth control decisions and why? Do you feel that one partner should have more input than the other? Which partner and why?

Do you think power within a relationship affects birth control decisions? How? Why?

Picture Story
Now I'm going to show you a picture. I want you to tell me about this woman's story. Who is she? What are her relationships like? How old is she? Where does she live? Anything you think is relevant to the picture.

Norms Questions
What does it mean for a pregnancy to be planned? How often do you think people plan pregnancies?

Do you feel like you personally can prevent pregnancy? Why or why not?

Do you think other women can prevent pregnancy? Why or why not?

What do you think of when you think about birth control?

Do you think it's always important to use birth control?

Can you tell me what you think about different types of birth control?
- Probe for condoms vs. other forms of birth control

How do you think about condoms? How important to you is it to use them?
In general are you more worried about getting pregnant or getting an STI? Why?

What do you think makes a woman decide to have unprotected sex when she doesn't want to get pregnant?

What do you think a woman means when she says she had unprotected sex because she "just wasn't thinking" about birth control?

Do you think men and women view birth control differently? Why or why not?

Do you think people of different races view birth control differently? Why or why not?

Closing Questions

Are there other things you can think of that have affected how you think about contraceptives or your use of them?

Do you have anything else on your mind you want to share?

This is my birth control.

Revised Interview Guide

Thank you for agreeing to participate in my study on pregnancy and contraceptive use. All of your responses will be completely anonymous and confidential. I'm going to begin with a few general questions about you and your relationships.

Introductory Questions
What year are you in school?

What's your major?

Do you have a current partner (boyfriend)?

How many romantic relationships have you been in?

Can you tell me a bit about your relationships?

Personal Norms and Risk as a Teen

Tell me about the relationships you had in high school. (Probe for sex, contraceptives, partner relationship/ influence on sex and contraceptives, age at first sex etc.)

Were your friends having sex in high school as well?

Did you talk about contraception with them at that point? What did they think about sex?

Did the experiences that your friends had with birth control affect your decisions about what to use/do? What did you learn from them? What do you think they learned from you?

Did you have any friends in high school that had a pregnancy scare, or got pregnant/got someone pregnant when she/he didn't want to? Can you tell me about her/his experience?

What did your parents think about you having sex? Did they know? Did they help you obtain contraceptives? Why or why not?

Was your family religious? (Probe for religious affiliation, church attendance, their perceptions of their religions stance on contraceptives)

Did you ever have sex without contraceptives while you were in high school? (If yes) Can you tell me about that experience (probe for regret, just not thinking, stupidity, other explanations for why birth control was not used)? Did you worry about pregnancy? What did you do?

Did you worry about pregnancy in general as a teen? Did you have any pregnancy scares?

What your parents have said/done if you had gotten pregnant while you were in high school? What would your friends have said/done?

How would you have reacted? Would you have kept the baby? Had an abortion? Given the baby up for adoption?

How would your partner(s) at that time have reacted? Did he/they worry about pregnancy? Did you talk about it?

How did you and your partner(s) in high school talk about contraceptive use? (Probe for just not thinking and in the moment)

Did you have different experiences with different partners? Can you tell me about your experiences? How were they the same? How were they different?

Personal Norms and Risk as an Emerging Adult

Tell me about the relationships you've had in college. (Probe for sex, contraceptives, partner relationship/ influence on sex and contraceptives)

How do your friends view sex now that you're in college?

Did you talk about contraception with them now? Tell me about your conversations. What do they think about sex? Do most of them have long term relationships? Hook ups?

What is the norm for sexual behavior in your friend group right now? How about on campus in general?

Did you have any friends in high school that had a pregnancy scare, or got pregnant/got someone pregnant when she/he didn't want to? Can you tell me about her/his experience?

What about hook ups or other short term primarily sexual relationships?

How have your birth control decisions differed with romantic partners as compared to hook-ups or short term partners?

Do you talk with your parents about sex now that you are in college? What do they think about relationships you've had? Do you feel like they expect you to be having sex now that you are an adult?

Have you had sex without contraceptives while you've been in college? (If yes) Can you tell me about that experience (probe for regret, just not thinking, stupidity, other explanations for why birth control was not used)? Did you worry about pregnancy? What did you do?

Do you worry about pregnancy now? Do think differently about pregnancy now than you did as a teen? Do you think about contraceptives differently now? Why or why not?

Have you have any pregnancy scares while you've been in college? Have you ever been pregnant? (If yes) How did you handle it?

What would your parents say/do if you got pregnant now, while you are in college? What would your friends say/do? How would they think about a pregnancy differently now that you are in college as compared to when you were in high school?

Do the experiences that your friends have with birth control affect your decisions about what to use/do? What have you learned from them? What do you think they have learned from you?

How would you react if you found out you were pregnant right now? Would you keep it? Have an abortion? Given the baby up for adoption?

How would your partner(s) right now react? Does he/do they worry about pregnancy? Do you talk about it? Tell me about your conversations with your partner about preventing pregnancy.

How do you and your partner(s) now talk about contraceptive use? (Probe for just not thinking and in the moment)

Have you had different experiences with different partners while you've been in college? Can you tell me about your experiences? How were they the same? How were they different?

Do you feel you are at risk for getting pregnant right now? Why or why not? (Are there times when you feel you could become pregnant even when you are not planning a pregnancy?)

Can you tell me about how you and your most recent romantic partner made decisions about preventing pregnancy?

Would changing the way you make decisions about birth control affect your current/most recent relationship?

What would it mean for you if you got pregnant right now?

Does that influence your use of birth control? What about the type of birth control you use?

General Partner Influence

Can you tell me about a time in the past when you were uncomfortable with how you and your partner made birth control decisions? What made you uncomfortable and how did you handle it?

Ideally, what should each partner contribute to birth control decisions and why? Do you feel that one partner should have more input than the other? Which partner and why?

Do you think power within a relationship affects birth control decisions? How? Why?

General Norms Questions

What does it mean for a pregnancy to be planned? How about for a pregnancy to be intended? Are planning and intention the same thing? How often do you think people plan pregnancies? How often do you think they intend them?

Do you feel like you personally can prevent pregnancy? Why or why not?

Do you think other women can prevent pregnancy? Why or why not?

What do you think of when I say birth control? How about when I say contraceptives?

Do you think it's always important to use birth control?

Can you tell me what you think about different types of birth control?
- Probe for condoms vs. other forms of birth control

How do you think about condoms? How important to you is it to use them?
In general are you more worried about getting pregnant or getting an STI? Why?

What do you think makes a woman decide to have unprotected sex when she doesn't want to get pregnant?

What do you think a woman means when she says she had unprotected sex because she "just wasn't thinking"

about birth control?

Do you think men and women view birth control differently? Why or why not?

Closing Questions

Are there other things you can think of that have affected how you think about contraceptives or your use of them?

Do you have anything else on your mind you want to share?