

SEXUAL EXPERIENCES AND HEALTH OUTCOMES FROM ADOLESCENCE TO EARLY
ADULTHOOD IN POPULATIONS WITH PHYSICAL DISABILITIES

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ABSTRACT

Nicole Fran Kahn: Sexual Experiences and Health Outcomes from Adolescence to Early Adulthood in Populations with Physical Disabilities
(under the direction of Carolyn Tucker Halpern)

Although a large amount of research over the last half century has focused on changes in adolescent sexual behavior, relatively little is known about what characterizes optimal sexual development through the life course.^{1,2} Populations with disabilities have been particularly understudied for various reasons, including historical restrictions on sexual behaviors for eugenic purposes^{3,4} and unfounded assumptions of asexuality or hypersexuality.^{5,6} Past research shows that adolescents with disabilities have less sexual knowledge than non-disabled peers, are at increased risk for pregnancy and sexually transmitted infections or diseases (STI/STD), and are more vulnerable to sexual violence and abuse, indicating a need for more information to protect this population.⁷⁻¹² It is therefore crucial to understand sexual patterns and health outcomes of populations with disabilities in order to develop better support for sexual health.

Accordingly, this dissertation used the Life Course¹³ perspective to understand longitudinal patterns of sexual development in populations with physical disabilities in the United States (U.S.) from adolescence into adulthood. I used data from the National Longitudinal Study of Adolescent to Adult Health (Add Health)¹⁴ to: 1) identify sexual patterns of people with physical disabilities from adolescence to adulthood, and 2) determine health outcomes associated with these sexual patterns.

Results demonstrate significant differences in sexual patterns and health outcomes for populations with physical disabilities through adulthood. Regarding sexual patterns, populations

with severe disabilities progressed more slowly to first vaginal sex, oral sex, and first sexual experience, and had fewer lifetime sexual partners compared to non-disabled peers. In general, earlier timing and more sexual partners were associated with greater odds of STI/STDs and unintended pregnancy, and lower romantic relationship quality in adulthood. Associations also varied by biological sex, race/ethnicity, and sexual orientation. Most notably, female and Non-Hispanic (NH) Black populations with mild disabilities were more likely to experience negative sexual health outcomes.

These results fill gaps in the literature by providing important information regarding sexual patterns and health outcomes in this notably understudied population. Such evidence can inform future research, practice, and policies that support understanding, healthy sexual development, and the provision of more focused sexuality education to populations with physical disabilities.

This dissertation is dedicated to the memory of my grandparents, Lisa and Justin Kahn and Joyce and Sam Berk, known to me as Oma, Opa, Pomsie and Sam, who always told us that no matter what happened, we would always have our education. As I achieve this important academic milestone, I am reminded of these words, the sacrifices they made for our family, and how proud I am to be their granddaughter.

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LIST OF ABBREVIATIONS

ADA	Americans with Disabilities Act
Add Health	The National Longitudinal Study of Adolescent to Adult Health
AHPVT	Add Health Picture Vocabulary Test
aHR	Adjusted hazard ratio
aOR	Adjusted odds ratio
AOUM	Abstinence only until marriage
aRR	Adjusted rate ratio
CDC	Centers for Disease Control and Prevention
CI	Confidence interval
GED	General Educational Development
HS	High school
MCH	Maternal and Child Health
NH	Non-Hispanic
NLSY	National Longitudinal Survey of Youth
NSFG	National Survey of Family Growth
OLS	Ordinary least squares regression
PDI	Physical Disability Index
SAHM	Society for Adolescent Health and Medicine
SES	Socioeconomic status
SHM	Supporting Healthy Marriage instrument
STI/STD	Sexually transmitted infection/sexually transmitted disease
U.S.	United States

WHO	World Health Organization
YRBSS	Youth Risk Behavior Surveillance System

CHAPTER 1: INTRODUCTION

Although a large amount of research has focused on changes in adolescent sexual behavior over the last half century, relatively little is known about what characterizes optimal sexual development through the life course.^{1,2} Populations with disabilities have been particularly understudied for various reasons, including historical restrictions on their sexual behaviors for eugenic purposes^{3,4} and unfounded assumptions of asexuality or hypersexuality.^{5,6} Fortunately, more recent legislation protecting these groups in the United States has started to bring their unique sexual development, health, and education needs to the forefront.^{15,16}

Based on the most recent report from the U.S. Census Bureau,¹⁷ approximately 56.7 million people in the United States had some type of disability in 2010, accounting for approximately 18.7% of the U.S. population that year. Of these, 2.8 million were considered to be school-aged (5-17 years), representing 5.2% of this age group.¹⁸ Almost 90% of children with disabilities are enrolled in public schools where they are provided with education services in the least restrictive environments based on their individualized education or health plans; however, this rarely includes sexuality education that is appropriate for their particular needs.⁸ Current policies that focus on abstinence only until marriage (AOUM) are not sensitive to the fact that most people engage in pre-marital sex.¹⁹ Thus, it is important to understand various sexual behavior patterns, such as timing of first sex and sexual partnering, to inform sexuality education programming and policy.^{1,20} This is particularly important for populations with physical disabilities, who have been shown to be at greater risk for negative health outcomes associated

with particular sexual development pathways and therefore are in need of more targeted and developmentally appropriate sexuality education.^{21–23} Unfortunately, the majority of this research uses cross-sectional data or convenience samples, which severely limits their generalizability and our understanding of the developmental consequences of sexual behavior in this population. Furthermore, none of this research considers the relationships between sexual patterns and sexual health outcomes among populations with disabilities. Accordingly, this project investigates the sexual patterns and health outcomes of populations with physical disabilities using the National Longitudinal Study of Adolescent to Adult Health (Add Health) to inform future research, practice, and policies for the healthy sexual development of these groups at the population level.

Disability

The Americans with Disabilities Act (ADA) defines a disability as “a physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment.”¹⁶ I use Cheng and Udry’s²² Physical Disability Index (PDI) for this dissertation, which similarly defines disability using information regarding limb difficulties, blindness, deafness, medical equipment use, assistive care needs, and perceptions of disability from Wave I of Add Health. The construction of this variable is defined in detail in Chapter 2; however, it is important to note that Add Health respondents were identified for further interview regarding their disabilities based on screening questions about limb difficulties from the Wave I in-school interview. Thus, while respondents with mental impairments could have been included in the PDI, they only would have been identified if they also had a physical limitation. For this reason, this group will be labeled as having physical disabilities throughout this dissertation.

Sexual Patterns

Sexual patterns are made up of multiple elements including timing of various sexual experiences and the accumulation of sexual partners. Although the body of research that considers the differences in these sexual patterns and their effects on health from adolescence to young adulthood is growing, much of the available research relies on cross-sectional or short-term longitudinal data. Importantly, little to no research has considered these sexual patterns among populations with physical disabilities. I have chosen to focus on timing and partner accumulation as the sexual patterns of interest for my dissertation because understanding when and how adolescents engage in sexual behavior is critical for guiding the timing and content of contemporary sexuality education curriculums.^{24,25} Furthermore, understanding how these patterns may be similar or different among populations with physical disabilities will provide us with important information regarding the specific needs of these groups and the ways in which we can scaffold sexuality education to better meet these needs.^{26,27} Research that has shaped our understanding of these particular sexual patterns is described below.

Timing

Timing of first sex, or sexual debut, is a common focus of adolescent sexuality research because of its implications for later aspects of sexual health. This is a particularly important topic for my dissertation because understanding timing patterns among populations with physical disabilities can help us to identify the proper timeline for age-appropriate sexuality education for these groups.²⁷ In the general population, research has produced conflicting findings regarding the relationship between timing of different sexual acts and adolescent and adult outcomes such as frequency of sexual activity²⁸ and likelihood of contraception use.²⁹ Timing of various types of sexual activity also varies by biological sex, race/ethnicity, and sexual orientation. For

example, studies indicate that women are more likely to engage in vaginal intercourse at an earlier age,³⁰ while men tend to experience oral and anal sex earlier.¹⁹ Research also shows that African American youth engage in vaginal intercourse earlier than their White peers but experience oral and anal sex later.^{19,30} Finally, sexual minority males and females have been reported to initiate sexual activity earlier than their heterosexual counterparts.^{31,32}

Very little research examines the relationship between physical disability and timing of sexual experiences, and the majority of this literature focuses on increased likelihood of sexual violence or abuse at earlier ages.^{7,33} Of the few studies that do focus on timing of sexual experiences and health outcomes in adolescent populations with various types of disabilities (e.g., physical, sensory, emotional), findings suggest differences in timing of first vaginal sex by both disability type and biological sex.^{34–36} For instance, in their cross-sectional study of 14-17 year olds in Germany, Wienholz and colleagues³⁶ found that a smaller proportion of teens with physical disabilities and vision or hearing impairments reported experiencing vaginal intercourse than did those without disabilities; however, among sexually experienced teens with any of these disabilities, males and those with hearing impairments were more likely to have reported ever having intercourse. Furthermore, of those who did engage in sexual behavior during this time period, adolescents with any of these disabilities reported earlier ages of sexual debut compared to those without a disability. Similarly, using data from the National Longitudinal Survey of Youth (NLSY), Shandra and colleagues³⁵ found that males with learning or emotional conditions were more likely, and those with sensory conditions were less likely, to report earlier sexual debut compared to males without any type of disability. Overall, the research suggests that populations with disabilities may experience earlier debut of vaginal sex than their peers without disabilities, though this relationship is moderated by the type and severity of the disability.

However, this existing literature tends to focus only on vaginal sex and often limits the study periods to the adolescent years. Because of these limitations, it is difficult to consider the implications of timing of different types of sexual behaviors and how such patterns could affect health outcomes at later ages among populations with physical disabilities.

Partner Accumulation

Partner accumulation refers to the cumulative number of sexual partners one has over a specified period of time. I have chosen to study partner accumulation because of past research suggesting a relationship between partner counts and negative health outcomes in early adulthood, as described below. This is particularly important for my dissertation because information regarding similarities or differences in partner accumulation among those with and without physical disabilities can help us to design more developmentally appropriate sexuality education that is responsive to the particular needs of different groups.²⁷

Previous research using Add Health has indicated that adolescents (12-18) and emerging adults (18-24) report higher partner accumulation rates than early adults (24-32); however, closer examination of the data shows differences by biological sex and race/ethnicity.³⁷ In terms of biological sex, Kan and colleagues,³⁷ using Add Health data, found that adolescent females reported more sexual partners over time than did males. In contrast, data from the national Youth Risk Behavior Surveillance System (YRBSS) consistently indicates that adolescent males are more likely than adolescent females to report having had four or more sexual partners.^{38,39} Such conflicting results may be related to differences in the datasets or the methods of analysis (growth over time vs. cumulative/categorical outcome). Regarding race/ethnicity, YRBSS data showed that Black adolescents were significantly more likely than both Whites and Hispanics to have had four or more sexual partners.^{38,39} In addition, Kan et al.³⁷ found that Hispanics in the

Add Health sample show more linear growth rates of partner accumulation from adolescence to young adulthood, while partnering among Whites and Blacks tends to increase through emerging adulthood and then decline by age 27. Finally, sexual minority male adults (18-39) and female adolescents and emerging adults (15-20) have been shown to have greater numbers of lifetime partners compared to heterosexuals.^{31,32}

One strength of a number of the studies described above is the use of nationally representative data, which makes the results generalizable to the broader population.^{32,37-39} However, the differences in the analytic methods and the use of cross-sectional data^{31,32,38,39} or convenience samples³¹ in other studies make it more difficult to know if these patterns persist across developmental stages. Very little research has considered the partner accumulation patterns of individuals with disabilities. One recent cross-sectional study of 18-25 year olds with visual, hearing, and physical disabilities in Germany showed they had experienced an average of 2.3 partnerships.⁴⁰ Although the differences were not statistically significant, this study found that those with hearing and vision impairments experienced more partnerships than did those with a physical disability, and that males with disabilities had more partnerships on average than did females.⁴⁰ Unfortunately, this study did not include respondents without disabilities, making it difficult to compare partnering experiences of individuals with disabilities to those of their non-disabled peers. To my knowledge, no such studies examine partner accumulation patterns among individuals with physical disabilities at a population level. For this reason, this dissertation will fill an important gap in the literature by focusing on the sexual partner accumulation patterns of populations with physical disabilities from adolescence to early adulthood.

Health Outcomes

There is a growing body of literature documenting the relationships between sexual patterns in adolescence and health outcomes in young adulthood, and much of this research has been used to inform the design of educational and preventive health services for adolescents and adults alike. Unfortunately, virtually no research focuses on these outcomes in the population with physical disabilities, which means that sexuality education and health services may not be particularly appropriate to the needs of this group. I have therefore chosen to focus on the relationship between sexual patterns and various health outcomes, including STI/STD diagnosis, unintended pregnancy, and romantic relationship quality among populations with physical disabilities from adolescence to early adulthood for this dissertation. Below I briefly describe recent research focused on these associations.

STI/STDs

The majority of studies examining health outcomes related to sexual patterns focus on STI/STDs. Data from the Centers for Disease Control and Prevention (CDC) show that while 15-24 year olds only represent 25% of the sexually active population, this age group accounts for half of all new STI/STD cases in the United States each year.^{41,42} Surveillance studies and research using nationally representative data have also shown that both women and sexual minorities are disproportionately burdened by STI/STDs.⁴¹⁻⁴³ Regarding timing of sexual activity, studies have shown that early sexual debut, particularly vaginal sex, has been associated with increased likelihood of STI/STD diagnosis.⁴⁴⁻⁴⁷ However, other studies have suggested moderation of these relationships by biological sex, such that early debut of vaginal sex is associated with higher odds of STI/STDs for both males and females, while delayed vaginal sex is only associated with significantly lower odds of STI/STDs among females.²⁸ Such

inconsistencies can be attributed to the differences in the sample sizes and the representativeness of the datasets used for each study. Relatively few studies have considered the ways in which other types of sexual activity are related to STI/STDs. In one such study, Haydon and colleagues⁴⁵ found no differences in STI/STD diagnoses among those who had early age of initiation of vaginal, oral, or anal sex compared to those of the average age. In contrast, delaying all sex experiences and only ever engaging in vaginal sex were associated with lower odds of STI/STD diagnosis.⁴⁵

A greater number of lifetime partners has also been associated with greater odds of STI/STDs. Among adolescents, Rosenberg and colleagues⁴⁸ found that concurrent sexual partnerships were associated with increased STI/STD diagnosis in a STI/STD clinic sample. In addition, Kelley et al.⁴⁹ found that adolescents in the Add Health sample who reported concurrent or multiple sequential partners had greater odds of reporting a STI/STD than those who were in a single relationship during adolescence. These associations also persist through young adulthood. For example, Ashenhurst and colleagues⁵⁰ found that those respondents in their college sample who reported multiple sexual partners had lower odds of using protection against STI/STDs during sexual encounters. Furthermore, a study by Vasilenko and colleagues⁴⁶ as well as my recent work⁵¹ both suggest that having more sexual partners is associated with greater odds of STI/STD diagnosis. When considering moderation by biological sex, Vasilenko et al.⁴⁶ found that having more sexual partners was associated with greater odds of STI/STD diagnosis for men, while STI/STD rates were consistent across all women, regardless of the number of sexual partners. Although few studies have considered moderation of the relationship between sexual partnering and STI/STDs among racial/ethnic groups and by sexual orientation, there is research to suggest that racial/ethnic and sexual minorities are at greater risk for STI/STDs than

their White and heterosexual majority counterparts, respectively.^{43,45,52} Such differences may be related to structural and contextual factors including segregated sexual networks, which have been associated with variation in STI/STD rates.⁵³

More research is still needed to understand the relationship between the timing of different types of sexual activity, numbers of sexual partners, and STI/STDs from adolescence through early adulthood. Furthermore, although some research has indicated that populations with physical disabilities are at greater risk for STI/STDs,^{8–10,54,55} none of this research has considered how timing of first sex or sexual partnering may affect STI/STD acquisition by early adulthood. Therefore, this dissertation will provide important information about how timing of sexual experiences and partner accumulation are related to STI/STD diagnosis among members of this specific population.

Unintended Pregnancy

Nearly half of all pregnancies in the United States are unintended, and research shows that unintended pregnancies are more prevalent among 18-24 year olds, women living in poverty, racial/ethnic minority groups, and sexual minority females.^{56–61} Most research that considers the relationship between timing of first sex or partner accumulation and unintended pregnancy focuses on contraceptive behaviors as the outcome rather than the pregnancy itself, or is limited to teen pregnancies. For example, research using the National Survey of Family Growth (NSFG) has shown that early age of sexual activity among adolescents is associated with longer delay of contraceptive use, putting one at a greater risk for unintended pregnancy.⁶² Another study by Reese and colleagues⁶³ using Add Health data showed that initiating sexual behavior with oral sex and waiting at least a year to have vaginal intercourse was associated with significantly lower odds of teenage pregnancies. Similarly, my work using Add Health⁵¹ suggests

that delayed sexual activity is associated with lower odds of a lifetime unintended pregnancy from adolescence through early adulthood.

Regarding partnering, a systematic review by Kirby⁶⁴ showed that having multiple sex partners during adolescence was associated with teen pregnancy. Research with small samples of emerging adults has also suggested that serial monogamy may be related to inconsistent contraceptive use, thus increasing the risk of unintended pregnancy.⁶⁵ In addition, my current work⁵¹ suggests that having fewer lifetime sexual partners is associated with lower odds of a lifetime unintended pregnancy compared to those with 4-7 lifetime partners from adolescence to early adulthood. To my knowledge, no studies consider the relationship between these sexual patterns and unintended pregnancy from adolescence through adulthood among those with physical disabilities. This dissertation will thus fill this gap in the literature by examining associations between these sexual patterns and unintended pregnancy among populations with physical disabilities using data from Add Health.

Romantic Relationship Quality

Reproductive health is defined by the World Health Organization (WHO) as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity;”⁶⁶ however, romantic relationship characteristics and other more positive aspects of human sexuality are less commonly studied than the negative health outcomes described above. Even fewer studies consider the unique experiences of populations with physical disabilities, who are entitled to the same rights to safe and satisfying sex as are those without physical disabilities.⁶⁷⁻⁷⁰ In particular, the literature shows mixed findings regarding associations between sexual patterns and romantic relationship quality, which may be attributed to differences in the types of samples used or the ways in which relationship quality was measured. For example,

cross-sectional research shows no differences in relationship quality between those who initiated sexual activity at an earlier or later age compared to the average.²⁸ However, my recent work⁵¹ using Add Health data indicates that those who delayed sexual activity have higher overall relationship quality in their current relationship, while those who engaged in sex earlier during adolescence and who had anal sex before age 18 showed lower overall relationship quality compared to the normative group. In a cross-sectional sample of 14-24 year olds visiting an adolescent medicine clinic, researchers found that having fewer than average lifetime sexual partners was associated with greater happiness in a current sexual relationship.⁷¹ Similarly, my research⁵¹ has shown that those who have fewer sexual partners report greater relationship quality compared to those with 4-7 lifetime sexual partners. While some studies have considered the relationship quality of people with disabilities, this research tends to focus on adults in the context of marriage and a disability that has occurred due to aging.⁷² One recent cross-sectional study of 18-25 year olds with vision, hearing, and physical disabilities in Germany suggested that the majority of these individuals experienced positive romantic relationships.⁴⁰ Unfortunately, this study was limited to individuals with a particular disability, making it difficult to compare their experiences to individuals without disabilities. To my knowledge, no research has focused on the relationships between sexual patterns and romantic relationship quality outcomes of people with physical disabilities from adolescence to adulthood. Thus, this dissertation will fill a critical gap in the research by studying these associations in a longitudinal, nationally representative sample of respondents with physical disabilities in the United States.

Limitations of Past Literature

More research is needed to better understand the relationship between sexual patterns and health outcomes at the population level, and to consider longitudinal patterns from adolescence

to young adulthood. Limited research has focused on the sexual development of adolescents with physical disabilities and how these experiences shape sexual health and behavior in young adulthood, as this population has traditionally been excluded from such studies.⁷³ Of the research that does consider the sexual experiences of populations with disabilities, the inconsistent findings may be attributable to variations in the types of disabilities (e.g., physical, learning, or emotional conditions) represented across samples. As mentioned previously, research to date has consistently shown that adolescents with physical disabilities have less sexual education, are at increased risk for pregnancy and STI/STDs due to poor contraceptive use, and are more vulnerable to physical and sexual violence and abuse, all of which may affect their sexual patterns over the life course.^{7-12,74} However, none of the aforementioned studies consider the influence of sexual timing and partnering on these outcomes, which are critically important components of these causal pathways.^{47,51,62,63,75} Furthermore, these and other studies that compare disability groups generally focus on the adolescent period only.³⁴⁻³⁶ Although important, cross-sectional research does not provide us with important information about long-term health implications of adolescent sexual behaviors, and thus limits our ability to make recommendations that can have lasting impacts on the sexual health of populations with physical disabilities across the life course.

Research Questions

This dissertation uses the Life Course¹³ perspective to better understand longitudinal patterns of sexual development and related health outcomes in U.S. populations with physical

disabilities from adolescence into adulthood. The Aims and related research questions are outlined below and addressed in separate chapters.^a

Aim 1: Identify the sexual patterns of people with physical disabilities from adolescence to early adulthood.

Chapter 3: How does the timing of initiation of oral, anal, and vaginal sex vary by physical disability severity? How does timing of initiation of each type of sex further vary by biological sex, race/ethnicity, and sexual orientation?

Chapter 4: How do pre-18 and lifetime sexual partner accumulation patterns vary by physical disability severity? How do these sexual partner accumulation patterns further vary by biological sex, race/ethnicity, and sexual orientation?

Aim 2: Determine the physical health outcomes and romantic relationship characteristics associated with the sexual patterns described in Aim 1.

Chapter 5: How are timing of first sex, lifetime sexual partner counts, and pre-18 sexual partner counts related to lifetime STI/STD diagnosis across different levels of disability severity? How do these associations further vary by biological sex, race/ethnicity, and sexual orientation?

Chapter 6: How are timing of first sex, lifetime sexual partner counts, and pre-18 sexual partner counts related to lifetime unintended pregnancy across different levels of disability severity? How do these relationships further vary by biological sex, race/ethnicity, and sexual orientation?

Chapter 7: How are timing of first sex, lifetime sexual partner counts, and pre-18 sexual

^a Aim 1 chapters (3-4) have been written for and submitted to peer-reviewed journals, and thus repeat information covered in the introductory chapters. Aim 2 chapters (5-7) are written in the dissertation manuscript format and will be prepared for future submission to peer-reviewed journals.

partner counts related to romantic relationship quality in the current or most recent relationship across different levels of disability severity? How do these associations further vary by biological sex, race/ethnicity, and sexual orientation?

The results of these analyses will fill a gap in the developmental and health literatures by providing important information regarding sexual patterns and health outcomes in this notably understudied population. Such information will help to guide future research, practice, and policies that support healthy sexual development and the provision of more focused sexual health education to populations with physical disabilities. Moreover, my use of a longitudinal dataset expands on previous research focused on the sexuality of populations with physical disabilities during adolescence by considering how sexual patterns and related health outcomes may have different implications when considered from adolescence through early adulthood.

CHAPTER 2: THEORETICAL FRAMEWORK AND DATA

Life Course Perspective

This dissertation draws upon the life course perspective, which focuses on the sequences of statuses and roles that people assume throughout life, and how these sequences are affected by changing societal norms over both individual and historical time.¹³ Of particular note are life transitions, which are the changes in statuses and roles that make up long-term patterns or trajectories, both within an individual life and in historical time. In addition, the life course perspective is concerned with the ideas of *cumulative advantage/disadvantage*, which suggests that the combination of various life experiences may exacerbate or mitigate negative health outcomes over time,^{76–79} and *intersectionality*, which similarly posits that individuals who have multiple socially marginalized identities may experience even greater disadvantage and discrimination than those who only identify with one minority group.⁸⁰

The life course perspective has more recently been applied to sexual development, indicating that social norms exist around the initiation and patterns of sexual experiences and that departures from these norms have implications for future social, health, and educational outcomes.^{1,81–83} Since populations with physical disabilities have different life experiences than their peers without physical disabilities,⁸⁴ the life course perspective would suggest the possibility that they also experience different outcomes. Furthermore, consistent with the concepts of cumulative advantage/disadvantage and intersectionality, one would expect members of the population with physical disabilities who also identify with one or more other

marginalized groups (e.g., female, Black race, sexual minority) to experience additive adverse effects of these sexual patterns compared to those who do not share these other minority statuses.^{70,85–88} Therefore, this dissertation uses the life course perspective to understand whether physical disability is associated with variations in sexual patterns and health outcomes in early adulthood, and how such patterns and outcomes may further vary by biological sex, race/ethnicity, and sexual orientation.

Figure 1: Conceptual model relating physical disability, sexual patterns, and health outcomes from adolescence to early adulthood

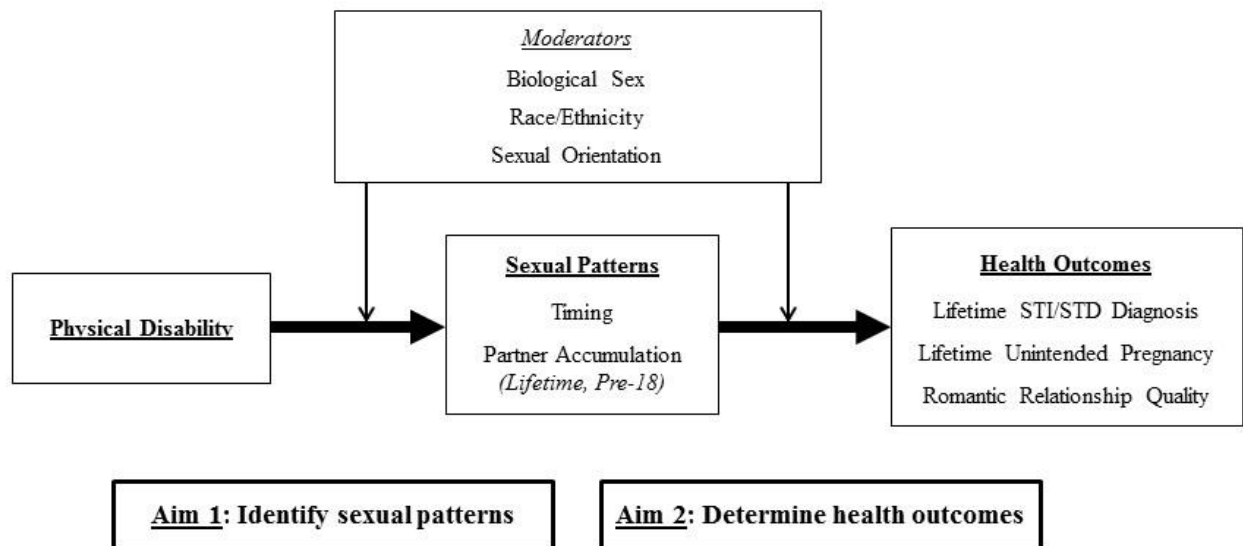


Figure 1 presents the conceptual model for this dissertation. Aim 1 is to identify sexual patterns experienced from adolescence to early adulthood in populations with physical disabilities, and is indicated by the bold arrow from “Physical Disability” to “Sexual Patterns.” Aim 2 is to determine the health outcomes and that are associated with the sexual patterns described in Aim 1, and is illustrated by the bold arrow from “Sexual Patterns” to “Health Outcomes.” For each aim, I also test for moderation by biological sex, race/ethnicity, and sexual orientation when sample sizes allow, which is indicated by the vertical arrows connecting “Moderators” to the bold arrows.

Methods

Study Sample

This dissertation uses data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative, longitudinal study of over 20,000 in-school adolescents who were in 7th-12th grade (ages 12-18) in the United States during the 1994-1995 school year.¹⁴ The purpose of the Add Health study was to examine the determinants of adolescent health and health behavior, and how these affect health outcomes over the life course. To date, four waves of data have been collected, consisting of one in-school and one parent interview at study entry and four in-home interviews spanning from adolescence into early adulthood. The current study uses data from the Wave I and Wave IV interviews, which capture the important life course transitions from adolescence to early adulthood. Specifically, Wave I consists of the original 20,745 respondents aged 12-18 in 1994-1995 (adolescence), and Wave IV consists of 15,701 of the original respondents who were ages 24-34 in 2008-2009 (early adulthood; response rate=80.3%).⁸⁹

I focus on respondents who had valid Wave IV cross-sectional sampling weights (n=14,800) and who had complete data on all variables of interest (n=13,458). To decrease the amount of missing data in the sample, I used multiple imputation by chained equations.⁹⁰ Analyses for Aim 1 outcomes included all 13,458 respondents, while Aim 2 analyses varied by health outcome:^b

- For the STI/STD outcome, the analytic sample excluded those who had never had any type of

^b These Aim 2 sample sizes only apply to analyses that use timing of first sex and the number of lifetime sexual partners as predictors of interest because multiple imputation models would not converge for the pre-18 sexual partnering predictor. Complete case analyses for pre-18 sexual partner models resulted in sample sizes of 11,391 respondents for the STI/STDs, 10,948 respondents for the unintended pregnancy, and 11,135 respondents for the romantic relationship quality outcomes.

sex (n=13,123).

- For the unintended pregnancy outcome, the analytic sample excluded those who had never had any type of sex and those who had never experienced vaginal sex (n=12,719).
- For the romantic relationship quality outcome, the analytic sample excluded those who had never had any type of sex and those who did not report on a current or most recent relationship (n=12,877).

All analyses used sampling weights and adjusted variance estimates for the Add Health complex survey design, and were performed using Stata Version 15.0.⁹¹

Measures

Physical Disability

Physical disability was measured using Physical Disability Index (PDI), which integrates information from the in-school and in-home adolescent interviews, interviewer reports, and the parent interview at Wave I. As described by Cheng and Udry,²² every adolescent respondent was asked screening questions regarding limb difficulties, identifying 989 adolescents who received an extended interview. For those identified, both the adolescent and parent were asked questions regarding the adolescent's disabilities, functional limitations, and assistive care needs. Responses to each of the adolescent and parent interviews were coded independently, and the higher of the two scores was used to define the adolescent's PDI score.

For both the adolescent and parent surveys, an individual's score started at zero. Scores increased by one point for each of the following:

1. Having limb difficulties
2. Using medical equipment
3. Needing assistive care

4. If the respondent perceived the adolescent to have a disability, or if the respondent believed others perceived the adolescent to have a disability
5. Indication of difficulty in walking, standing, extending, grasping, or holding things
6. More than three body parts affected (parent interview only)

After selecting the higher of the two scores, interviewer reports of blindness and deafness were incorporated as follows:

- If the adolescent was deaf or blind in one eye/ear and had an initial score <3 , the adolescent was given a final score of 3.
- If the adolescent was blind in one eye and deaf and had an initial score <4 , the adolescent was given a final score of 4.
- If the adolescent was blind in both eyes and had an initial score <5 , the adolescent was given a final score of 5.

This process resulted in scores ranging from 0-5; however, due to the infrequency of scores ≥ 4 , scores of 4 or 5 were grouped into the “3” category, creating the final 0-3 scale, indicating no (0), mild (1), moderate (2), and severe (3) physical disability.⁹²

Sexual Patterns

Timing. To create the appropriate variables for survival models, I created three dichotomous variables (yes, no) to serve as the failure variables. These were based on the following items regarding lifetime experiences of vaginal, oral, and anal sex from the Wave IV interview:

- Have you ever had vaginal intercourse? (Vaginal intercourse is when a man inserts his penis into a woman's vagina.)

- Have you ever had oral sex? That is, has a partner ever put his/her mouth on your sex organs or you put your mouth on his/her sex organs?
- Have you ever had anal intercourse? (By anal intercourse, we mean when a man inserts his penis into his partner's anus or butt hole.)

Time at risk for each type of sex was determined using responses to the following items regarding age in years at first sexual experience, each of which was recoded to a floor of 10 years (see Table 51 of the Appendix for distributions of age at first sex variables):

- How old were you the first time you ever had vaginal intercourse?
- How old were you the very first time you had oral sex?
- How old were you the very first time you had anal intercourse?

For those who did not experience a given type of sex, time at risk was equal to the respondent's age at the time of the Wave IV interview.

In addition to the variables for each individual behavior described above, I also constructed a dichotomous failure variable and a time at risk variable for the respondent's first sexual behavior, regardless of the type of sex. Again, for those who did not experience any of the three sexual behaviors, time at risk equaled the respondent's age at the time of the Wave IV interview.

For Aim 2, I measured timing using years sexually active instead of age at first sex. To create this variable, I subtracted the age of the first sexual behavior, whether vaginal, oral or anal, from age at the time of the Wave IV interview.

Partner accumulation. At Wave IV, respondents were asked to provide numbers of male and female sexual partners with whom they had ever engaged in any type of sexual activity, both in their lifetimes and before the age of 18 (pre-18) using the following items:

- Considering all types of sexual activity, with how many male partners have you ever had sex?
- Considering all types of sexual activity, with how many female partners have you ever had sex?
- Considering all types of sexual activity, with how many male partners did you have sex before you were 18 years old, even if only one time?
- Considering all types of sexual activity, with how many female partners did you have sex before you were 18 years old, even if only one time?

Responses to these items were used to construct two continuous partner count variables for each respondent, one each for lifetime and pre-18 partners. Given the range of responses and right skew of the distribution, lifetime partner counts were capped at 100 and pre-18 partner counts were capped at 60 (See Table 51 of the Appendix for distributions of partnering variables). The resulting partnering variables were used for both Aims 1 and 2.

Health Outcomes

Lifetime STI/STD diagnosis. I used the self-reported history of STI/STDs from Wave IV. Specifically, respondents were asked the question below, followed by a list of possible STI/STDs:

- Have you ever been told by a doctor, nurse, or other health professional that you had the following sexually transmitted disease?

Since many of the STI/STDs are rare, I created a dichotomous variable (yes, no) that indicated if the respondent had ever been diagnosed with any of the listed STI/STDs. Since some of the STI/STDs in the Add Health questionnaire are sex specific, I only included those infections or diseases that can affect both biological sexes and are not caused by other STI/STDs.

Included STI/STDs were: chlamydia, gonorrhea, trichomoniasis, syphilis, genital herpes, genital warts, hepatitis B, human papilloma virus, and HIV/AIDS. Excluded STI/STDs were pelvic inflammatory disease, cervicitis/mucopurulent cervicitis, vaginitis, urethritis, and any other STI/STD.

Unintended pregnancy. At Wave IV, respondents provided a complete pregnancy history. For every pregnancy, respondents were asked, the following regarding fertility intentions:

- “Thinking back to the time just before this pregnancy with {fill initials}, did you want to have a child then?”

If the respondent indicated “no” for any reported pregnancy, the respondent was coded as having had an unintended pregnancy (1). If none of the pregnancies was unintended or if the respondent had never been pregnant, the respondent was coded as never having an unintended pregnancy (0).

Romantic relationship quality. The romantic relationship quality variable was calculated as the average score of six items from the Supporting Healthy Marriage (SHM) baseline instrument.⁹³ Respondents participated in this section of the Wave IV survey if they reported at least one past or present relationship with an intimate partner. Respondents were asked a series of detailed questions about their current partner, and if not currently in a relationship, their most recent partnership. Each respondent indicated how much they agreed or disagreed with the following six relationship quality items using a 5-point Likert scale (1=strongly disagree, 5=strongly agree):

1. We (enjoy/enjoyed) doing even ordinary, day-to-day things together.
2. I (am/was) satisfied with the way we handle our problems and disagreements;
3. My partner (listens/listened) to me when I need someone to talk to;

4. My partner (expresses/expressed) love and affection to me;
5. I (am/was) satisfied with our sex life;
6. I (trust/trusted) my partner to be faithful to me.

One item from the SHM instrument was included in the Add Health survey but was excluded from the current analysis. This item was “I (am/was) satisfied with the way we handle family finances,” and was excluded because it is more applicable to marriage and cohabiting relationships than other relationship types. Items were reverse coded so that higher romantic relationship quality was indicated by a higher mean score ($\alpha=0.88$).

Aim 1 Controls and Moderators

In main effect analyses for Aim 1, I controlled for biological sex, race/ethnicity, age of the respondent at the time of the Wave IV interview, socioeconomic status (SES) of the family of origin, sexual orientation, cognitive ability score, and history of sexual violence and abuse. In moderation analyses, biological sex, race/ethnicity and sexual orientation were treated as moderators; age, SES, cognitive ability, and history of sexual violence and abuse served as controls.

Biological sex was measured using the sex on school records at Wave I and confirmed by the interviewer at each wave. For these analyses, I used biological sex reported at Wave IV.

Race/ethnicity is self-reported and verified by interviewers. These analyses were limited to respondents who identified as Hispanic, non-Hispanic (NH) Black, and NH White.

Age at the time of the interview was previously calculated by finding the difference between the Wave IV interview dates and birth dates for each respondent.

Socioeconomic status is a previously constructed variable from Wave I, and is measured using the highest education level achieved by either parent.

Sexual orientation was measured using an item regarding sexual orientation identity at Wave IV. The *sexual minority* group included respondents who endorsed an identity of fully or mostly homosexual, bisexual, mostly heterosexual, or asexual. Those who identified as fully heterosexual represented the *heterosexual* group.

Cognitive ability was measured using the 87-item Add Health Picture Vocabulary Test (AHPVT) from Wave I.⁹⁴ The AHPVT is an abridged version of the Peabody Picture Vocabulary Test, which is moderately correlated with other intelligence measures such as the Stanford-Binet Intelligence Scale and the Wechsler Intelligence Scale for Children.^{95–97} AHPVT scores were standardized to approximate an intelligence quotient metric with a mean of 100 and a standard deviation of 15, resulting in four categories (<85, 85–99, 100–114, >114).⁹⁸

Sexual violence and abuse were measured using retrospective reports from Wave IV regarding respondents' history of non-parental coerced sex, non-parental forced sex, and sexual abuse by a parent/caregiver.

Aim 2 Controls and Moderators

As with Aim 1, I controlled for biological sex, race/ethnicity, age of the respondent at the time of the Wave IV interview, SES of the family of origin, sexual orientation, cognitive ability score, and history of sexual violence and abuse in main effect analyses for Aim 2. In moderation analyses, biological sex, race/ethnicity and sexual orientation were treated as moderators; age, SES, cognitive ability, and history of sexual violence and abuse served as controls.

In addition to the above controls, models with lifetime partners as the predictor of interest were also controlled for years sexually active. For models with pre-18 partners as the predictor of interest, I also controlled for years sexually active and post-18 sexual partners.

Post-18 sexual partners were calculated by subtracting the number of pre-18 partners

from the number of lifetime partners. In cases where pre-18 and lifetime partners were the same, post-18 partners was coded as 0.

For the romantic relationship quality outcome, I also control for various relationship characteristics, including relationship type, status, duration, and sex of the romantic partner.

Relationship type (dating, cohabitation, pregnancy, marriage) of the detailed relationship was reported by the respondent.

Relationship currency is a previously constructed variable that indicates whether the relationship described in detail is the current or the most recent partner of the respondent.

Relationship duration is a previously constructed variable that measures the length of the reported relationship in months from the Wave IV interview.

Biological sex of the romantic partner was reported by the respondent and was coded as “opposite” or “same” sex.

CHAPTER 3: TIMING OF FIRST VAGINAL, ORAL, AND ANAL SEX AMONG POPULATIONS WITH PHYSICAL DISABILITIES^c

Introduction

Timing of first sex, or sexual debut, is a common focus of adolescent sexuality research because of its implications for later aspects of sexual health.¹⁹ Although the body of research that considers the differences in timing of sexual experiences from adolescence to young adulthood is growing, much of the available research relies on cross-sectional or short-term longitudinal data. Importantly, little to no research has considered the timing of various sexual experiences among populations with physical disabilities, which is critical for guiding the timing and content of contemporary sexuality education curriculums.^{24,25}

The majority of research that examines the relationship between physical disability and timing of sexual experiences focuses on increased likelihood of sexual violence or abuse at earlier ages.^{7,33} Of the few studies that do not focus on violence or abuse, findings in adolescent populations suggest differences in timing of first vaginal sex by disability type (e.g., physical, sensory, emotional).^{10,34,35} For instance, in their cross-sectional study of 14-17 year olds in Germany, Wienholz and colleagues found that among sexually experienced teens with physical disabilities and vision or hearing impairments, adolescents with disabilities reported earlier ages of sexual debut compared to those without a disability.³⁶ Timing of different types of sexual activity also varies by biological sex, race/ethnicity, and sexual orientation. For example, studies

^c This chapter was submitted to the *Journal of Sex Research* under the following citation: Kahn NF, Suchindran C, Halpern CT. "Timing of first vaginal, oral, and anal sex from adolescence to early adulthood among populations with physical disabilities in the United States." (original submission: October 2017)

indicate that women are more likely to engage in vaginal intercourse at an earlier age, while men tend to experience oral and anal sex earlier.^{19,30} Among populations with disabilities, Shandra and colleagues found that males with learning or emotional conditions were more likely, and those with sensory conditions were less likely, to report earlier sexual debut compared to males without any type of disability.³⁵ In another paper, Shandra and Chowdhury found no differences in the mean age at first sex for females.³⁴ Research also shows that African American youth engage in vaginal intercourse earlier than their White peers but experience oral and anal sex later.^{19,30} Finally, sexual minorities have been reported to initiate sexual activity earlier than their heterosexual counterparts.^{31,32} Unfortunately, no such research has considered how timing of sexual experiences may vary by race/ethnicity and sexual orientation in populations with disabilities.

Overall, the limited literature suggests that populations with disabilities may experience earlier debut of vaginal sex than their peers without disabilities, though this relationship is moderated by disability type, disability severity, and biological sex. However, a major limitation of this existing literature is that it tends to focus only on vaginal sex. This issue was further illustrated in recent research by Kahn and Halpern, which suggests that populations with severe physical disabilities are not only less likely to experience vaginal sex, but also oral sex, and to have had any type of sexual experience, whether vaginal, oral, or anal, compared to their peers without physical disabilities.⁹⁹ The sexual timing literature also often focuses on the adolescent years. Although important, cross-sectional research does not provide us with important information about long-term health implications of adolescent sexual behaviors, and thus limits our ability to make recommendations that can have lasting impacts on sexual health.

Furthermore, such research does not consider how the sexual experiences of populations

with disabilities may also vary by race/ethnicity and sexual orientation. This is particularly important when identifying and eliminating health disparities, because populations with multiple minority or marginalized identities (e.g., physical disability and sexual minority) may experience worse health outcomes compared to populations with none or only one of these identities. More broadly, such research is important when trying to identify specific sexual health needs of the population with disabilities and the ways in which we can scaffold sexuality education to better meet these needs.^{26,27}

Current Research

Accordingly, the current study fills these gaps in the literature by examining 1) the timing of various sexual experiences among populations with physical disabilities in the United States from adolescence to early adulthood, and 2) how timing of each type further varies by biological sex, race/ethnicity, and sexual orientation. We frame our analyses within the *life course perspective*, which focuses on the sequences of statuses and roles that people assume throughout life, and how these sequences are affected by changing societal norms over time.¹³ The life course perspective has more recently been applied to sexual development, indicating that social norms exist around the initiation and patterns of sexual experiences and that departures from these norms have implications for future social, health, and educational outcomes.^{1,81,83} Since populations with physical disabilities have different life experiences than their peers without physical disabilities, the life course perspective would suggest the possibility that they also experience different sexual health outcomes.⁸⁴ The life course perspective is also concerned with *intersectionality*, which suggests that individuals who have multiple socially marginalized identities may experience even greater disadvantage than those who only identify with one minority group.⁸⁰ Based on previous research, we hypothesize that those with physical

disabilities will exhibit earlier initiation of each type of sexual activity compared to those without physical disabilities, but the degree to which they differ will depend on the severity of the disability.³⁶ Additionally, consistent with the concept of intersectionality, we further hypothesize that the relationships between physical disability and timing of each sexual experience will be moderated by biological sex, race/ethnicity, and sexual orientation.^{70,85–88}

Methods

Study Sample

This study uses data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), which is a large, nationally representative, longitudinal study of over 20,000 in-school adolescents who were in 7th-12th grade (ages 12-18) in the United States during the 1994-1995 school year.¹⁴ To date, four waves of data have been collected, consisting of one in-school and one parent interview during adolescence and four in-home interviews spanning from adolescence into early adulthood. This paper uses data from Waves I and IV, which capture the important life course transitions from adolescence to early adulthood. Specifically, Wave I included the original 20,745 respondents aged 12-18 in 1994-1995 (adolescence), and Wave IV included 15,701 of the original respondents who were ages 24-34 in 2008-2009 (early adulthood; response rate=80.3%).⁸⁹ We focus on respondents who had valid Wave IV cross-sectional sampling weights (n=14,800) and had complete data on all variables of interest. To decrease the amount of missing data in the sample, we used multiple imputation by chained equations, yielding a final sample size of 13,458 respondents.⁹⁰

Measures

Physical disability. Our measure of physical disability is called the Physical Disability Index (PDI), which was developed by Cheng and Udry.²² Adolescent respondents were asked

screening questions regarding limb difficulties during the in-school interview, which identified 989 adolescents with disabilities to receive an extended in-home interview at Wave I. Both the adolescent and parent were asked questions regarding the adolescent's disabilities, functional limitations, and assistive care needs, and their responses were coded independently. The higher of the two scores was used to define the adolescent's PDI score. More specifically, the adolescent's score started at zero for both the adolescent and parent interviews, and increased by one point for each of the following:

1. Having limb difficulties
2. Using medical equipment
3. Needing assistive care
4. If the respondent perceived the adolescent to have a disability, or if the respondent believed others perceived the adolescent to have a disability
5. Indication of difficulty walking, standing, extending, grasping, or holding things
6. More than three body parts affected (parent interview only)

After selecting the higher of the two scores, interviewer reports of blindness and deafness were incorporated as follows to create a 0-5 scale:

- If the adolescent was deaf or blind in one eye/ear and had an initial score <3, the adolescent was given a final score of 3.
- If the adolescent was blind in one eye and deaf and had an initial score <4, the adolescent was given a final score of 4.
- If the adolescent was blind in both eyes and had an initial score <5, the adolescent was given a final score of 5.

Because few respondents had scores ≥ 4 , scores of 4 or 5 were grouped into the “3” category, creating the final 0-3 scale, indicating no (0), mild (1), moderate (2), and severe (3) physical disability.

Timing. Respondents were asked the following questions regarding lifetime experiences of vaginal, oral, and anal sex from the Wave IV interview:

- Have you ever had vaginal intercourse? (Vaginal intercourse is when a man inserts his penis into a woman's vagina.)
- Have you ever had oral sex? That is, has a partner ever put his/her mouth on your sex organs or you put your mouth on his/her sex organs?
- Have you ever had anal intercourse? (By anal intercourse, we mean when a man inserts his penis into his partner's anus or butt hole.)

Age at first sex for each type was determined using responses to the following items, each of which was recoded to a floor of 10 years:

- How old were you the first time you ever had vaginal intercourse?
- How old were you the very first time you had oral sex?
- How old were you the very first time you had anal intercourse?

Since this study used survival models (see below), ages for those who had not experienced a given type of sex was coded as the respondent's age at the time of the Wave IV interview.

Controls and moderators. In main effect analyses, we controlled for biological sex, race/ethnicity, socioeconomic status (SES) of the family of origin, age of the respondent at the time of the Wave IV interview, sexual orientation, cognitive ability, and history of sexual violence and abuse. In moderation analyses, biological sex, race/ethnicity and sexual orientation

were treated as moderators; age, SES, cognitive ability, and history of sexual violence served as controls.

Biological sex was indicated by the interviewer at Wave IV. Race/ethnicity was self-reported and verified by interviewers at Wave I. Age at the time of the interview was calculated by finding the difference between the Wave IV interview dates and birth dates for each respondent. Parent education at Wave I is a proxy for SES during adolescence, and was measured using the highest education level achieved by either parent. Sexual orientation was measured using an item regarding sexual orientation identity at Wave IV. The *sexual minority* group includes respondents who endorsed an identity of fully or mostly homosexual, bisexual, mostly heterosexual, or asexual, while the *heterosexual* group includes respondents who identified as fully heterosexual.

Past research has suggested that populations with low cognitive ability scores are less sexually experienced than their peers.^{92,100} Since physical and cognitive disabilities often co-occur, we chose to control for cognitive ability using the 87-item Add Health Picture Vocabulary Test (AHPVT) from Wave I.⁹⁴ The AHPVT is an abridged version of the Peabody Picture Vocabulary Test, which is moderately correlated with other intelligence measures such as the Stanford-Binet Intelligence Scale and the Wechsler Intelligence Scale for Children.^{95–97} AHPVT scores were standardized to approximate an intelligence quotient metric with a mean of 100 and a standard deviation of 15, resulting in four categories (<85, 85–99, 100–114, >114).⁹⁸

Since populations with disabilities have been shown to be more vulnerable to sexual violence and abuse, we measured history of non-parental coerced sex, non-parental forced sex, and sexual abuse by a parent or caregiver using retrospective reports from Wave IV.⁷

Approach

After examining descriptive statistics, we used Cox proportional hazards models to compare the timing of first sexual experiences among the disability severity groups to the group without disabilities for each type of sex and the first sexual experience, whether vaginal, oral, or anal. For each type of sex, the first model includes physical disability as the only predictor, and the second model includes physical disability and all other covariates. For moderation analyses, we repeated the analyses described above after interacting the physical disability variable with the moderator of interest (biological sex, race/ethnicity, sexual orientation). Since the probability of finding a significant difference increases with each additional comparison, we used the Holm-Bonferroni method to report only those differences that were statistically significant at the 0.05 level after correction.¹⁰¹ All analyses used sampling weights and adjusted variance estimates for the Add Health complex survey design and were completed using Stata Version 15.0.⁹¹

Results

Sample Characteristics

Table 1 presents descriptive statistics for all variables by physical disability severity. The analytic sample was almost evenly split between males and females, and the mean age of respondents was 28.3 years. The majority of respondents (70.0%) identified as NH White, 12.8% identified as Hispanic, and 17.1% identified as NH Black. Approximately 60% of parents had attended some college or had at least a college degree, and the majority of the sample (86.6%) identified as heterosexual. Finally, among those who had experienced each type of sex, the mean ages were 16.6 years for first vaginal sex, 17.3 years for first oral sex, 21.4 years for first anal sex, and 16.3 years for first sexual experience, whether vaginal, oral, or anal.

Cox Proportional Hazards Models

Table 2 presents the hazard ratios from Cox proportional hazards models that examine timing of first sex by disability severity. The hazard rate for vaginal sex among respondents with severe disabilities was 0.74 times the hazard rate of respondents without disabilities, suggesting a significantly slower progression to first vaginal sex among members of this group. Similarly, the hazard rate for experiencing oral sex among respondents with severe disabilities was 0.77 times the hazard rate of respondents without disabilities. Finally, for the first sexual experience, the hazard rate for respondents with severe disabilities was 0.75 times the hazard rate of those without disabilities. Although no statistically significant differences emerged for the other disability severity groups, there was a decreasing trend in the timing of each type of sex, such that hazard ratios decreased as disability severity increased.

Table 3 presents results of the moderation analyses by biological sex, in which males without disabilities are the referent. For oral sex, the hazard rates for females at every disability severity level were significantly different from the hazard rates for males without disabilities. Specifically, the rates of experiencing oral sex for females without disabilities was 0.74, with mild disabilities was 0.78, with moderate disabilities was 0.58, and with severe disabilities was 0.55 times the rate for males without disabilities. For anal sex, only the hazard rate for females without disabilities was significantly lower than the hazard rate for males without disabilities. Females without disabilities and those with moderate disabilities also had significantly lower hazard rates of experiencing any type of sex compared to the hazard rates for males without disabilities. There were no statistically significant differences between females at all severity levels and males without disabilities for vaginal sex, or when comparing males with disabilities to the referent group for all sexual acts. However, comparisons of the confidence intervals

suggest that females with moderate disabilities had a lower hazard rate of experiencing vaginal sex and of having any sexual experience compared to the hazard rates for females without disabilities.

Table 4 includes results of moderation analyses by race/ethnicity, for which NH White respondents without disabilities are the referent. The NH Black respondents without disabilities differed from the referent for every type of sex. Specifically, the hazard rates for this group were 1.18 times for vaginal sex, 0.68 times for oral sex, 0.80 times for anal sex, and 1.20 times for the first sexual experience compared to the hazard rate for NH White respondents without disabilities. Also, the hazard rate for experiencing oral sex among NH Black respondents with mild disabilities was 0.52 times the hazard rate of NH White respondents without disabilities. In contrast, the hazard rate for experiencing anal sex among Hispanic respondents without disabilities was 1.26 times the hazard rate of the referent group. There were no other significant differences when comparing the disability and racial/ethnic interaction groups to the referent. Comparisons of the confidence intervals suggested no differences by disability severity within racial/ethnic groups. These comparisons did, however, show racial/ethnic differences within disability severity groups. In particular, there were differences between all racial/ethnic groups for oral sex among both the group without disabilities and the group with mild disabilities. In addition, the hazard rates for Hispanic and NH Black respondents without disabilities differed for both anal sex and the first sexual experience.

Table 5 presents results of moderation analyses by sexual orientation, for which heterosexuals without disabilities are the referent. Sexual minorities without disabilities progressed significantly faster to each type of sex except vaginal sex compared to their heterosexual peers. In particular, the hazard rates for this group were 0.85 times for vaginal sex,

1.26 times for oral sex, 1.97 times for anal sex, and 1.15 times for the first sexual experience compared to the hazard rates for heterosexuals without disabilities. The only other significant difference was among sexual minorities with severe disabilities, whose hazard rate for vaginal sex was 0.24 times the hazard rate of heterosexuals without disabilities. Comparisons of the confidence intervals suggested some within group differences, such that sexual minorities with severe disabilities had a lower hazard rate for both vaginal sex and any sexual experience compared to the hazard rate of sexual minorities without disabilities. In addition, within the group with severe disabilities, sexual minority respondents had a lower hazard rate for vaginal sex compared to the hazard rate of heterosexuals.

Discussion

This paper demonstrates significant differences in the timing of sexual experiences for populations with physical disabilities through their young adult years. While past research has focused on vaginal sex or only the adolescent period, this paper goes further by examining timing for various sexual experiences, how timing varies throughout the early adult years, and how these trends further vary by other demographic factors. Specifically, those with the most severe disabilities during adolescence had a significantly slower progression to first vaginal sex, oral sex, and first overall sexual experience compared to their peers without disabilities. We also found significant differences between disability groups by biological sex, race/ethnicity, and sexual orientation.

Our first hypothesis was that respondents with disabilities would exhibit earlier timing of each type of sex, but that the degree to which they differed would vary by disability severity. This hypothesis was not supported. Contrary to previous studies which showed that respondents with mild disabilities exhibited earlier timing of vaginal sex than their peers without disabilities,

we found no significant differences for either the mild or moderate disability groups for vaginal sex or any other type of sex.³⁶ We did, however, find differences for the group with severe disabilities, such that these respondents exhibited a significantly slower progression to first vaginal and oral sex, as well as their first sexual experience, compared to the group without disabilities. Although not significant, we also observed decreasing trends in the hazard ratios, suggesting slower progression to each type of sex with increasing disability severity. These results are in conflict with those of previous research, which may be due to differences in the samples. For instance, Wienholz et al.'s study used a small, cross-sectional sample of adolescents, and thus could not examine how sexual experiences may change as this population enters adulthood.³⁶ Future research should continue to explore how sexual timing may vary over the life course in populations with disabilities, and should further consider how these timing patterns may be related to later sexual health outcomes.

Our second hypothesis was that there would be variation in timing of each type of sex among the disability severity groups by biological sex, race/ethnicity, and sexual orientation. This hypothesis was partially supported. For biological sex, we found that females and males had similar hazard rates for timing of vaginal sex, while males had a faster progression to first oral sex, anal sex, and their first sexual experience. Although this was not similar to previous literature for vaginal sex, these patterns were consistent for oral and anal sex.^{19,30} These differences, however, were driven by particular subgroups. All females at every disability severity level had a slower progression to oral sex than males. For anal sex, only females without disabilities had a significantly lower hazard rate than males without disabilities. Finally, for the first sexual experience, females without disabilities and those with moderate disabilities had significantly slower progression compared to males without disabilities. When comparing

confidence intervals, we also found that females with moderate disabilities had a slower progression to first vaginal sex and their first sexual experience compared to females without disabilities. These moderation results conflict with past longitudinal research by Shandra and colleagues, who found that males with disabilities differed from those without disabilities, but that females with disabilities were no different from females without disabilities.^{34,35} Such conflicting results may be due to the fact that these researchers used a less explicit definition of sexual intercourse, or may be due to differences in our definitions of disability. Despite these differences across studies, all of these results indicate important differences by disability status and biological sex, which have important implications for planning future sexual health research with this particular population.

For race/ethnicity, we found significant differences by racial ethnic group, but these differences were largely driven by respondents without disabilities. Our results align with previous research that shows NH Blacks engage in vaginal sex earlier but experience oral and anal sex later than their NH White peers.^{19,30} We also found that Hispanic respondents experienced anal sex significantly earlier than NH Whites and NH Blacks, and that NH Blacks had a faster progression to first sexual experience overall. In moderation analyses, we only found a difference among NH Black respondents with mild disabilities, who also progressed more slowly to first oral sex than did NH Whites without disabilities. Finally, when comparing confidence intervals, we found differences within the no disability and mild disability subgroups that mirrored the racial/ethnic differences that we found in the general population. The fact that we did not see differences in the more severe disability groups may be because these individuals substitute different sexual acts to accommodate their disabilities, but could also be the result of insufficient statistical power.¹⁰² Overall, these results suggest a need for more studies focused on

sexuality among populations with disabilities and greater inclusion of various minority groups in such research.

Finally, for sexual orientation, we found that sexual minorities had a slower progression to first vaginal sex, but a faster progression to oral sex, anal sex, and their first sexual experience compared to heterosexuals. While this was, again, largely driven by the group without disabilities, we did find that sexual minorities with severe disabilities also had a significantly slower progression to vaginal sex when compared to heterosexuals without disabilities, heterosexuals with severe disabilities, and sexual minorities without disabilities. Our results for oral sex, anal sex, and the first sexual experience are consistent with general findings from previous work, though they differ for vaginal sex.^{31,32} This could be due lack of specificity in the definition of “sexual intercourse” in past studies compared to the specific definitions used in the Add Health survey, since sexual minority respondents may interpret this term differently than their heterosexual peers. Future research with this population should continue to ask about various sexual experiences and provide clear definitions of each act in order to get a more accurate portrait of the sexual experiences of sexual minorities and populations with disabilities.

Strengths and Limitations

Our study uses a large, nationally representative sample of youth in the United States, including those with physical disabilities, who have been followed from adolescence through early adulthood. The majority of past research focused on sexual experiences in this population has used convenience samples or cross-sectional data, which limits the generalizability of their findings to the larger population with disabilities and over time. A particular strength of the Add Health methodology was the deliberate oversampling of respondents with physical disabilities, who have been historically excluded from sexual health research.^{67,103} Therefore, our study

provides a significant contribution to this literature by documenting the unique experiences of this understudied population in a longitudinal, nationally representative sample.

While the Add Health design is a major strength of this study, statistical power and sample size are still important considerations when designing future research with this population. A number of best practices for including special populations have been identified by disability researchers and advocates, such as using in-home surveys and computer-assisted technologies.¹⁰⁴ The Add Health sampling design used many of these best practices, including sampling from special schools for youth with disabilities and following up with these respondents at home using computer-based techniques.⁸⁹ Although a number of our findings were not statistically significant, particularly in subgroup analyses, the trends we have identified provide support for greater inclusion of this population in future research.

Data limitations also affected our ability to determine whether first sexual experiences were or were not consensual. This is particularly important because past research has indicated that populations with disabilities are more vulnerable to sexual violence and abuse, a pattern we also see in the Add Health data.⁷ While we included lifetime experiences of sexual violence as covariates in our analyses, this is an important limitation of our study that should be considered in future research with this group.

Conclusion

This study fills important gaps in the developmental and public health literatures by considering variations in sexual timing among populations with physical disabilities using a nationally representative sample of adolescents who have been followed for almost 15 years. The majority of past research has used cross-sectional or convenience samples, which significantly limit their generalizability. In contrast, our dataset provides a unique opportunity to study

physical disability and to consider the intersectionality of physical disability and other marginalized identities at a population level. In general, information regarding sexual timing patterns of populations with physical disabilities, as well as variations in these patterns by biological sex, race/ethnicity, and sexual orientation, can be used to critically inform the design and implementation of sexuality education programs. Our results showed that except for those with the most severe disabilities, there were no overall differences in timing of first sex across disability severity levels. Importantly, this suggests that sex education programming that is age-appropriate for those without disabilities is also age-appropriate for those with disabilities. Furthermore, future research should continue to promote the inclusion of populations with disabilities to inform the design and implementation of future programs and policies for healthy sexual development in these groups.

Table 1: Descriptive statistics by physical disability severity for timing models

<i>% (95% CI)</i> <i>n=13,458</i>	<u>None</u> 94.4 (93.8-95.0)	<u>Mild</u> 3.4 (2.9-3.9)	<u>Moderate</u> 1.2 (0.9-1.5)	<u>Severe</u> 1.0 (0.8-1.3)	<u>Total</u> 100.0
Biological Sex					
Male	50.5 (49.2-51.9)	50.1 (43.3-56.9)	50.4 (39.8-60.9)	49.1 (38.4-59.9)	50.5 (49.2-51.8)
Female	49.5 (48.1-50.8)	49.9 (43.1-56.7)	49.6 (39.1-60.2)	50.9 (40.1-61.6)	49.5 (48.2-50.8)
Race/Ethnicity					
Hispanic	13.0 (9.3-16.7)	9.2 (5.1-13.4)	9.7 (2.6-16.8)	10.1 (3.5-16.7)	12.8 (9.2-16.5)
NH Black	17.2 (12.7-21.7)	13.4 (8.5-18.3)	23.3 (12.3-34.2)	16.2 (7.7-24.7)	17.1 (12.7-21.6)
NH White	69.8 (64.0-75.5)	77.3 (71.1-83.6)	67.1 (55.5-78.6)	73.7 (62.7-84.6)	70.0 (64.4-75.7)
Parent Education (SES)					
<HS	12.5 (10.0-14.9)	12.1 (7.0-17.2)	19.9 (8.9-30.8)	15.7 (7.1-24.3)	12.6 (10.1-15.1)
HS/GED	27.9 (25.6-30.2)	24.1 (18.6-29.6)	15.2 (8.2-22.2)	33.4 (22.9-43.8)	27.7 (25.4-30.0)
Some College	29.8 (28.1-31.5)	29.3 (22.6-35.9)	32.4 (23.0-41.7)	29.7 (20.0-39.3)	29.8 (28.1-31.6)
College Grad	29.8 (26.3-33.3)	34.5 (26.8-42.2)	32.5 (22.2-42.8)	21.3 (13.7-28.8)	29.9 (26.4-33.4)
Sexual Orientation					
Heterosexual	86.7 (85.7-87.7)	87.0 (83.1-90.9)	81.7 (73.5-89.8)	79.1 (69.7-88.6)	86.6 (85.6-87.6)
Sexual Minority	13.3 (12.3-14.3)	13.0 (9.1-16.9)	18.3 (10.2-26.5)	20.9 (11.4-30.3)	13.4 (12.4-14.4)
Cognitive Ability Score					
<85	13.9 (11.2-16.5)	11.3 (6.8-15.8)	14.2 (4.3-24.1)	19.9 (11.2-28.5)	13.8 (11.2-16.4)
85-99	33.4 (31.4-35.4)	39.0 (32.2-45.8)	33.4 (24.1-42.8)	30.7 (20.7-40.7)	33.6 (31.6-35.6)
100-114	35.6 (33.4-37.8)	34.3 (28.1-40.6)	30.5 (21.2-39.8)	31.9 (21.5-42.3)	35.5 (33.3-37.7)
>114	17.1 (14.9-19.3)	15.3 (11.0-19.6)	21.8 (12.7-31.0)	17.5 (9.7-25.4)	17.1 (15.0-19.3)
Coerced Sex					
No	87.8 (86.9-88.6)	83.2 (78.2-88.2)	74.6 (64.8-84.4)	83.8 (76.0-91.6)	87.4 (86.6-88.3)
Yes	12.2 (11.4-13.1)	16.8 (11.8-21.8)	25.4 (15.6-35.2)	16.2 (8.4-24.0)	12.6 (11.7-13.4)
Forced Sex					
No	92.2 (91.5-92.8)	87.1 (82.9-91.4)	83.8 (76.8-90.7)	87.5 (80.7-94.2)	91.9 (91.2-92.5)
Yes	7.8 (7.2-8.5)	12.9 (8.6-17.1)	16.2 (9.3-23.2)	12.5 (5.8-19.3)	8.1 (7.5-8.8)
Sexual Abuse					
No	95.2 (94.6-95.8)	92.4 (88.8-95.9)	91.4 (85.9-96.8)	91.7 (85.1-98.3)	95.0 (94.4-95.6)
Yes	4.8 (4.2-5.4)	7.6 (4.1-11.2)	8.6 (3.2-14.1)	8.3 (1.7-14.9)	5.0 (4.4-5.6)

<i>% (95% CI)</i> <i>n=13,458</i>	<u>None</u> 94.4 (93.8-95.0)	<u>Mild</u> 3.4 (2.9-3.9)	<u>Moderate</u> 1.2 (0.9-1.5)	<u>Severe</u> 1.0 (0.8-1.3)	<u>Total</u> 100.0
Ever Had Vaginal Sex					
No	6.0 (4.9-7.2)	5.2 (1.7-8.6)	8.3 (2.6-14.0)	19.3 (10.1-28.4)	6.2 (5.1-7.2)
Yes	94.0 (92.8-95.1)	94.8 (91.4-98.3)	91.7 (86.0-97.4)	80.7 (71.6-89.9)	93.8 (92.8-94.9)
Ever Had Oral Sex					
No	7.0 (5.5-8.5)	7.0 (3.0-10.9)	12.2 (2.0-22.5)	15.8 (7.7-23.9)	7.2 (5.7-8.6)
Yes	93.0 (91.5-94.5)	93.0 (89.1-97.0)	87.8 (77.5-98.0)	84.2 (76.1-92.3)	92.8 (91.4-94.3)
Ever Had Anal Sex					
No	56.0 (54.2-57.7)	54.4 (48.2-60.6)	52.5 (41.0-63.9)	61.8 (51.6-72.1)	55.9 (54.2-57.7)
Yes	44.0 (42.3-45.8)	45.6 (39.4-51.8)	47.5 (36.1-59.0)	38.2 (27.9-48.4)	44.1 (42.3-45.8)
Ever Had Any Sex					
No	3.0 (2.0-4.0)	4.0 (0.7-7.2)	4.7 (0.1-9.3)	10.4 (3.6-17.3)	3.1 (2.1-4.0)
Yes	97.0 (96.0-98.0)	96.0 (92.8-99.3)	95.3 (90.7-99.9)	89.6 (82.7-96.4)	96.9 (96.0-97.9)
MEANS (95% CI)					
Age at Wave IV	28.3 (28.1-28.6)	28.4 (28.0-28.8)	28.7 (28.3-29.1)	28.7 (28.3-29.2)	28.3 (28.1-28.6)
Age at Vaginal Sex	16.6 (16.5-16.8)	16.2 (15.7-16.7)	16.9 (16.1-17.7)	16.4 (15.7-17.1)	16.6 (16.5-16.7)
Age at Oral Sex	17.3 (17.2-17.5)	16.8 (16.3-17.2)	17.3 (16.6-18.0)	17.5 (16.8-18.2)	17.3 (17.2-17.4)
Age at Anal Sex	21.4 (21.2-21.6)	20.9 (20.2-21.7)	22.4 (21.2-23.5)	20.9 (19.7-22.1)	21.4 (21.2-21.6)
Age at First Sex	16.3 (16.1-16.4)	15.8 (15.4-16.3)	16.6 (15.9-17.4)	16.5 (15.9-17.1)	16.3 (16.1-16.4)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development

Table 2: Adjusted hazard ratios (and 95% confidence intervals) from Cox proportional hazards models comparing the timing of each type of sex by physical disability

aHR (95% CI)	<u>Vaginal</u>		<u>Oral</u>	
	Disability Only	Full Model	Disability Only	Full Model
Physical Disability (None)				
Mild	1.11 (0.95-1.30)	1.06 (0.90-1.25)	1.10 (0.93-1.30)	1.02 (0.85-1.22)
Moderate	0.88 (0.72-1.07)	0.83 (0.67-1.03)	0.86 (0.64-1.16)	0.85 (0.68-1.07)
Severe	0.74 (0.56-0.97)*	0.74 (0.57-0.96)*	0.79 (0.62-1.01)	0.77 (0.61-0.98)*
Biological Sex (Male)				
Female		1.05 (1.00-1.10)		0.74 (0.71-0.78)*
Race/Ethnicity (NH White)				
Hispanic		0.99 (0.90-1.08)		0.92 (0.85-1.00)*
NH Black		1.17 (1.07-1.28)*		0.68 (0.62-0.75)*
Parent Education (SES; College Grad)				
<HS		1.22 (1.11-1.35)*		0.93 (0.83-1.04)
HS/GED		1.30 (1.23-1.39)*		1.12 (1.05-1.19)*
Some College		1.19 (1.12-1.26)*		1.05 (0.99-1.12)
Age at Wave IV		0.98 (0.96-0.99)*		0.96 (0.95-0.98)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.84 (0.78-0.91)*		1.25 (1.15-1.36)*
Cognitive Ability Score (100-114)				
<85		0.72 (0.62-0.85)*		0.58 (0.50-0.68)*
85-99		1.04 (0.97-1.11)		0.96 (0.89-1.02)
>114		0.86 (0.81-0.91)*		0.92 (0.87-0.97)*
Coerced Sex (No)				
Yes		1.40 (1.28-1.52)*		1.35 (1.24-1.47)*
Forced Sex (No)				
Yes		1.13 (1.01-1.26)*		1.21 (1.10-1.33)*
Sexual Abuse (No)				
Yes		1.05 (0.91-1.22)		1.07 (0.95-1.21)

aHR (95% CI)	<u>Anal</u>		<u>First</u>	
	Disability Only	Full Model	Disability Only	Full Model
Physical Disability (None)				
Mild	1.09 (0.91-1.31)	1.03 (0.86-1.23)	1.06 (0.89-1.27)	0.99 (0.82-1.20)
Moderate	1.03 (0.75-1.41)	0.91 (0.68-1.22)	0.86 (0.70-1.05)	0.81 (0.66-1.00)
Severe	0.90 (0.63-1.28)	0.87 (0.60-1.24)	0.78 (0.62-0.98)*	0.75 (0.59-0.95)*
Biological Sex (Male)				
Female		0.73 (0.67-0.79)*		0.90 (0.86-0.95)*
Race/Ethnicity (NH White)				
Hispanic		1.27 (1.14-1.41)*		0.99 (0.90-1.07)
NH Black		0.80 (0.70-0.91)*		1.19 (1.10-1.29)*
Parent Education (SES; College Grad)				
<HS		1.02 (0.89-1.16)		1.19 (1.07-1.32)*
HS/GED		1.09 (0.99-1.19)		1.27 (1.20-1.34)*
Some College		1.02 (0.92-1.14)		1.11 (1.05-1.18)*
Age at Wave IV		0.95 (0.93-0.97)*		0.97 (0.95-0.98)*
Sexual Orientation (Heterosexual)				
Sexual Minority		1.93 (1.75-2.12)*		1.14 (1.05-1.22)*
Cognitive Ability Score (100-114)				
<85		0.65 (0.56-0.75)*		0.72 (0.60-0.86)*
85-99		0.92 (0.85-0.99)*		1.05 (0.98-1.12)
>114		0.98 (0.89-1.09)		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.63 (1.45-1.84)*		1.36 (1.25-1.49)*
Forced Sex (No)				
Yes		1.12 (0.96-1.31)		1.27 (1.16-1.39)*
Sexual Abuse (No)				
Yes		1.26 (1.10-1.45)*		1.08 (0.93-1.26)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aHR = adjusted hazard ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 3: Adjusted hazard ratios (and 95% confidence intervals) from Cox proportional hazards models comparing the timing of each type of sex by the interaction between physical disability and biological sex

aHR (95% CI)	<u>Vaginal</u>		<u>Oral</u>	
	Interaction Only	Full Model	Interaction Only	Full Model
Physical Disability/Biological Sex Interaction (None/Male)				
None/Female	1.10 (1.05-1.15)*	1.05 (1.00-1.11)	0.80 (0.76-0.83)*	0.74 (0.71-0.78)*
Mild/Male	1.04 (0.83-1.30)	1.04 (0.83-1.29)	1.03 (0.77-1.36)	0.99 (0.74-1.34)
Mild/Female	1.30 (1.09-1.54)*	1.13 (0.92-1.38)	0.94 (0.80-1.11)	0.78 (0.65-0.92)*
Moderate/Male	1.04 (0.82-1.32)	1.05 (0.81-1.36)	0.78 (0.45-1.36)	0.93 (0.66-1.32)
Moderate/Female	0.81 (0.62-1.07)	0.71 (0.54-0.93)	0.74 (0.56-0.98)	0.58 (0.44-0.77)*
Severe/Male	0.75 (0.51-1.09)	0.73 (0.50-1.07)	0.78 (0.55-1.11)	0.80 (0.56-1.14)
Severe/Female	0.80 (0.58-1.11)	0.79 (0.58-1.07)	0.64 (0.45-0.90)	0.55 (0.40-0.76)*
Race/Ethnicity (NH White)				
Hispanic		0.99 (0.90-1.08)		0.92 (0.85-1.00)*
NH Black		1.17 (1.07-1.28)*		0.68 (0.62-0.75)*
Parent Education (SES; College Grad)				
<HS		1.22 (1.11-1.35)*		0.93 (0.83-1.04)
HS/GED		1.30 (1.23-1.39)*		1.12 (1.05-1.19)*
Some College		1.19 (1.12-1.26)*		1.05 (0.99-1.12)
Age at Wave IV		0.98 (0.96-0.99)*		0.96 (0.95-0.98)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.84 (0.78-0.92)*		1.25 (1.15-1.36)*
Cognitive Ability Score (100-114)				
<85		0.72 (0.62-0.84)*		0.58 (0.49-0.68)*
85-99		1.04 (0.97-1.11)		0.96 (0.90-1.02)
>114		0.86 (0.81-0.91)*		0.92 (0.87-0.97)*
Coerced Sex (No)				
Yes		1.40 (1.29-1.52)*		1.35 (1.24-1.47)*
Forced Sex (No)				
Yes		1.13 (1.01-1.26)*		1.21 (1.10-1.34)*
Sexual Abuse (No)				
Yes		1.05 (0.90-1.22)		1.07 (0.95-1.21)

aHR (95% CI)	<u>Anal</u>		<u>First</u>	
	Interaction Only	Full Model	Interaction Only	Full Model
Physical Disability/Biological Sex Interaction (None/Male)				
None/Female	0.93 (0.86-1.00)	0.74 (0.68-0.81)*	0.98 (0.94-1.03)	0.90 (0.86-0.95)*
Mild/Male	1.10 (0.88-1.38)	1.10 (0.87-1.39)	0.97 (0.75-1.27)	0.96 (0.73-1.25)
Mild/Female	1.00 (0.75-1.33)	0.71 (0.54-0.95)	1.14 (0.95-1.37)	0.93 (0.75-1.15)
Moderate/Male	0.94 (0.56-1.58)	1.00 (0.62-1.60)	1.01 (0.79-1.29)	1.03 (0.80-1.32)
Moderate/Female	1.04 (0.70-1.53)	0.62 (0.42-0.92)	0.72 (0.54-0.96)	0.59 (0.45-0.78)*
Severe/Male	1.01 (0.60-1.69)	1.00 (0.61-1.65)	0.71 (0.49-1.02)	0.66 (0.45-0.97)
Severe/Female	0.73 (0.44-1.22)	0.55 (0.32-0.93)	0.85 (0.65-1.11)	0.76 (0.58-1.00)
Race/Ethnicity (NH White)				
Hispanic		1.27 (1.14-1.41)*		0.99 (0.90-1.07)
NH Black		0.80 (0.70-0.91)*		1.19 (1.09-1.29)*
Parent Education (SES; College Grad)				
<HS		1.02 (0.89-1.16)		1.19 (1.07-1.32)*
HS/GED		1.09 (0.99-1.19)		1.27 (1.20-1.34)*
Some College		1.02 (0.92-1.14)		1.12 (1.05-1.18)*
Age at Wave IV		0.95 (0.93-0.97)*		0.97 (0.96-0.98)*
Sexual Orientation (Heterosexual)				
Sexual Minority		1.93 (1.75-2.12)*		1.14 (1.05-1.22)*
Cognitive Ability Score (100-114)				
<85		0.65 (0.56-0.75)*		0.72 (0.60-0.86)*
85-99		0.92 (0.85-0.99)*		1.05 (0.98-1.12)
>114		0.98 (0.89-1.09)		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.63 (1.45-1.84)*		1.37 (1.25-1.49)*
Forced Sex (No)				
Yes		1.12 (0.96-1.31)		1.27 (1.16-1.39)*
Sexual Abuse (No)				
Yes		1.26 (1.10-1.45)*		1.08 (0.93-1.26)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aHR = adjusted hazard ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 4: Adjusted hazard ratios (and 95% confidence intervals) from Cox proportional hazards models comparing the timing of each type of sex by the interaction between physical disability and race/ethnicity

aHR (95% CI)	<u>Vaginal</u>		<u>Oral</u>	
	Interaction Only	Full Model	Interaction Only	Full Model
Physical Disability/Race Interaction (None/NH White)				
None/Hispanic	0.94 (0.86-1.03)	0.98 (0.89-1.08)	0.74 (0.67-0.81)*	0.91 (0.83-0.99)
None/NH Black	1.17 (1.07-1.27)*	1.18 (1.08-1.29)*	0.59 (0.53-0.66)*	0.68 (0.62-0.76)*
Mild/Hispanic	1.29 (0.93-1.78)	1.29 (0.93-1.80)	1.14 (0.80-1.60)	1.26 (0.87-1.81)
Mild/NH Black	0.89 (0.57-1.40)	0.85 (0.54-1.33)	0.52 (0.36-0.75)*	0.58 (0.41-0.81)*
Mild/NH White	1.15 (0.97-1.35)	1.09 (0.93-1.29)	1.05 (0.86-1.26)	1.01 (0.83-1.23)
Moderate/Hispanic	1.01 (0.60-1.69)	1.17 (0.71-1.92)	0.97 (0.64-1.47)	1.06 (0.70-1.60)
Moderate/NH Black	0.98 (0.67-1.45)	1.11 (0.76-1.62)	0.38 (0.15-1.01)	0.48 (0.22-1.06)
Moderate/ NH White	0.85 (0.67-1.09)	0.77 (0.59-1.00)	0.89 (0.71-1.13)	0.85 (0.67-1.07)
Severe/Hispanic	0.54 (0.15-1.90)	0.53 (0.16-1.76)	0.89 (0.50-1.59)	0.87 (0.46-1.67)
Severe/NH Black	0.79 (0.39-1.61)	0.75 (0.36-1.56)	0.61 (0.37-1.02)	0.65 (0.39-1.10)
Severe/NH White	0.77 (0.59-1.01)	0.79 (0.61-1.02)	0.69 (0.50-0.94)	0.72 (0.53-0.97)
Biological Sex (Male)				
Female		1.05 (1.00-1.10)		0.74 (0.71-0.78)*
Parent Education (SES; College Grad)				
<HS		1.22 (1.11-1.35)*		0.93 (0.83-1.04)
HS/GED		1.30 (1.23-1.39)*		1.12 (1.05-1.19)*
Some College		1.19 (1.12-1.26)*		1.05 (0.99-1.12)
Age at Wave IV		0.98 (0.96-0.99)*		0.96 (0.95-0.98)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.84 (0.78-0.91)*		1.25 (1.15-1.36)*
Cognitive Ability Score (100-114)				
<85		0.72 (0.62-0.85)*		0.58 (0.50-0.68)*
85-99		1.03 (0.97-1.10)		0.96 (0.89-1.02)
>114		0.86 (0.80-0.91)*		0.91 (0.86-0.97)*
Coerced Sex (No)				
Yes		1.41 (1.29-1.53)*		1.35 (1.24-1.47)*
Forced Sex (No)				
Yes		1.12 (1.01-1.26)*		1.21 (1.10-1.33)*
Sexual Abuse (No)				
Yes		1.05 (0.91-1.22)		1.07 (0.95-1.21)

aHR (95% CI)	<u>Anal</u>		<u>First</u>	
	Interaction Only	Full Model	Interaction Only	Full Model
Physical Disability/Race Interaction (None/NH White)				
None/Hispanic	1.09 (0.98-1.21)	1.26 (1.13-1.40)*	0.92 (0.84-1.00)	0.98 (0.89-1.07)
None/NH Black	0.70 (0.61-0.80)*	0.80 (0.70-0.92)*	1.15 (1.06-1.25)*	1.20 (1.10-1.30)*
Mild/Hispanic	1.16 (0.59-2.26)	1.33 (0.68-2.61)	1.25 (0.87-1.80)	1.27 (0.88-1.84)
Mild/NH Black	0.64 (0.42-0.98)	0.64 (0.42-0.98)	0.93 (0.59-1.45)	0.86 (0.54-1.36)
Mild/NH White	1.09 (0.89-1.34)	1.06 (0.86-1.30)	1.08 (0.90-1.30)	1.01 (0.84-1.23)
Moderate/Hispanic	1.73 (0.82-3.64)	1.97 (0.89-4.33)	0.96 (0.61-1.50)	1.10 (0.71-1.68)
Moderate/NH Black	0.62 (0.28-1.35)	0.57 (0.31-1.02)	1.10 (0.68-1.77)	1.21 (0.81-1.81)
Moderate/ NH White	1.03 (0.71-1.48)	0.89 (0.63-1.26)	0.80 (0.63-1.01)	0.73 (0.57-0.94)
Severe/Hispanic	1.56 (0.62-3.98)	1.38 (0.48-3.94)	0.89 (0.42-1.89)	0.76 (0.36-1.58)
Severe/NH Black	1.00 (0.46-2.20)	1.10 (0.54-2.24)	0.83 (0.43-1.61)	0.77 (0.38-1.55)
Severe/NH White	0.76 (0.50-1.17)	0.75 (0.48-1.16)	0.77 (0.60-1.00)	0.77 (0.60-1.00)
Biological Sex (Male)				
Female		0.73 (0.67-0.80)*		0.90 (0.86-0.95)*
Parent Education (SES; College Grad)				
<HS		1.02 (0.89-1.17)		1.19 (1.07-1.32)*
HS/GED		1.09 (0.99-1.19)		1.27 (1.20-1.34)*
Some College		1.03 (0.92-1.14)		1.11 (1.05-1.18)*
Age at Wave IV		0.95 (0.93-0.97)*		0.97 (0.95-0.98)*
Sexual Orientation (Heterosexual)				
Sexual Minority		1.93 (1.75-2.13)*		1.14 (1.05-1.22)*
Cognitive Ability Score (100-114)				
<85		0.65 (0.56-0.75)*		0.72 (0.60-0.86)*
85-99		0.92 (0.85-0.99)*		1.05 (0.98-1.12)
>114		0.98 (0.89-1.08)		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.63 (1.45-1.84)*		1.37 (1.26-1.50)*
Forced Sex (No)				
Yes		1.12 (0.96-1.31)		1.26 (1.15-1.38)*
Sexual Abuse (No)				
Yes		1.27 (1.10-1.46)*		1.09 (0.94-1.26)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aHR = adjusted hazard ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 5: Adjusted hazard ratios (and 95% confidence intervals) from Cox proportional hazards models comparing the timing of each type of sex by the interaction between physical disability and sexual orientation

aHR (95% CI)	<u>Vaginal</u>		<u>Oral</u>	
	Interaction Only	Full Model	Interaction Only	Full Model
Physical Disability/Sexual Orientation Interaction (None/Heterosexual)				
None/Sexual Minority	0.87 (0.80-0.95)*	0.85 (0.78-0.92)*	1.25 (1.16-1.35)*	1.26 (1.16-1.36)*
Mild/Heterosexual	1.06 (0.91-1.23)	1.02 (0.86-1.22)	1.10 (0.93-1.30)	1.03 (0.86-1.22)
Mild/Sexual Minority	1.34 (0.82-2.20)	1.12 (0.72-1.74)	1.39 (0.81-2.39)	1.23 (0.71-2.15)
Moderate/Heterosexual	0.84 (0.69-1.04)	0.80 (0.63-1.01)	0.85 (0.60-1.20)	0.84 (0.65-1.10)
Moderate/Sexual Minority	0.96 (0.55-1.67)	0.88 (0.53-1.47)	1.06 (0.69-1.61)	1.10 (0.75-1.61)
Severe/Heterosexual	0.94 (0.73-1.21)	0.91 (0.71-1.17)	0.83 (0.63-1.10)	0.84 (0.65-1.09)
Severe/Sexual Minority	0.25 (0.11-0.53)*	0.24 (0.11-0.52)*	0.75 (0.45-1.24)	0.71 (0.41-1.24)
Biological Sex (Male)				
Female		1.05 (1.00-1.10)		0.74 (0.71-0.78)*
Race/Ethnicity (NH White)				
Hispanic		0.99 (0.90-1.08)		0.92 (0.85-1.00)*
NH Black		1.17 (1.07-1.28)*		0.68 (0.62-0.75)*
Parent Education (SES; College Grad)				
<HS		1.23 (1.11-1.35)*		0.93 (0.83-1.04)
HS/GED		1.30 (1.23-1.39)*		1.12 (1.05-1.19)*
Some College		1.18 (1.12-1.25)*		1.05 (0.99-1.11)
Age at Wave IV		0.98 (0.96-0.99)*		0.96 (0.95-0.98)*
Cognitive Ability Score (100-114)				
<85		0.72 (0.62-0.84)*		0.58 (0.49-0.68)*
85-99		1.03 (0.97-1.10)		0.96 (0.89-1.02)
>114		0.86 (0.81-0.91)*		0.92 (0.86-0.97)*
Coerced Sex (No)				
Yes		1.40 (1.28-1.52)*		1.35 (1.24-1.47)*
Forced Sex (No)				
Yes		1.13 (1.01-1.26)*		1.21 (1.10-1.33)*
Sexual Abuse (No)				
Yes		1.05 (0.90-1.21)		1.07 (0.95-1.21)

aHR (95% CI)	<u>Anal</u>		<u>First</u>	
	Interaction Only	Full Model	Interaction Only	Full Model
Physical Disability/Sexual Orientation Interaction (None/Heterosexual)				
None/Sexual Minority	2.03 (1.86-2.21)*	1.97 (1.79-2.17)*	1.15 (1.07-1.25)*	1.15 (1.06-1.24)*
Mild/Heterosexual	1.14 (0.94-1.39)	1.10 (0.90-1.34)	1.06 (0.89-1.26)	1.00 (0.82-1.23)
Mild/Sexual Minority	1.66 (1.02-2.70)	1.56 (0.97-2.50)	1.26 (0.73-2.17)	1.08 (0.66-1.76)
Moderate/Heterosexual	1.08 (0.74-1.57)	1.02 (0.71-1.47)	0.84 (0.68-1.04)	0.80 (0.63-1.00)
Moderate/Sexual Minority	1.43 (0.92-2.23)	1.32 (0.85-2.06)	1.05 (0.62-1.77)	1.02 (0.65-1.59)
Severe/Heterosexual	0.94 (0.62-1.43)	0.96 (0.64-1.45)	0.88 (0.68-1.13)	0.84 (0.64-1.09)
Severe/Sexual Minority	1.26 (0.66-2.42)	1.27 (0.68-2.35)	0.55 (0.34-0.90)	0.56 (0.35-0.90)
Biological Sex (Male)				
Female		0.73 (0.67-0.80)*		0.90 (0.86-0.95)*
Race/Ethnicity (NH White)				
Hispanic		1.27 (1.14-1.41)*		0.99 (0.90-1.08)
NH Black		0.80 (0.70-0.91)*		1.19 (1.09-1.29)*
Parent Education (SES; College Grad)				
<HS		1.02 (0.89-1.17)		1.19 (1.07-1.32)*
HS/GED		1.09 (1.00-1.19)		1.27 (1.20-1.34)*
Some College		1.03 (0.92-1.14)		1.11 (1.05-1.18)*
Age at Wave IV				
		0.95 (0.93-0.97)*		0.97 (0.96-0.98)*
Cognitive Ability Score (100-114)				
<85		0.65 (0.56-0.75)*		0.72 (0.60-0.86)*
85-99		0.92 (0.85-0.99)*		1.05 (0.98-1.12)
>114		0.98 (0.89-1.09)		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.63 (1.45-1.84)*		1.36 (1.25-1.49)*
Forced Sex (No)				
Yes		1.12 (0.96-1.31)		1.27 (1.16-1.38)*
Sexual Abuse (No)				
Yes		1.27 (1.10-1.46)*		1.08 (0.93-1.26)*

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aHR = adjusted hazard ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

CHAPTER 4: SEXUAL PARTNER ACCUMULATION AMONG POPULATIONS WITH PHYSICAL DISABILITIES^d

Introduction

Beyond timing of first sex, sexual partner accumulation has been shown to be an important predictor of sexual health outcomes among adolescents and early adults in the United States.⁵¹ Unfortunately, the bulk of past adolescent sexuality research has only focused on the relationship between timing of first sex and later health outcomes, which has influenced sex education programs that encourage abstinence only until marriage.^{105,106} More recent research has suggested that sexual partnering during adolescence and across the life course may have more proximal implications for later sexual health, and thus deserves increased attention in the developmental and sexual health literatures, as well as in the design and implementation of sex education programs.⁵¹ While there is a relatively strong body of literature characterizing the sexual partnering behaviors of the general population over time, no research has sought to understand variations in sexual partnering among populations with physical disabilities. Given that populations with disabilities have been found to be at greater risk for various negative health outcomes,^{7–12,74} it is important for us to understand variations in their sexual behavior patterns, including sexual partnering, to identify their specific sex education needs.^{24–27}

The past literature on sexual partnering patterns in population-based samples has shown important variations in sexual partner accumulation from adolescence to early adulthood. In

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particular, previous research using data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) has indicated that adolescents (12-18) and emerging adults (18-24) report higher partner accumulation rates than early adults (24-32); however, closer examination of the data shows differences by biological sex and race/ethnicity.³⁷ In terms of biological sex, Kan and colleagues³⁷ found that adolescent females in the Add Health study reported more sexual partners over time than did males. In contrast, data from the national Youth Risk Behavior Surveillance System (YRBSS) consistently indicate that adolescent males are more likely than adolescent females to report having had four or more sexual partners.^{38,39} Such conflicting results may be related to differences in the datasets or the type of outcome variable (count vs. categorical). Regarding race/ethnicity, YRBSS data show that Black adolescents are significantly more likely than both Whites and Hispanics to have had four or more sexual partners.^{38,39} Finally, sexual minority male adults (18-39), female adolescents, and emerging adults (15-20) have been shown to have greater numbers of lifetime partners compared to their heterosexual, same sex peers.^{31,32}

Limited research has focused on the sexual development of adolescents with physical disabilities and how these experiences shape sexual health and behavior in young adulthood, as this population has traditionally been excluded from such studies.⁷³ Research to date has consistently shown that adolescents with physical disabilities have less sexual education, are at increased risk for pregnancy and STI/STDs due to poor contraceptive use, and are more vulnerable to physical and sexual violence and abuse, all of which may affect their sexual patterns over the life course.^{7-12,74} More recent research has begun to examine normative sexual development and behavior patterns in populations with physical disabilities in the United States from adolescence to early adulthood, considering both the experiences and timing of various

sexual acts.^{99,107} In particular, these studies have shown that populations with the most severe physical disabilities are less likely to have experienced vaginal sex, oral sex, and to have had any sexual experience, while those with mild or moderate disabilities are not significantly different in their sexual experiences compared to peers without disabilities by early adulthood (24-32).⁹⁹ Researchers have also found differences by biological sex, such that males with severe disabilities were less likely to have had any sexual experience, and females with moderate and severe disabilities were less likely to have experienced vaginal sex compared to their same sex peers without disabilities.⁹⁹ Regarding the timing of these experiences, this research shows that populations with the most severe physical disabilities progress significantly more slowly to first vaginal sex, oral sex, and first sexual experience compared to those without disabilities, but that these relationships further vary by biological sex, race/ethnicity, and sexual orientation.¹⁰⁷ To our knowledge, no studies have examined normative partner accumulation patterns among populations with physical disabilities which, as mentioned earlier, is an important component of sexual patterns with implications for later sexual health.

Current Research

Our study draws upon the life course perspective, which explores the statuses and roles that people assume throughout life and how these are embedded in structural and social contexts.¹³ The life course perspective is often applied to sexual development because departures from normative sexual behavior patterns have important social and health implications over time.^{1,82,83,108} In the context of disability and sexual experiences, the life course would suggest that if individuals with physical disabilities have different sexual experiences,⁸⁴ these experiences would have different social and health implications over time.

One particularly important life course concept is transitions, which are the changes in

statuses and roles that make up long-term patterns or trajectories, both within an individual life and in historical time. For example, the transition to adulthood is often studied because it represents an important stage when young people reach a certain level of developmental and social maturity in society.¹⁰⁹ This transition is particularly important when studying sexual partnering behaviors, because sexual experiences in adolescence (i.e., before age 18) may introduce different health risks compared to experiences in adulthood due to developmental and social differences in sexual risk taking behavior over time.^{1,110}

Also related to the life course perspective are the concepts of *cumulative advantage/disadvantage*, which suggest that the combination of various life experiences may exacerbate or mitigate negative health outcomes over time,^{76–79} and *intersectionality*, which similarly proposes that people with multiple marginalized identities may experience even greater disadvantage than individuals who identify with one or no minority groups.⁸⁰ Consistent with these concepts, population with physical disabilities who also identify with another marginalized groups (e.g., female, Black race, sexual minority) could experience additive adverse effects of sexual behaviors compared to individuals who do not share these other minority statuses.^{70,85–88}

Therefore, the goals of this paper are to examine 1) the lifetime and pre-18 sexual partner patterns of populations with physical disabilities from adolescence to early adulthood, and 2) how these sexual partnering outcomes further vary by biological sex, race/ethnicity, and sexual orientation. We hypothesize that individuals with physical disabilities will exhibit fewer lifetime and pre-18 sexual partners compared to those without physical disabilities, but the degree to which they differ will depend on the severity of the disability. Consistent with the concepts of cumulative advantage/disadvantage and intersectionality, we also hypothesize that the relationships between physical disability and sexual partner accumulation will be moderated by

biological sex, race/ethnicity, and sexual orientation.

Methods

Study Sample

We use data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a large, nationally representative, longitudinal study of over 20,000 in-school adolescents who were in 7th-12th grade (ages 12-18) in the United States during the 1994-1995 school year.¹⁴ Four waves of data are available thus far, consisting of one in-school and one parent interview at study entry and four in-home interviews spanning from adolescence into early adulthood. The current study will use data from the Wave I and Wave IV interviews, which capture the important life course transitions from adolescence to early adulthood. Specifically, Wave I consists of the original 20,745 respondents aged 12-18 in 1994-1995 (adolescence), and Wave IV consists of 15,701 of the original respondents who were ages 24-34 in 2008-2009 (early adulthood; response rate=80.3%).⁸⁹ This analysis only includes respondents with valid sampling weights (n=14,800) and complete data on all variables of interest. To decrease the amount of missing data, we used multiple imputation by chained equations,⁹⁰ yielding a final sample of 13,458.

Measures

Physical disability. We used Cheng and Udry's²² Physical Disability Index (PDI), which integrates information from the in-school and in-home adolescent interviews, interviewer reports, and the parent interview at Wave I. Each adolescent respondent was asked screening questions regarding limb difficulties during the in-school interview, identifying 989 adolescents who received an extended interview. For those identified, the adolescent and parent were asked questions regarding the adolescent's disabilities, functional limitations, and assistive care needs.

These responses were coded independently, and the higher of the two scores defined the adolescent's PDI score. In both the adolescent and parent surveys, scores started at zero and increased by one point for each of the following:

1. Having limb difficulties
2. Using medical equipment
3. Needing assistive care
4. If the respondent perceived the adolescent to have a disability, or if the respondent believed others perceived the adolescent to have a disability
5. Indication of difficulty in walking, standing, extending, grasping, or holding things
6. More than three body parts affected (parent interview only)

After selecting the higher of the two scores, interviewer reports of blindness and deafness were incorporated as follows to create a 0-5 scale:

- If the adolescent was deaf or blind in one eye/ear and had an initial score <3 , the adolescent was given a final score of 3.
- If the adolescent was blind in one eye and deaf and had an initial score <4 , the adolescent was given a final score of 4.
- If the adolescent was blind in both eyes and had an initial score <5 , the adolescent was given a final score of 5.

Due to the infrequency of scores ≥ 4 , scores of 4 and 5 were grouped into the "3" category, creating the final 0-3 scale, indicating no (0), mild (1), moderate (2), and severe (3) physical disability.⁹²

Partner accumulation. At Wave IV, respondents were asked to report numbers of male and female sexual partners with whom they had ever engaged in any type of sexual activity, both

in their lifetimes and before the age of 18 (pre-18) using the following items:

Lifetime partners:

- Considering all types of sexual activity, with how many (male/female) partners have you ever had sex?

Pre-18 partners:

- Considering all types of sexual activity, with how many (male/female) partners did you have sex before you were 18 years old, even if only one time?

Given the range of responses and right skew of the distribution, lifetime partner counts were capped at 100 and pre-18 partner counts were capped at 60.

Controls and moderators. For main effect analyses, we controlled for biological sex, race/ethnicity, age of the respondent at the time of the Wave IV interview, socioeconomic status (SES) of the family of origin, sexual orientation, cognitive ability, history of sexual violence and abuse, and years sexually active. In moderation analyses, biological sex, race/ethnicity and sexual orientation serve as moderators, and age, SES, cognitive ability, history of sexual violence and abuse, and years sexually active serve as controls.

Biological sex was indicated by the interviewer at Wave IV. Race/ethnicity was self-reported and verified by interviewers at Wave I. Age at the time of the interview was calculated by finding the difference between the Wave IV interview date and birth date. SES was measured using the highest education level achieved by either parent at Wave I. For sexual orientation, the *sexual minority* group included those who endorsed an identity of fully or mostly homosexual, bisexual, mostly heterosexual, or asexual, and the *heterosexual* group included those who identified as fully heterosexual.

Since past research has shown that populations with low cognitive abilities are less

sexually experienced than their peers of average cognitive abilities^{92,100} and because physical and cognitive disabilities are often comorbid, we controlled for cognitive ability using the Add Health Picture Vocabulary Test (AHPVT) from Wave I.⁹⁴ The AHPVT is an abridged version of the Peabody Picture Vocabulary Test,⁹⁷ which is moderately correlated with other intelligence measures including the Stanford-Binet Intelligence Scale⁹⁶ and the Wechsler Intelligence Scale for Children.⁹⁵ AHPVT scores were standardized to approximate an intelligence quotient metric with a mean of 100 and standard deviation of 15, resulting in four categories (<85, 85–99, 100–114, >114).⁹⁸

Past research has also shown that populations with disabilities are more susceptible to sexual violence and abuse.⁷ We therefore measured history of non-parental coerced sex, non-parental forced sex, and sexual abuse by a parent/caregiver using retrospective reports from Wave IV. Finally, because respondents had been sexually active for different periods of time, we also controlled for total years sexually active at the time of the Wave IV interview for lifetime partner analyses and years sexually active before age 18 for pre-18 partner analyses. This was calculated by subtracting the age at earliest sexual experience, whether vaginal, oral, or anal, from the respondent's age at Wave IV.

Approach

After examining descriptive statistics, we used Poisson regression models to compare lifetime and pre-18 partner accumulation among disability severity groups to those without disabilities. For each partnering outcome, the first model only included disability and years sexually active, and the second model included disability, years sexually active, and all covariates. In moderation analyses, we repeated analyses after interacting disability with the moderator of interest (biological sex, race/ethnicity, sexual orientation). Because estimates for

covariates in moderation analyses were consistent with those from main effects, we excluded these from the moderation results table. We used the Holm-Bonferroni method¹⁰¹ to report only statistically significant differences at the 0.05 level after correction for multiple tests. All analyses used sampling weights and adjusted variance estimates for the Add Health complex survey design and were completed using Stata 15.0.⁹¹

Results

Sample Characteristics

Table 6 provides descriptive statistics for all variables by disability severity. Most of the sample had no physical disability (94.4%), with an additional 3.4% having a mild, 1.2% having a moderate, and 1.0% having a severe disability. The sample was almost evenly split between males and females, and the mean age of respondents was 28.3 years. Seventy percent were NH White, 12.8% were Hispanic, and 17.1% were NH Black. Almost 60% of parents completed at least some college or had a college degree, and 86.6% of respondents identified as heterosexual. Respondents had been sexually active for an average of 2.1 years before age 18 and for 12.7 years in their lifetimes. Finally, respondents reported an average of 3.1 pre-18 sexual partners and 12.9 lifetime partners. Comparisons of the confidence intervals suggested significant differences in the mean number of lifetime partners for respondents without disabilities (12.8, 95% CI: 12.3-13.4) and those with the most severe disabilities (9.5, 95% CI: 7.3-11.8).

Poisson Regression Models

Table 7 presents the adjusted rate ratios from analyses comparing numbers of pre-18 and lifetime partners among disability severity groups. We found no statistically significant differences in numbers of pre-18 or lifetime partners across disability groups at the 0.05 level after adjusting for covariates. We did find that those with the most severe disabilities had 0.81

times as many lifetime sexual partners as those without disabilities, but this was only marginally significant. No such results were found for the other disability groups or for the pre-18 partner outcome.

Table 8 includes results of moderation analyses by biological sex, race/ethnicity, and sexual orientation. In biological sex analyses, males without disabilities are the referent group. For pre-18 partners, only females without disabilities were significantly different from the referent, with a ratio of 0.75 pre-18 partners. All females at every disability severity level had significantly fewer lifetime sexual partners compared to males in the adjusted models. In particular, the ratio for females without disabilities was 0.53, with mild disabilities was 0.55, with moderate disabilities was 0.60, and with severe disabilities was 0.40 compared to males without disabilities. Males with disabilities were not significantly different from males without disabilities in terms of pre-18 or lifetime partnering. Comparisons of the confidence intervals also indicated differences in lifetime partnering within disability groups. Specifically, females with mild disabilities had fewer lifetime sexual partners than males with mild disabilities, and females with severe disabilities had fewer lifetime sexual partners than males with severe disabilities. No other differences emerged within biological sex or disability groups.

Moderation analyses by race/ethnicity are also shown in Table 8. Two statistically significant differences in lifetime partnering emerged when comparing moderation groups to NH Whites without disabilities. Specifically, NH Blacks without disabilities had 1.09 times, and NH Whites with severe disabilities had 0.40 times as many lifetime partners as the referent. Comparisons of the confidence intervals also showed within group differences, such that NH Blacks without disabilities had more lifetime partners than Hispanics without disabilities, and NH White respondents with severe disabilities also had fewer lifetime sexual partners than NH

Whites with mild disabilities. No such differences existed for other racial/ethnic and disability groups, nor were there any differences among groups for the pre-18 partnering outcome.

Table 8 also includes moderation analyses by sexual orientation, for which heterosexuals without disabilities are the referent. We found that sexual minorities with no disabilities had 1.46 times and sexual minorities with mild disabilities had 1.80 times as many lifetime sexual partners as the referent. Comparing confidence intervals, we also found a difference within the mild disability group, such that sexual minorities had more lifetime partners than did heterosexuals. There were no such differences for the other groups and no significant differences in pre-18 partners across sexual orientation groups.

Discussion

The purpose of this paper was to understand differences in pre-18 and lifetime sexual partnering among populations with physical disabilities in the United States from adolescence to early adulthood, and to examine how these differences further vary by biological sex, race/ethnicity and sexual orientation. Overall, we found no differences in numbers of pre-18 sexual partners across disability severity groups. However, we did find that, on average, respondents with the most severe disabilities had fewer lifetime sexual partners, though this result did not persist in adjusted models. Our results also indicated important differences by biological sex, race/ethnicity, and sexual orientation, regardless of disability status. This study represents an important contribution to the literature by examining the normative partner accumulation patterns in this vulnerable group, which can be used to inform future research, policies, and programs focused on sexual health among populations with physical disabilities.

Our first hypothesis was that individuals with physical disabilities would exhibit fewer pre-18 and lifetime sexual partners compared to those without physical disabilities, but that the

degree to which they differed would depend on the severity of the disability. This hypothesis was partially supported. We did not find any differences in numbers of pre-18 sexual partners across disability severity groups. This may be attributable to the narrower range of values for this outcome, as most respondents reported four or fewer partners during adolescence. For lifetime partnering, bivariate models indicated that those with the most severe disabilities had significantly fewer lifetime sexual partners than did those without disabilities, though this was not statistically significant at the 0.05 level in the fully adjusted Poisson regression model. The absence of such statistically significant differences does have important implications for sexual health and education. Populations with disabilities were once perceived to be less sexual than their peers without disabilities, which has affected the timing and content of their sexuality education.^{8,10} In contrast, our results and those of past research focused on the timing of first sex¹⁰⁷ indicate more similarities than differences in sexual behavior patterns across disability severity groups, further suggesting similar sex education needs for students with and without disabilities.

Our second hypothesis was that the relationships between physical disability and sexual partner accumulation would be moderated by biological sex, race/ethnicity, and sexual orientation. This hypothesis was also partially supported. Main effect analyses showed that females had fewer lifetime partners than males, NH Blacks had more lifetime partners than NH Whites and Hispanics, and sexual minorities had more lifetime partners than did their heterosexual peers, all of which is consistent with previous research.^{31,32,38,39} In interaction models, we only found one significant difference for the pre-18 partnering outcome, such that females without disabilities had fewer sexual partners before age 18 than did males without disabilities. This, again, may be attributable to less variation in the outcome, since most

respondents reported four or fewer pre-18 partners.

We did, however, observe several instances of moderation for the lifetime partnering outcome. Specifically, for biological sex, we found that females at every disability level had significantly fewer sexual partners than did males without disabilities. We also found within disability group differences, such that females with mild disabilities had fewer lifetime partners than did males with mild disabilities, and females with severe disabilities had fewer lifetime partners than did males with severe disabilities. These results are very similar to the patterns found in the general population,^{38,39} suggesting similar experiences and thus similar sex education needs for females and males, regardless of disability status.

Our findings were also consistent with previous research for race/ethnicity,^{38,39} such that NH Blacks without disabilities had significantly more lifetime partners than did NH Whites and Hispanics without disabilities. We also found that NH Whites with severe disabilities had significantly fewer lifetime partners compared to NH Whites with mild disabilities and without disabilities. The fact that we did not observe similar trends for the other racial/ethnic groups may reflect no differences by disability severity in these groups, or may reflect a lack of statistical power due to small cell sizes. Future research should continue to include diverse populations with disabilities to better understand variations in sexual partnering behaviors, and how these behaviors may have differential effects on later health outcomes.

Findings were also consistent with previous research for sexual orientation.^{31,32} In moderation analyses, we found that sexual minorities with mild disabilities and sexual minorities without disabilities both had more lifetime sexual partners than did heterosexuals without disabilities. Within the mild disability group, we also found that sexual minorities exhibited significantly more lifetime sexual partners than their heterosexual peers. Such results further

stress the importance of providing developmentally appropriate and inclusive sex education,²⁰ as sexual minorities may be at even greater risk for negative health outcomes associated with sexual partnering over the life course.

Strengths and Limitations

Populations with disabilities have been historically excluded from sexual health research, which has limited our ability to understand their experiences and needs.^{67,103} A particular strength of these analyses was our ability to study disability using nationally representative data from the Add Health study, as these respondents were deliberately oversampled at study entry.⁸⁹ Therefore, this paper makes a significant contribution to the sexual health literature by providing important information about the sexual behavior of this understudied group at a population level.

However, although this dataset represents a unique opportunity to study sexual health among people with physical disabilities in a large, nationally representative sample, sample size and statistical power are still an important issue. Disability researchers and advocates have recommended ways to involve special populations in survey research, including the use of in-home surveys and computer assisted technologies.^{104,111} Add Health's sampling design and follow-up procedures represent many of the identified recommendations^{89,104} and thus is an important strength of this study. However, future research should continue to make a concerted effort to include populations with disabilities to ensure that the evidence we use to design sexual health policies and programs are inclusive of their experiences.

Finally, we were unable to identify whether all sexual encounters, and thus partners, were consensual due to data limitations. This is important given the documented vulnerability of populations with disabilities to sexual violence and abuse.⁷ Although we did include experiences

of sexual violence as additional covariates in all of our models, this represents a limitation of our analyses and a major consideration for future sexual health research with this population.

Conclusion

This paper represents an important contribution to the developmental and public health literatures by presenting variations in sexual partnering behaviors among members of an understudied and vulnerable population. In particular, we found that the sexual partnering behaviors of populations with and without disabilities are more similar than they are different. Since sexual partnering during adolescence and across the life course have significant implications for later sexual health and sex education programming,⁵¹ this study provides valuable evidence for the provision of age- and developmentally appropriate sex education to populations with physical disabilities.^{24–27} Future research should continue to include populations with disabilities and other minority groups to ensure that their experiences are represented in sexual health policies and programs.

Table 6: Descriptive statistics by physical disability severity for partner accumulation models

<i>% (95% CI)</i> <i>n=13,458</i>	<u>None</u> 94.4 (93.8-95.0)	<u>Mild</u> 3.4 (2.9-3.9)	<u>Moderate</u> 1.2 (0.9-1.5)	<u>Severe</u> 1.0 (0.8-1.3)	<u>Total</u> 100.0
Biological Sex					
Male	50.5 (49.2-51.9)	50.2 (43.4-57.0)	50.5 (40.0-61.1)	49.2 (38.4-59.9)	50.5 (49.2-51.8)
Female	49.5 (48.1-50.8)	49.8 (43.0-56.6)	49.5 (38.9-60.0)	50.8 (40.1-61.6)	49.5 (48.2-50.8)
Race/Ethnicity					
Hispanic	13.0 (9.3-16.7)	9.3 (5.1-13.5)	9.6 (2.7-16.6)	10.1 (3.4-16.8)	12.8 (9.2-16.5)
NH Black	17.2 (12.7-21.7)	13.4 (8.5-18.3)	23.3 (12.4-34.3)	16.2 (7.7-24.7)	17.1 (12.7-21.6)
NH White	69.8 (64.0-75.5)	77.3 (71.1-83.6)	67.0 (55.5-78.6)	73.7 (62.7-84.6)	70.0 (64.4-75.7)
Parent Education (SES)					
<HS	12.4 (10.0-14.9)	12.3 (7.1-17.5)	20.0 (9.0-31.0)	15.7 (7.1-24.3)	12.6 (10.1-15.0)
HS/GED	28.0 (25.7-30.3)	24.1 (18.5-29.7)	15.1 (8.2-22.1)	33.3 (22.8-43.7)	27.7 (25.5-30.0)
Some College	29.8 (28.1-31.6)	29.3 (22.6-36.0)	32.6 (23.1-42.0)	29.7 (20.1-39.4)	29.9 (28.1-31.6)
College Grad	29.7 (26.2-33.2)	34.3 (26.6-41.9)	32.3 (22.0-42.6)	21.3 (13.7-28.8)	29.8 (26.4-33.3)
Sexual Orientation					
Heterosexual	86.7 (85.7-87.7)	87.1 (83.2-91.0)	81.8 (73.8-89.8)	79.6 (70.2-89.1)	86.6 (85.6-87.6)
Sexual Minority	13.3 (12.3-14.3)	12.9 (9.0-16.8)	18.2 (10.2-26.2)	20.4 (10.9-29.8)	13.4 (12.4-14.4)
Cognitive Ability Score					
<85	13.9 (11.2-16.5)	11.3 (6.8-15.8)	14.7 (4.6-24.9)	20.1 (11.2-29.0)	13.9 (11.2-16.5)
85-99	33.5 (31.5-35.5)	38.9 (32.2-45.5)	33.5 (24.1-43.0)	31.4 (21.1-41.7)	33.6 (31.6-35.7)
100-114	35.6 (33.3-37.8)	34.4 (28.2-40.7)	29.8 (20.6-38.9)	31.2 (20.9-41.5)	35.4 (33.2-37.6)
>114	17.1 (14.9-19.3)	15.4 (11.1-19.7)	21.9 (12.8-31.1)	17.3 (9.6-25.0)	17.1 (14.9-19.2)
Coerced Sex					
No	87.8 (87.0-88.6)	83.3 (78.2-88.3)	74.4 (64.5-84.2)	83.8 (76.0-91.6)	87.4 (86.6-88.3)
Yes	12.2 (11.4-13.0)	16.7 (11.7-21.8)	25.6 (15.8-35.5)	16.2 (8.4-24.0)	12.6 (11.7-13.4)
Forced Sex					
No	92.2 (91.5-92.9)	87.2 (82.9-91.5)	83.7 (76.8-90.7)	87.5 (80.8-94.2)	91.9 (91.2-92.5)
Yes	7.8 (7.1-8.5)	12.8 (8.5-17.1)	16.3 (9.3-23.2)	12.5 (5.8-19.2)	8.1 (7.5-8.8)
Sexual Abuse					
No	95.2 (94.6-95.8)	92.4 (88.9-95.9)	91.8 (86.9-96.8)	91.5 (84.8-98.2)	95.0 (94.4-95.6)
Yes	4.8 (4.2-5.4)	7.6 (4.1-11.1)	8.2 (3.2-13.1)	8.5 (1.8-15.2)	5.0 (4.4-5.6)

<i>% (95% CI)</i> <i>n=13,458</i>	<u>None</u> 94.4 (93.8-95.0)	<u>Mild</u> 3.4 (2.9-3.9)	<u>Moderate</u> 1.2 (0.9-1.5)	<u>Severe</u> 1.0 (0.8-1.3)	<u>Total</u> 100.0
MEANS (95% CI)					
Age at Wave IV	28.3 (28.1-28.6)	28.4 (28.0-28.8)	28.7 (28.3-29.1)	28.7 (28.3-29.2)	28.3 (28.1-28.6)
Pre-18 Years Sexually Active	2.1 (2.0-2.2)	2.4 (2.1-2.7)	2.0 (1.5-2.5)	1.8 (1.4-2.2)	2.1 (2.0-2.2)
Years Sexually Active	12.7 (12.4-12.9)	12.9 (12.3-13.5)	12.5 (11.6-13.5)	11.9 (10.9-12.9)	12.7 (12.4-12.9)
Pre-18 Sexual Partners	3.1 (2.9-3.3)	3.8 (2.9-4.8)	4.2 (2.7-5.7)	2.8 (1.7-3.9)	3.1 (2.9-3.3)
Lifetime Sexual Partners	12.8 (12.3-13.4)	14.1 (11.8-16.4)	14.5 (10.6-18.4)	9.5 (7.3-11.8)	12.9 (12.3-13.4)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development

Table 7: Adjusted rate ratios (and 95% confidence intervals) from Poisson regression models comparing numbers of pre-18 and lifetime sexual partners by physical disability

aRR (95% CI)	<u>Pre-18 Partners</u>		<u>Lifetime Partners</u>	
	Disability Only	Full Model	Disability Only	Full Model
Physical Disability (None)				
Mild	1.13 (0.91-1.41)	1.13 (0.92-1.40)	1.06 (0.90-1.24)	1.07 (0.92-1.24)
Moderate	1.35 (0.96-1.89)	1.26 (0.91-1.74)	1.10 (0.88-1.38)	1.04 (0.84-1.29)
Severe	1.00 (0.73-1.36)	0.98 (0.73-1.30)	0.78 (0.62-0.98)*	0.81 (0.66-1.00)
Years Sexually Active[†]	1.15 (1.14-1.17)*	1.13 (1.12-1.14)*	1.41 (1.38-1.43)*	1.44 (1.42-1.47)*
Biological Sex (Male)				
Female		0.75 (0.69-0.81)*		0.53 (0.50-0.56)*
Race/Ethnicity (NH White)				
Hispanic		0.90 (0.78-1.04)		1.01 (0.93-1.11)
NH Black		1.01 (0.91-1.13)		1.20 (1.12-1.27)*
Parent Education (SES; College Grad)				
<HS		0.96 (0.82-1.13)		0.73 (0.66-0.82)*
HS/GED		1.04 (0.92-1.17)		0.85 (0.79-0.92)*
Some College		1.05 (0.94-1.17)		0.92 (0.86-0.99)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.18 (1.06-1.31)*		1.47 (1.36-1.59)*
Age at Wave IV		0.98 (0.96-1.01)		0.89 (0.88-0.91)*
Cognitive Ability Score (100-114)				
<85		0.97 (0.82-1.15)		0.85 (0.76-0.96)*
85-99		1.10 (0.99-1.22)		0.96 (0.90-1.02)
>114		0.87 (0.78-0.98)*		0.99 (0.92-1.08)
Coerced Sex (No)				
Yes		1.32 (1.17-1.48)*		1.33 (1.20-1.47)*
Forced Sex (No)				
Yes		1.17 (1.02-1.34)*		1.25 (1.11-1.42)*
Sexual Abuse (No)				
Yes		1.12 (0.95-1.33)		1.12 (1.00-1.26)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; [†]Pre-18 partners analyses are adjusted for years sexually active before age 18 and lifetime partners analyses are adjusted for total years sexually active; aRR = adjusted rate ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 8: Adjusted rate ratios (and 95% confidence intervals) from three sets of Poisson regression models testing moderation in the numbers of pre-18 and lifetime sexual partners among disability severity groups by biological sex, race/ethnicity, and sexual orientation

aRR (95% CI)	<u>Pre-18 Partners</u>		<u>Lifetime Partners</u>	
	Moderator Only	Full Model	Moderator Only	Full Model
Physical Disability/Biological Sex (None/Male)				
None/Female	0.88 (0.81-0.95)*	0.75 (0.69-0.81)*	0.64 (0.60-0.68)*	0.53 (0.50-0.56)*
Mild/Male	1.10 (0.80-1.51)	1.12 (0.82-1.53)	1.02 (0.81-1.27)	1.09 (0.88-1.35)
Mild/Female	1.04 (0.78-1.38)	0.86 (0.65-1.14)	0.72 (0.57-0.90)*	0.55 (0.44-0.68)*
Moderate/Male	1.36 (0.92-2.01)	1.37 (0.92-2.04)	0.91 (0.70-1.18)	0.97 (0.76-1.24)
Moderate/Female	1.18 (0.65-2.16)	0.85 (0.49-1.48)	0.91 (0.60-1.39)	0.60 (0.42-0.86)*
Severe/Male	0.93 (0.66-1.31)	0.88 (0.63-1.24)	0.86 (0.62-1.18)	0.85 (0.62-1.16)
Severe/Female	0.95 (0.60-1.50)	0.79 (0.52-1.20)	0.46 (0.36-0.60)*	0.40 (0.32-0.51)*
Physical Disability/Race (None/NH White)				
None/Hispanic	0.88 (0.76-1.03)	0.90 (0.77-1.04)	0.92 (0.82-1.03)	1.03 (0.93-1.12)
None/NH Black	1.00 (0.90-1.12)	1.02 (0.91-1.14)	1.10 (1.01-1.19)	1.20 (1.13-1.28)*
Mild/Hispanic	0.76 (0.56-1.02)	0.76 (0.52-1.09)	0.72 (0.52-1.00)	0.74 (0.51-1.08)
Mild/NH Black	0.95 (0.61-1.49)	0.93 (0.61-1.42)	1.11 (0.83-1.49)	1.19 (0.92-1.54)
Mild/NH White	1.19 (0.92-1.54)	1.21 (0.95-1.55)	1.10 (0.90-1.34)	1.13 (0.94-1.35)
Moderate/Hispanic	1.06 (0.60-1.90)	1.08 (0.63-1.87)	0.84 (0.65-1.07)	0.86 (0.62-1.20)
Moderate/NH Black	1.44 (0.64-3.23)	1.33 (0.65-2.71)	1.08 (0.52-2.26)	1.17 (0.61-2.26)
Moderate/NH White	1.32 (0.92-1.89)	1.24 (0.85-1.81)	1.17 (0.95-1.44)	1.10 (0.89-1.37)
Severe/Hispanic	1.73 (0.68-4.37)	1.63 (0.67-3.97)	1.05 (0.62-1.78)	1.16 (0.72-1.87)
Severe/NH Black	1.17 (0.72-1.90)	1.19 (0.79-1.81)	1.08 (0.57-2.03)	1.02 (0.49-2.12)
Severe/NH White	0.81 (0.54-1.21)	0.79 (0.54-1.15)	0.68 (0.53-0.87)*	0.75 (0.61-0.92)*
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.11 (1.00-1.25)	1.15 (1.03-1.28)	1.36 (1.24-1.49)*	1.46 (1.34-1.59)*
Mild/Heterosexual	1.06 (0.83-1.35)	1.05 (0.83-1.34)	1.04 (0.87-1.25)	1.04 (0.87-1.23)
Mild/Sexual Minority	1.72 (1.04-2.83)	1.78 (1.13-2.81)	1.57 (1.09-2.26)	1.80 (1.27-2.56)*
Moderate/Heterosexual	1.33 (0.97-1.83)	1.29 (0.94-1.78)	1.05 (0.87-1.27)	1.01 (0.83-1.22)
Moderate/Sexual Minority	1.49 (0.62-3.55)	1.37 (0.61-3.04)	1.57 (0.80-3.05)	1.67 (0.91-3.07)
Severe/Heterosexual	0.84 (0.65-1.10)	0.82 (0.64-1.06)	0.80 (0.62-1.05)	0.84 (0.65-1.07)
Severe/Sexual Minority	1.72 (0.94-3.14)	1.80 (0.99-3.27)	0.89 (0.58-1.37)	1.05 (0.69-1.59)

Notes: Pre-18 partners analyses are adjusted for years sexually active before age 18 and lifetime partners analyses are adjusted for total years sexually active; Each full moderation model is adjusted for parent education, age at the Wave IV interview, cognitive ability score, coerced sex, forced sex, sexual abuse, and untested moderators; Referent groups for categorical variables are in parentheses next to the variable names; aRR = adjusted rate ratio; CI = confidence interval; NH = Non-Hispanic; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

CHAPTER 5: ASSOCIATIONS BETWEEN SEXUAL PATTERNS AND LIFETIME STI/STD DIAGNOSIS AMONG POPULATIONS WITH PHYSICAL DISABILITIES

Research Questions

How are timing of first sex, lifetime sexual partner counts, and pre-18 sexual partner counts related to lifetime STI/STD diagnosis across different levels of disability severity? How do these associations further vary by biological sex, race/ethnicity, and sexual orientation?

Methods

Approach

After examining descriptive statistics, I used adjusted logistic regression models to test relationships between each sexual pattern (timing, lifetime partners, pre-18 partners) and lifetime STI/STD diagnosis among disability severity groups to those without disabilities. For each predictor, I completed two sets of models. The first set included covariate models in which disability and the predictor of interest were included as separate variables:

Model 1:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i)$$

Model 2 included the main effects and all other covariates:

Model 2:

$$\begin{aligned} \log\left(\frac{p_i}{1-p_i}\right) = & \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(BioSex_i) + \beta_4(Race_i) \\ & + \beta_5(Age_i) + \beta_6(SES_i) + \beta_7(SexualOrientation_i) + \beta_8(CognitiveAbility_i) \\ & + \beta_9(CoercedSex_i) + \beta_{10}(ForcedSex_i) + \beta_{11}(SexualAbuse_i) \end{aligned}$$

The second set of models tested the interaction between disability and the sexual pattern of interest. Model 3 included only the interaction between disability and the predictor of interest, as well as the corresponding main effects:

Model 3:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(Disability_i * Predictor_i)$$

Model 4 included the interaction, main effects, and all other covariates:

Model 4:

$$\begin{aligned} \log\left(\frac{p_i}{1-p_i}\right) = & \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(Disability_i * Predictor_i) \\ & + \beta_4(BioSex_i) + \beta_5(Race_i) + \beta_6(Age_i) + \beta_7(SES_i) \\ & + \beta_8(SexualOrientation_i) + \beta_9(CognitiveAbility_i) + \beta_{10}(CoercedSex_i) \\ & + \beta_{11}(ForcedSex_i) + \beta_{12}(SexualAbuse_i) \end{aligned}$$

Lifetime partnering models included years sexually active as an additional covariate, and pre-18 partnering models included years sexually active and post-18 sexual partners as additional covariates. In moderation analyses, I repeated analyses using subgroups that interacted disability with the moderator of interest (biological sex, race/ethnicity, sexual orientation). For these analyses, I used the Holm-Bonferroni method¹⁰¹ to report only statistically significant differences at the 0.05 level after correction for multiple tests. All interaction models for the main disability models and significant interactions from moderation models are also presented as figures in the Appendix.

Results

Sample Characteristics

Table 9 presents descriptive statistics for analyses using the timing and lifetime partnering variables as predictors, and Table 10 presents those for the pre-18 partnering predictor. The majority of the sample (94.5%) had no disability, 3.3% had a mild disability, 1.2% had a moderate disability, and 1.0% had a severe disability across both samples. The samples were approximately evenly split between males and females, and the average age of respondents was 28.3 years. Over 70% of each sample was NH White, while approximately 16% was NH Black and 12% was Hispanic. Regarding parent education, roughly 60% had attained a college degree or more. About 86% identified as heterosexual, and approximately 13%, 8%, and 5% of respondents reported experiencing coerced sex, forced sex, and sexual abuse, respectively.

The average age at first sex was about 16.3 years, and respondents had been sexually active for about 13.0 years. On average, respondents reported 13.2 lifetime sexual partners and 3.1 pre-18 sexual partners. Finally, approximately 22% of the sample reported a lifetime STI/STD diagnosis.

Logistic Regression Models

In every timing model, I found that each additional year of sexual activity was associated with 1.18-1.20 times the odds of a lifetime STI/STD diagnosis. Similarly, the lifetime partnering models showed that each additional partner was associated with 1.02-1.03 times the odds of a lifetime STI/STD diagnosis. Finally, in every pre-18 partnering model except for those testing for differences between disability/sexual orientation subgroups, results showed that each additional partner was associated with 1.01 times the odds of a lifetime STI/STD diagnosis. The

detailed results of the regression analyses are presented below by 1) disability/moderator and 2) predictor of interest.

Disability

Timing. Table 11 presents the results of the timing models comparing disability groups in which the group without disabilities is the referent. When holding years sexually active and all other covariates constant, respondents with the most severe disabilities had 0.52 times the odds of a lifetime STI/STD diagnosis compared to the odds of those without disabilities. A global test of the interaction between disability and years sexually active was statistically significant ($F(3, 123.4)=2.98, p=0.03$), so I proceeded to the interaction model. Results indicated the presence of an interaction for respondents with mild disabilities, such that they had 0.86 times the odds of a lifetime STI/STD diagnosis compared to the odds of those without disabilities with each additional year of sexual activity. The main effect for the group with mild disabilities was also statistically significant, suggesting that, on average, this group had 9.41 times the odds of a lifetime STI/STD diagnosis across all years of sexual activity compared to the odds of those without disabilities. This result is also illustrated using predicted probabilities in Figure 2 of the Appendix. No other differences emerged in the covariate or interaction models across the disability groups.

Lifetime sexual partners. Table 12 presents the results of logistic regression models relating disability and STI/STD diagnosis using lifetime partners as the predictor. When holding lifetime sexual partners and all other covariates constant, I found no statistically significant differences in the odds of a lifetime STI/STD diagnosis among disability groups compared to the odds of those without disabilities. A global test of the interaction between disability and number of lifetime sexual partners was not statistically significant ($F(3, 125.7)=1.50, p=0.22$), indicating

no differences in the odds of STI/STD diagnosis with additional sexual partners across disability groups. Predicted probabilities of this result are illustrated in Figure 3 of the Appendix.

Pre-18 sexual partners. Table 13 presents the results of the main disability models using pre-18 partners as the predictor of interest. When holding number of pre-18 sexual partners and all other covariates constant, respondents with the most severe disabilities had 0.49 times the odds of a lifetime STI/STD diagnosis compared to the odds of those without disabilities. A global test of the interaction between disability and pre-18 sexual partners was not statistically significant ($F(3, 126)=0.73, p=0.54$) indicating no significant variation in the odds of an STI/STD diagnosis with each additional pre-18 sexual partner across disability groups. These results are presented as predicted probabilities in Figure 4 of the Appendix.

Disability/Biological Sex

Timing. Table 14 presents the timing models, for which males without disabilities were the referent. Results of the covariate model showed that females without disabilities had 2.87, females with mild disabilities had 3.79, and males with severe disabilities had 0.18 times the odds of a lifetime STI/STD diagnosis compared to males without disabilities. Comparisons of the confidence intervals indicated further differences within disability groups. Among both those with mild and those with severe disabilities, females had greater odds of a lifetime STI/STD diagnosis compared to the odds for males. No such differences emerged among those with moderate disabilities or within biological sex groups, and the global test of the interaction was not significant ($F(7, 124.8)=1.59, p=0.14$), indicating no interaction between years sexually active and the disability/biological sex groups.

Lifetime sexual partners. Table 15 presents the results for the lifetime partnering predictor. In the fully adjusted covariate model, females without disabilities had 3.90, females

with mild disabilities had 5.21, and females with severe disabilities had 2.90 times the odds of a lifetime STI/STD diagnosis compared to males without disabilities. Comparisons of the confidence intervals indicated further differences within disability groups. Among both those with mild and those with severe disabilities, females had greater odds of a lifetime STI/STD diagnosis compared to the odds for males. No such differences emerged among those with moderate disabilities, or within biological sex groups, but the global test of the interaction was statistically significant ($F(7, 125.8)=3.99, p<0.01$), indicating an interaction between numbers of lifetime sexual partners and at least one of the disability/biological sex groups. The subsequent interaction model showed that females without disabilities had 1.02 times the odds of a lifetime STI/STD diagnosis compared to males without disabilities with each additional sexual partner. The main effect for this group was also significant, confirming that on average, females without disabilities had greater odds of a lifetime STI/STD diagnosis compared to their male counterparts across all lifetime partner counts. These interaction results are presented using predicted probabilities in Figure 5 of the Appendix. No other differences emerged in the interaction model or for males in both the covariate and interaction models.

Pre-18 sexual partners. Results for the pre-18 partnering predictor are shown in Table 16. The covariate model showed that females without disabilities had 3.87 and females with mild disabilities had 5.02 times the odds of a lifetime STI/STD diagnosis compared to males without disabilities. Comparisons of the confidence intervals indicated further differences within the mild disability group, such that females had greater odds of a lifetime STI/STD diagnosis compared to the odds for males. No such differences emerged within other disability or biological sex groups, and the global test of the interaction was not significant ($F(7, 122)=1.24, p=0.28$), indicating no interaction between numbers of pre-18 sexual partners and the disability/biological sex groups.

Disability/Race

Timing. Table 17 shows the timing models, for which NH Whites without disabilities are the referent. In the adjusted covariate model, I found that both Hispanics without disabilities (aOR=1.51) and NH Blacks without disabilities (aOR=3.23) had greater odds of a lifetime STI/STD compared to the odds of the referent. I also found that NH Blacks with mild disabilities had 2.84 times the odds of a lifetime STI/STD diagnosis compared to the odds of NH Whites without disabilities. Comparisons of the confidence intervals indicated one additional difference between race groups among those without disabilities, such that the odds of STI/STD diagnosis were higher for NH Blacks than for Hispanics. No other within disability or race groups differences emerged. A global test showed the presence of an interaction ($F(11, 123.1)=2.07$, $p=0.03$) for NH White respondents with mild disabilities, such that they had 0.82 times the odds of a lifetime STI/STD diagnosis compared to the odds of NH Whites without disabilities with each additional year of sexual activity. The main effect for this group was also significant, such that NH Whites with mild disabilities had an average of 19.03 times the odds of a lifetime STI/STD across all years of sexual activity compared to the referent. This interaction is illustrated using predicted probabilities in Figure 6 of the Appendix. No other differences emerged between and within disability/race groups in covariate or interaction models.

Lifetime sexual partners. Next, I tested models using lifetime partnering as the predictor of interest (See Table 18). The adjusted covariate model showed that both Hispanics without disabilities (aOR=1.50) and NH Blacks without disabilities (aOR=3.11) had greater odds of a lifetime STI/STD compared to the odds of NH Whites without disabilities. Non-Hispanic Blacks with mild disabilities also had 2.94 times the odds of a lifetime STI/STD diagnosis compared to the odds of NH Whites without disabilities. Comparisons of the confidence intervals indicated

that the odds of STI/STD diagnosis were higher for NH Blacks than for Hispanics without disabilities. No other within disability or race groups differences emerged. The global test of the interaction was not statistically significant, ($F(11, 125.6)=1.71, p=0.08$) indicating no differences in the odds of STI/STD diagnosis with each additional lifetime sexual partner across disability/race groups.

Pre-18 sexual partners. Table 19 presents results for the pre-18 partnering predictor. In the adjusted covariate model, I again found that both Hispanics without disabilities ($aOR=1.51$) and NH Blacks without disabilities ($aOR=3.15$) had greater odds of a lifetime STI/STD compared to the odds of the referent. Similarly, NH Blacks with mild disabilities also had 3.39 times the odds of a lifetime STI/STD diagnosis compared to the odds of NH Whites without disabilities. The confidence intervals indicated within disability group differences, such that the odds of STI/STD diagnosis were higher for NH Blacks than for Hispanics among those without disabilities, and were higher for NH Blacks than for NH Whites among those with mild disabilities. No other within disability or race group differences emerged. A global test indicated no interaction between pre-18 partners and the disability/race subgroups, ($F(10, 119)=0.60, p=0.81$), suggesting no differences in the odds of STI/STD diagnosis across disability race/subgroups with increasing numbers of pre-18 sexual partners.

Disability/Sexual Orientation

Timing. Table 20 shows the results of timing models, for which heterosexuals without disabilities are the referent. The adjusted covariate model indicated that sexual minorities without disabilities had 1.36 times the odds of a lifetime STI/STD diagnosis compared to the odds of the referent. The global test of the interaction was significant ($F(7,124.6)=2.27, p=0.03$), and further examination indicated that heterosexuals with mild disabilities had 0.84 times the

odds of a lifetime STI/STD with each additional year of sexual activity compared to the odds of their peers without disabilities. Furthermore, the main effect for this group was significant, suggesting that the odds of STI/STD among heterosexuals with mild disabilities across time points was, on average, 11.02 times the odds of heterosexuals without disabilities. The results of this interaction are illustrated using predicted probabilities in Figure 7 of the Appendix. No other significant differences emerged between or within disability/sexual orientation groups in covariate or interaction models.

Lifetime sexual partners. The results of the lifetime partnering models can be found in Table 21. When holding lifetime sexual partners and all other covariates constant, I found no statistically significant differences in the odds of a lifetime STI/STD diagnosis among the various subgroups compared to the odds of heterosexuals without disabilities. A global test of the interaction between the disability/sexual orientation groups and number of lifetime sexual partners was not statistically significant ($F(3, 125.8)=0.82, p=0.57$), indicating no differences in the odds of STI/STD diagnosis with each additional sexual partner across the disability/sexual orientation subgroups.

Pre-18 sexual partners. Finally, Table 22 shows the results of the pre-18 partnering models for the disability/sexual orientation groups. The adjusted covariate model indicated no differences between the disability/sexual orientation subgroups. The global test of the interaction also was not significant ($F(7, 122)=1.00, p=0.43$), indicating no differences between disability/sexual orientation subgroups with increasing numbers of pre-18 sexual partners.

Discussion

The purpose of this chapter was to understand the relationships between various sexual patterns and the odds of a lifetime STI/STD diagnosis among disability groups. Results showed

that timing of first sex, lifetime sexual partnering, and pre-18 sexual partnering each were associated with increased odds of an STI/STD diagnosis, but that there was also variation by disability status. In particular, populations with mild disabilities, and specifically females and NH Blacks, were disproportionately affected by STI/STDs overall. Further research and support for these populations is therefore warranted. Patterns of results are discussed in the sections below by the moderator of interest.

Disability

Across all models, I found that each additional year of sexual activity was associated with increased odds of a lifetime STI/STD diagnosis. These results align with much of the previous research focused on both adolescents and early adults, which shows that early sexual debut is associated with increased likelihood of STI/STD diagnosis.^{44–47} When looking at disability specifically, covariate models showed that those with the most severe disabilities had lower odds of an STI/STD diagnosis compared to peers without disabilities. This result is not consistent with previous literature, which suggests that the population with disabilities is at greater risk for STI/STDs.^{8,55,112} However, this difference may be attributable to the types of disabilities studied, the aggregation of disability severity levels, and/or the measurement of the outcome across studies. This is further illustrated by the results of the interaction model, which showed that while the odds of an STI/STD diagnosis among respondents with mild disabilities increased more slowly than those without disabilities over time, this group had significantly greater odds of STI/STD diagnosis compared to those without disabilities across all years of sexual activity. Since this group is much larger than the groups with moderate or severe disabilities, the heterogeneous groupings used in past research may have masked the diverse experiences of those who have more severe disabilities. Importantly, these results suggest that people with mild

disabilities may be at greatest risk for STI/STD over time, and therefore need more specialized attention in research, policies, and programs that focus on healthy sexual development from adolescence to early adulthood.

Overall, results of the lifetime partnering models suggested that each additional partner was associated with an increased odds of lifetime STI/STD diagnosis. However, I found no differences in numbers of lifetime partners or in the effect of lifetime partnering on STI/STD diagnosis when comparing disability groups. Such null results fill an important gap in the literature, and indicate that lifetime sexual partnering does not function differently for those with disabilities compared to those without disabilities. The overall findings do support those of past research showing the importance of partnering to STI/STD outcomes in the general population,^{46,48–51} and suggest that policies and programs should not only be focused on risk reduction strategies rather than abstinence only, but should also be inclusive of those with disabilities since they exhibit similar behaviors to their non-disabled peers.

As with lifetime partnering, each additional pre-18 sexual partner was associated with greater odds of lifetime STI/STD diagnosis across disability groups, and further support the results of past literature.^{48,49} In the covariate model comparing the disability groups, only those with severe disabilities had lower odds of a lifetime STI/STD diagnosis compared to those without disabilities. In addition, the interaction model was not significant, indicating no differences in lifetime diagnosis of an STI/STD across disability groups with each additional partner before age 18. These results provide an important contribution to the literature, which lacks information on the adolescent sexual partnering behaviors and related health outcomes of populations with disabilities. Importantly, these findings further suggest the importance of education around sexual risk reduction for all adolescents, regardless of disability severity.

Disability/Biological Sex

Results of the analyses focused on biological sex within the various disability groups exhibited similar results. Covariate models showed that females without and with mild disabilities had significantly greater odds of a lifetime STI/STD diagnosis compared to males without disabilities, while males with severe disabilities had lower odds. Importantly, when I compared the sexes within disability groups, I found that females had significantly greater odds of a lifetime STI/STD diagnosis compared to males in every disability category. These results support those of past research, which consistently shows that females are disproportionately burdened by STI/STDs.^{41–43} Contrary to past research,²⁸ I did not find a significant interaction between timing and STI/STD diagnosis across disability/biological sex groups. This difference may be attributed to different definitions of sexual debut, since past work looks only at vaginal sex while I focused on the first sexual experience, whether vaginal, oral, or anal. Taken together, these results suggest that females, regardless of disability level, may need more focused sexuality education during adolescence to prevent STI/STDs.

The results for the lifetime partnering models were similar to those for timing. Females without, with mild, and with severe disabilities all showed increased odds of a lifetime STI/STD diagnosis when compared to males without disabilities in covariate models. I also found that females had greater odds of STI/STD diagnosis compared to males within both the mild and severe disability groups. The interaction model suggested that females without disabilities had greater odds of a lifetime STI/STD compared to their male peers with each additional lifetime partner and across all lifetime partner counts. Overall, these results further show how females, and particularly those with mild disabilities, are more likely to have an STI/STD and may therefore need more focused sex education to prevent such negative sexual health outcomes.

Results for models focused on pre-18 partnering followed similar patterns. Females without and with mild disabilities had significantly greater odds of a lifetime STI/STD diagnosis compared to males without disabilities. Further, among those with mild disabilities, females had significantly greater odds of STI/STD diagnosis than did males. Again, these results fill an important gap in the scant literature on disability and sexual health, and stress the importance of focused STI/STD prevention education for females.

Disability/Race

The findings from analyses by disability/race exhibited similar patterns to those the past literature on racial/ethnic minorities. The adjusted covariate model showed that Hispanics and NH Blacks without disabilities and NH Blacks with mild disabilities had greater odds of a lifetime STI/STD diagnosis compared to NH Whites without disabilities. These findings support those of past studies which show that racial/ethnic minorities are at greater risk for STI/STDs than their White counterparts.^{42,45,52} The interaction model showed that NH Whites with mild disabilities had greater odds of STI/STD diagnosis across all years of sexual activity compared to their peers without disabilities, supporting the results found in the main disability model described earlier. The fact that I did not find differences in the interaction models for the racial/ethnic minority groups is not surprising given the very limited numbers of respondents in each of these disability/race groups. Future studies should thus make a concerted effort to represent racially diverse populations and disability levels in their research.

The results of analyses using lifetime sexual partners as the predictor of interest yielded nearly identical results to those for timing. Hispanics and NH Blacks without disabilities and NH Blacks with mild disabilities had significantly greater odds of a lifetime STI/STD diagnosis in the covariate models compared to NH Whites without disabilities. The interaction model was not

significant, which could be attributed to small sample sizes in the disability/race groups and/or difficulty establishing temporality between the lifetime partnering and STI/STD variables due to data limitations. As discussed above, future research should place stronger emphasis on including participants from diverse populations with disabilities in order to better understand the unique experiences and needs of these groups.

Results of the pre-18 sexual partnering analyses followed similar patterns. Both Hispanics and NH Blacks without disabilities, as well as NH Blacks with mild disabilities had greater odds of a lifetime STI/STD diagnosis compared to NH Whites without disabilities in the covariate model. I also found that within the mild disability group, NH Blacks had greater odds of a lifetime STI/STD compared to NH Whites. These results further support those described in the timing and lifetime partnering models, and suggest the need for targeted policies, practices, and programs to prevent such negative outcomes among members of these marginalized disability/race groups.

Disability/Sexual Orientation

Results of the disability/sexual orientation models generated few statistically significant estimates. In the covariate model for timing, I found that sexual minorities without disabilities had greater odds of a lifetime STI/STD diagnosis compared to their heterosexual peers. This result is consistent with past research which has shown that sexual minorities are more likely to have STI/STDs than heterosexuals.^{42,43,52} The interaction model, however, suggested that heterosexuals with mild disabilities had greater odds of STI/STD diagnosis across all years of sexual activity compared to those without disabilities, which further supports the experiences of those with mild disabilities that I documented above. No other significant results emerged in the timing models, nor were there any statistically significant differences in the lifetime and pre-18

sexual partnering analyses. These null results may indicate similar experiences for the various disability/sexual orientation groups compared to heterosexuals without disabilities, but are also likely affected by small subgroup sizes, particularly among sexual minorities in the more severe disability categories. Future sexual health research should therefore continue to make a greater effort to include populations with disabilities who also identify as sexual minorities.

Strengths and Limitations

To my knowledge, this chapter represents the first attempt to understand the relationship between sexual behavior patterns and lifetime STI/STD diagnoses among populations with disabilities from adolescence through early adulthood. The majority of past research has relied on convenience samples and/or cross-sectional data, which limits the generalizability of their findings. In addition, most research focused on STI/STDs in populations with disabilities has only focused on STI/STD risk behavior as a measure of the outcome, rather than how these behaviors are linked to an actual diagnosis. Future research can build on my analyses by continuing to investigate relationships between sexual health behaviors and outcomes at the population level.¹¹³

My research, however, is not without important limitations. As with all secondary data analysis, I was limited to the measures that were available in the Add Health data set. For example, I was unable to account for condom use in each of the respondents' sexual partnerships. Condoms are an important mediator of the studied relationship because they are a commonly used as a STI/STD prevention method, and inconsistent condom use has been associated with both early sexual intercourse^{114,115} and increased numbers of sexual partners.^{49,50} Future research should test this mediating framework to better understand the effects of timing and sexual partnering on STI/STD acquisition among populations with disabilities.

Similarly, my analyses are subject to measurement error due to the use of self-reported STI/STD diagnosis. First, since many STI/STDs are asymptomatic, underreporting is quite likely.⁵² Similarly, STI/STD diagnosis requires access to sexual health services, which marginalized populations, particularly racial/minorities¹¹⁶ and people with disabilities,^{117,118} are less likely to have. Due to such underreporting, the results of my analyses may actually be more conservative estimates of these relationships compared to what is actually expected in the population. Future research can build on these results using serological testing for current STI/STDs to better understand disparities in STI/STD diagnosis among population with disabilities.

Finally, it was difficult to establish temporality between the variables in my model, as I could not identify when the respondents' first STI/STDs occurred. It is therefore difficult to identify the exact time at risk and numbers of sexual partners a respondent had before their STI/STD diagnosis. For this reason, I cannot say that the associations that I observed in these analyses are causal, particularly in interaction models. However, I do believe that these results are important for understanding patterns of risk behavior and related outcomes, and can still inform the design of future sexual health research among populations with disabilities.

Conclusion

Although some past research has shown that populations with physical disabilities are at greater risk for STI/STDs,^{8–10,54,55} none of this research has considered how timing of first sex or sexual partnering affect STI/STD acquisition by early adulthood. The analyses of this chapter fill this significant gap in the sexual health and disability literatures by considering the relationship between various sexual patterns and STI/STD diagnosis among populations with disabilities. It is clear from these results that populations with mild disabilities, particularly females and NH

Blacks, bear a greater burden with respect to STI/STDs and thus deserve increased attention in sexual health and education research, practice, and policies.^{119,120} Future research should make a concerted effort to include respondents with disabilities from diverse populations to help identify marginalized populations that may be at greater risk and thus in need targeted support.

Table 9: Descriptive statistics by physical disability severity for STI/STD analyses using timing and lifetime partnering as main predictors

<i>n=13,123</i> <i>% (95% CI)</i>	<u>None</u> 94.5 (94.0-95.1)	<u>Mild</u> 3.3 (2.9-3.8)	<u>Moderate</u> 1.2 (0.9-1.4)	<u>Severe</u> 1.0 (0.8-1.2)	<u>Total</u> 100.0
Biological Sex					
Male	50.5 (49.2-51.9)	49.8 (42.7-56.8)	52.0 (41.3-62.7)	45.3 (33.6-57.0)	50.5 (49.1-51.8)
Female	49.5 (48.1-50.8)	50.2 (43.2-57.3)	48.0 (37.3-58.7)	54.7 (43.0-66.4)	49.5 (48.2-50.9)
Race/Ethnicity					
Hispanic	12.8 (9.1-16.5)	9.5 (5.2-13.8)	9.7 (2.5-17.0)	10.7 (3.4-17.9)	12.6 (9.0-16.3)
NH Black	17.1 (12.6-21.7)	12.7 (7.9-17.6)	23.5 (12.4-34.7)	16.2 (7.3-25.2)	17.0 (12.6-21.5)
NH White	70.1 (64.3-75.8)	77.7 (71.3-84.1)	66.7 (54.9-78.5)	73.1 (61.3-84.9)	70.3 (64.7-76.0)
Parent Education (SES)					
<HS	12.5 (10.0-14.9)	11.5 (6.7-16.4)	19.7 (8.4-31.0)	15.4 (7.1-23.8)	12.6 (10.1-15.0)
HS/GED	27.8 (25.6-30.1)	24.1 (18.6-29.6)	16.0 (8.6-23.4)	33.6 (22.5-44.6)	27.6 (25.4-29.9)
Some College	29.9 (28.2-31.6)	29.4 (22.9-35.8)	32.4 (22.8-42.0)	30.6 (20.1-41.1)	29.9 (28.2-31.6)
College Grad	29.8 (26.3-33.3)	35.0 (27.1-42.8)	31.9 (21.5-42.3)	20.4 (12.8-27.9)	29.9 (26.5-33.4)
Sexual Orientation					
Heterosexual	86.7 (85.7-87.8)	87.4 (83.7-91.2)	81.9 (73.4-90.5)	80.3 (70.3-90.3)	86.6 (85.6-87.7)
Sexual Minority	13.3 (12.2-14.3)	12.6 (8.8-16.3)	18.1 (9.5-26.6)	19.7 (9.7-29.7)	13.4 (12.3-14.4)
Cognitive Ability Score					
<85	12.9 (10.5-15.2)	10.6 (6.2-14.9)	13.5 (3.2-23.8)	17.8 (9.3-26.3)	12.8 (10.5-15.2)
85-99	34.0 (32.0-36.0)	38.4 (31.6-45.3)	34.8 (24.9-44.8)	31.7 (21.1-42.3)	34.1 (32.1-36.1)
100-114	36.0 (33.8-38.2)	35.4 (29.1-41.6)	30.1 (20.7-39.5)	31.3 (20.5-42.1)	35.9 (33.7-38.0)
>114	17.1 (14.9-19.4)	15.6 (11.4-19.9)	21.5 (12.2-30.8)	19.2 (10.5-27.9)	17.2 (15.0-19.3)
Coerced Sex					
No	87.4 (86.6-88.3)	84.0 (79.3-88.6)	73.3 (63.2-83.5)	81.5 (72.7-90.3)	87.1 (86.2-87.9)
Yes	12.6 (11.7-13.4)	16.0 (11.4-20.7)	26.7 (16.5-36.8)	18.5 (9.7-27.3)	12.9 (12.1-13.8)
Forced Sex					
No	92.0 (91.3-92.7)	87.4 (83.2-91.6)	83.6 (76.4-90.9)	85.7 (77.8-93.6)	91.7 (91.0-92.4)
Yes	8.0 (7.3-8.7)	12.6 (8.4-16.8)	16.4 (9.1-23.6)	14.3 (6.4-22.2)	8.3 (7.6-9.0)
Sexual Abuse					
No	95.1 (94.5-95.8)	93.6 (90.7-96.6)	91.8 (86.4-97.3)	90.5 (83.1-97.8)	95.0 (94.4-95.6)
Yes	4.9 (4.2-5.5)	6.4 (3.4-9.3)	8.2 (2.7-13.6)	9.5 (2.2-16.9)	5.0 (4.4-5.6)

<i>n=13,123</i> <i>% (95% CI)</i>	<u>None</u> 94.5 (94.0-95.1)	<u>Mild</u> 3.3 (2.9-3.8)	<u>Moderate</u> 1.2 (0.9-1.4)	<u>Severe</u> 1.0 (0.8-1.2)	<u>Total</u> 100.0
Lifetime STI/STD Diagnosis					
No	77.4 (75.8-79.0)	74.5 (69.2-79.8)	81.8 (74.1-89.4)	85.7 (78.5-92.8)	77.5 (75.9-79.0)
Yes	22.6 (21.0-24.2)	25.5 (20.2-30.8)	18.2 (10.6-25.9)	14.3 (7.2-21.5)	22.5 (21.0-24.1)
MEANS (95% CI)					
Age at Wave IV	28.3 (28.1-28.6)	28.3 (28.0-28.7)	28.7 (28.3-29.1)	28.7 (28.2-29.2)	28.3 (28.1-28.6)
Age at First Sex	16.3 (16.2-16.4)	15.9 (15.5-16.3)	16.6 (15.9-17.4)	16.5 (15.9-17.1)	16.3 (16.2-16.4)
Lifetime Sexual Partners	13.2 (12.6-13.7)	14.2 (11.9-16.6)	15.0 (11.0-19.0)	10.5 (8.1-12.9)	13.2 (12.7-13.7)
Years Sexually Active	13.0 (12.8-13.3)	13.4 (12.9-13.9)	13.1 (12.2-13.9)	13.2 (12.5-13.9)	13.1 (12.8-13.3)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; STI/STD = sexually transmitted infection/disease; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development

Table 10: Descriptive statistics by physical disability severity for STI/STD analyses using pre-18 partnering as the main predictor

<i>n (%)</i>	<u>None</u> 10,690 (94.5)	<u>Mild</u> 423 (3.3)	<u>Moderate</u> 161 (1.2)	<u>Severe</u> 117 (1.0)	<u>Total</u> 11,391 (100.0)
Biological Sex					
Male	4,875 (49.8)	195 (46.1)	80 (54.4)	49 (44.6)	5,199 (49.7)
Female	5,815 (50.2)	228 (53.9)	81 (45.6)	68 (55.5)	6,192 (50.3)
Race/Ethnicity					
Hispanic	1,865 (12.2)	63 (10.0)	24 (11.1)	14 (8.6)	1,966 (12.1)
Black	2,426 (15.7)	74 (10.6)	30 (21.7)	18 (17.8)	2,548 (15.7)
White	6,399 (72.1)	286 (79.4)	107 (67.3)	85 (73.7)	6,877 (72.3)
Parent Education (SES)					
<HS	1,341 (11.7)	46 (11.0)	21 (18.8)	13 (11.5)	1,421 (11.7)
HS/GED	2,744 (27.5)	105 (22.5)	38 (16.8)	38 (36.5)	2,925 (27.3)
Some College	3,152 (29.8)	135 (31.9)	53 (32.5)	38 (30.5)	3,378 (29.9)
College Grad	3,453 (31.1)	137 (34.6)	49 (31.9)	28 (21.5)	3,667 (31.1)
Sexual Orientation					
Heterosexual	9,226 (86.6)	361 (85.9)	130 (80.1)	95 (82.8)	9,812 (86.4)
Sexual Minority	1,464 (13.4)	62 (14.2)	31 (19.9)	22 (17.2)	1,579 (13.6)
Cognitive Ability Score					
<85	1,422 (11.4)	45 (9.7)	16 (10.7)	17 (16.5)	1,500 (11.4)
85-99	3,667 (33.4)	145 (36.7)	62 (37.9)	35 (31.2)	3,909 (33.5)
100-114	3,779 (37.0)	162 (37.6)	49 (28.2)	42 (30.8)	4,032 (36.8)
>114	1,822 (18.3)	71 (16.0)	34 (23.3)	23 (21.6)	1,950 (18.3)
Coerced Sex					
No	9,362 (87.5)	349 (82.6)	129 (76.1)	93 (82.1)	9,933 (87.1)
Yes	1,328 (12.5)	74 (17.4)	32 (24.0)	24 (17.9)	1,458 (12.9)
Forced Sex					
No	9,829 (92.0)	366 (86.4)	142 (86.6)	98 (86.4)	10,435 (91.7)
Yes	861 (8.0)	57 (13.6)	19 (13.5)	19 (13.6)	956 (8.3)
Sexual Abuse					
No	10,170 (95.3)	395 (93.5)	147 (92.1)	108 (89.6)	10,820 (95.2)
Yes	520 (4.7)	28 (6.5)	14 (7.9)	9 (10.4)	571 (4.8)

<i>n (%)</i>	<u>None</u> 10,690 (94.5)	<u>Mild</u> 423 (3.3)	<u>Moderate</u> 161 (1.2)	<u>Severe</u> 117 (1.0)	<u>Total</u> 11,391 (100.0)
Lifetime STI/STD Diagnosis					
No	8,126 (77.7)	323 (73.8)	131 (81.6)	97 (87.1)	8,677 (77.7)
Yes	2,564 (22.4)	100 (26.2)	30 (18.4)	20 (13.0)	2,714 (22.3)
	MEANS (SD)				
Age at Wave IV	28.3 (1.8)	28.2 (1.9)	28.6 (1.7)	28.6 (1.9)	28.3 (1.8)
Age at First Sex	16.4 (2.8)	16.0 (2.8)	16.8 (3.7)	16.6 (3.0)	16.4 (2.8)
Number of Pre-18 Sexual Partners	3.1 (5.7)	3.4 (5.9)	4.4 (8.7)	2.7 (4.6)	3.1 (5.8)
Number of Post-18 Sexual Partners	10.0 (13.7)	9.7 (15.0)	10.7 (15.0)	8.0 (10.9)	9.9 (13.7)
Years Sexually Active	12.9 (3.2)	13.2 (3.4)	12.8 (4.4)	13.0 (3.1)	12.9 (3.3)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; STI/STD = sexually transmitted infection/disease; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; SD = standard deviation

Table 11: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and STI/STD diagnosis across disability groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	1.13 (0.83-1.53)	1.16 (0.84-1.61)	9.59 (3.19-28.83)*	9.41 (2.18-40.58)*
Moderate	0.75 (0.45-1.23)	0.65 (0.38-1.09)	0.83 (0.03-23.50)	1.51 (0.06-38.22)
Severe	0.56 (0.32-0.99)*	0.52 (0.29-0.91)*	0.40 (0.02-7.23)	0.49 (0.02-12.45)
Years Sexually Active	1.12 (1.10-1.14)*	1.18 (1.15-1.21)*	1.13 (1.10-1.15)*	1.19 (1.15-1.22)*
Physical Disability * Years Sexually Active (None)				
Mild			0.85 (0.79-0.93)*	0.86 (0.77-0.95)*
Moderate			0.99 (0.79-1.25)	0.94 (0.75-1.18)
Severe			1.02 (0.84-1.25)	1.00 (0.80-1.25)
Biological Sex (Male)				
Female		2.93 (2.58-3.33)*		2.94 (2.58-3.34)*
Race/Ethnicity (NH White)				
Hispanic		1.50 (1.20-1.87)*		1.49 (1.20-1.86)*
NH Black		3.20 (2.73-3.74)*		3.18 (2.71-3.73)*
Parent Education (SES; College Grad)				
<HS		0.78 (0.61-1.00)		0.79 (0.62-1.01)
HS/GED		0.93 (0.79-1.08)		0.93 (0.79-1.09)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.38 (1.17-1.63)*		1.38 (1.17-1.63)*
Cognitive Ability Score (100-114)				
<85		0.92 (0.73-1.15)		0.92 (0.73-1.16)
85-99		0.91 (0.78-1.06)		0.91 (0.78-1.06)
>114		1.08 (0.87-1.33)		1.08 (0.87-1.34)
Age at Wave IV		0.86 (0.81-0.90)*		0.86 (0.81-0.90)*
Coerced Sex (No)				
Yes		1.54 (1.26-1.89)*		1.54 (1.26-1.89)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Forced Sex (No)				
Yes		1.29 (1.05-1.58)*		1.28 (1.04-1.57)*
Sexual Abuse (No)				
Yes		1.06 (0.83-1.37)		1.06 (0.82-1.36)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 12: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and STI/STD diagnosis across disability groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	1.15 (0.85-1.55)	1.17 (0.84-1.63)	1.33 (0.93-1.91)	1.31 (0.86-1.98)
Moderate	0.72 (0.44-1.17)	0.64 (0.37-1.11)	0.61 (0.31-1.18)	0.63 (0.30-1.36)
Severe	0.61 (0.34-1.10)	0.57 (0.32-1.00)	0.81 (0.41-1.58)	0.74 (0.38-1.45)
Lifetime Sexual Partners	1.02 (1.02-1.03)*	1.03 (1.02-1.03)*	1.02 (1.02-1.03)*	1.03 (1.02-1.03)*
Physical Disability * Lifetime Sexual Partners (None)				
Mild			0.99 (0.98-1.01)	0.99 (0.97-1.01)
Moderate			1.01 (0.99-1.03)	1.00 (0.97-1.03)
Severe			0.98 (0.95-1.01)	0.98 (0.95-1.01)
Years Sexually Active		1.13 (1.09-1.16)*		1.13 (1.09-1.16)*
Biological Sex (Male)				
Female		3.98 (3.43-4.61)*		3.98 (3.43-4.61)*
Race/Ethnicity (NH White)				
Hispanic		1.49 (1.19-1.88)*		1.50 (1.19-1.88)*
NH Black		3.09 (2.64-3.63)*		3.09 (2.64-3.63)*
Parent Education (SES; College Grad)				
<HS		0.87 (0.68-1.13)		0.87 (0.68-1.13)
HS/GED		0.99 (0.84-1.17)		0.99 (0.84-1.17)
Some College		1.00 (0.85-1.17)		1.00 (0.85-1.17)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.18 (1.00-1.39)*		1.18 (1.00-1.39)*
Cognitive Ability Score (100-114)				
<85		0.97 (0.77-1.23)		0.97 (0.77-1.22)
85-99		0.91 (0.79-1.06)		0.91 (0.79-1.06)
>114		1.07 (0.87-1.33)		1.07 (0.87-1.33)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Age at Wave IV		0.88 (0.84-0.93)*		0.88 (0.84-0.94)*
Coerced Sex (No)				
Yes		1.43 (1.16-1.77)*		1.43 (1.15-1.77)*
Forced Sex (No)				
Yes		1.18 (0.96-1.44)		1.18 (0.96-1.44)
Sexual Abuse (No)				
Yes		1.01 (0.79-1.31)		1.02 (0.79-1.31)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 13: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and STI/STD diagnosis across disability groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	1.21 (0.91-1.61)	1.21 (0.88-1.67)	1.32 (0.94-1.87)	1.38 (0.94-2.03)
Moderate	0.71 (0.42-1.19)	0.71 (0.40-1.26)	0.65 (0.33-1.28)	0.71 (0.33-1.53)
Severe	0.52 (0.28-0.96)*	0.49 (0.27-0.89)*	0.54 (0.30-0.96)*	0.52 (0.28-0.96)*
Pre-18 Sexual Partners	1.05 (1.04-1.07)*	1.01 (1.00-1.02)*	1.05 (1.04-1.07)*	1.01 (1.00-1.03)*
Physical Disability * Pre-18 Sexual Partners (None)				
Mild			0.98 (0.93-1.02)	0.97 (0.92-1.01)
Moderate			1.01 (0.96-1.07)	1.00 (0.93-1.07)
Severe			0.99 (0.91-1.08)	0.99 (0.92-1.06)
Years Sexually Active		1.14 (1.11-1.18)*		1.14 (1.11-1.18)*
Post-18 Sexual Partners		1.03 (1.02-1.04)*		1.03 (1.02-1.04)*
Biological Sex (Male)				
Female		3.93 (3.37-4.57)*		3.93 (3.38-4.58)*
Race/Ethnicity (NH White)				
Hispanic		1.51 (1.22-1.86)*		1.51 (1.22-1.86)*
NH Black		3.14 (2.65-3.71)*		3.13 (2.65-3.71)*
Parent Education (SES; College Grad)				
<HS		0.91 (0.69-1.19)		0.91 (0.69-1.19)
HS/GED		1.02 (0.86-1.22)		1.02 (0.86-1.22)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.14 (0.95-1.35)		1.14 (0.96-1.36)
Cognitive Ability Score (100-114)				
<85		0.96 (0.76-1.21)		0.96 (0.76-1.21)
85-99		0.91 (0.78-1.07)		0.91 (0.78-1.07)
>114		1.07 (0.86-1.35)		1.07 (0.86-1.34)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Age at Wave IV		0.88 (0.83-0.93)*		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.40 (1.12-1.77)*		1.40 (1.12-1.77)*
Forced Sex (No)				
Yes		1.24 (1.00-1.53)*		1.24 (1.00-1.54)*
Sexual Abuse (No)				
Yes		1.07 (0.82-1.39)		1.06 (0.82-1.39)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 14: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and STI/STD diagnosis across disability/biological sex groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	3.26 (2.88-3.69)*	2.87 (2.51-3.29)*	4.78 (2.64-8.68)*	3.86 (2.10-7.12)*
Mild/Male	0.80 (0.38-1.67)	0.90 (0.42-1.94)	21.84 (2.36-202.03)*	17.32 (1.14-263.50)
Mild/Female	4.34 (3.13-6.01)*	3.79 (2.69-5.33)*	33.44 (6.65-168.26)*	22.98 (3.96-133.23)*
Moderate/Male	0.71 (0.28-1.81)	0.63 (0.24-1.66)	0.04 (0.00-5.34)	0.04 (0.00-4.75)
Moderate/Female	2.53 (1.35-4.75)*	1.88 (0.95-3.74)	8.43 (0.36-198.14)	12.64 (0.50-317.37)
Severe/Male	0.22 (0.06-0.72)	0.18 (0.05-0.65)*	7.47 (0.00-306016)	4.18 (0.00-1470832)
Severe/Female	2.01 (1.04-3.91)	1.98 (1.02-3.84)	1.33 (0.04-42.62)	1.49 (0.03-65.59)
Years Sexually Active	1.14 (1.12-1.16)*	1.18 (1.15-1.21)*	1.17 (1.13-1.21)*	1.20 (1.16-1.25)*
Physical Disability/Biological Sex * Years Sexually Active (None/Male)				
None/Female			0.97 (0.93-1.01)	0.98 (0.94-1.02)
Mild/Male			0.79 (0.68-0.92)*	0.81 (0.67-0.97)
Mild/Female			0.86 (0.76-0.97)	0.87 (0.77-1.00)
Moderate/Male			1.21 (0.89-1.63)	1.20 (0.90-1.61)
Moderate/Female			0.92 (0.73-1.15)	0.87 (0.69-1.09)
Severe/Male			0.77 (0.33-1.76)	0.79 (0.29-2.14)
Severe/Female			1.03 (0.81-1.31)	1.02 (0.79-1.32)
Race/Ethnicity (NH White)				
Hispanic		1.50 (1.21-1.87)*		1.49 (1.19-1.86)*
NH Black		3.21 (2.74-3.75)*		3.17 (2.71-3.72)*
Parent Education (SES; College Grad)				
<HS		0.79 (0.61-1.00)		0.79 (0.62-1.01)
HS/GED		0.93 (0.79-1.08)		0.93 (0.79-1.09)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.37 (1.16-1.62)*		1.38 (1.17-1.63)*
Cognitive Ability Score (100-114)				
<85		0.92 (0.73-1.15)		0.92 (0.74-1.16)
85-99		0.91 (0.78-1.06)		0.91 (0.78-1.06)
>114		1.08 (0.87-1.33)		1.08 (0.87-1.34)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Age at Wave IV		0.86 (0.81-0.90)*		0.86 (0.81-0.90)*
Coerced Sex (No)				
Yes		1.55 (1.26-1.89)*		1.55 (1.27-1.90)*
Forced Sex (No)				
Yes		1.28 (1.04-1.57)*		1.28 (1.04-1.57)*
Sexual Abuse (No)				
Yes		1.07 (0.83-1.38)		1.07 (0.83-1.38)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 15: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and STI/STD diagnosis across disability/biological sex groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	4.26 (3.72-4.89)*	3.90 (3.35-4.53)*	2.90 (2.44-3.45)*	2.95 (2.46-3.53)*
Mild/Male	0.79 (0.37-1.71)	0.89 (0.41-1.94)	0.93 (0.40-2.21)	0.86 (0.32-2.35)
Mild/Female	5.66 (4.13-7.75)*	5.21 (3.69-7.37)*	5.12 (3.22-8.13)*	5.06 (3.10-8.26)*
Moderate/Male	0.77 (0.28-2.07)	0.68 (0.26-1.73)	0.61 (0.19-2.02)	0.44 (0.13-1.48)
Moderate/Female	2.74 (1.47-5.12)*	2.41 (1.17-4.96)	2.41 (1.05-5.54)	2.68 (1.05-6.88)
Severe/Male	0.23 (0.07-0.76)*	0.20 (0.06-0.71)	0.64 (0.10-3.99)	0.53 (0.07-3.75)
Severe/Female	3.01 (1.53-5.95)*	2.90 (1.48-5.69)*	2.19 (0.85-5.60)	2.44 (0.94-6.34)
Lifetime Sexual Partners	1.03 (1.03-1.04)*	1.03 (1.02-1.03)*	1.03 (1.02-1.03)*	1.02 (1.02-1.03)*
Physical Disability/Biological Sex * Lifetime Sexual Partners (None/Male)				
None/Female			1.03 (1.02-1.04)*	1.02 (1.01-1.03)*
Mild/Male			0.99 (0.97-1.02)	1.00 (0.98-1.03)
Mild/Female			1.00 (0.97-1.04)	1.00 (0.97-1.03)
Moderate/Male			1.01 (0.98-1.04)	1.02 (0.99-1.04)
Moderate/Female			1.01 (0.98-1.03)	0.99 (0.97-1.02)
Severe/Male			0.92 (0.83-1.03)	0.93(0.84-1.03)
Severe/Female			1.03 (0.94-1.13)	1.02 (0.92-1.12)
Years Sexually Active		1.13 (1.09-1.16)*		1.12 (1.09-1.15)*
Race/Ethnicity (NH White)				
Hispanic		1.50 (1.19-1.88)*		1.53 (1.22-1.93)*
NH Black		3.10 (2.64-3.64)*		3.14 (2.68-3.68)*
Parent Education (SES; College Grad)				
<HS		0.87 (0.68-1.13)		0.87 (0.68-1.13)
HS/GED		0.99 (0.84-1.17)		0.99 (0.84-1.17)
Some College		1.00 (0.85-1.17)		0.99 (0.85-1.17)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.18 (1.00-1.39)		1.09 (0.92-1.30)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.97 (0.77-1.23)		0.99 (0.78-1.25)
85-99		0.92 (0.79-1.07)		0.92 (0.79-1.08)
>114		1.08 (0.87-1.33)		1.07 (0.86-1.33)
Age at Wave IV		0.89 (0.84-0.94)*		0.89 (0.84-0.94)*
Coerced Sex (No)				
Yes		1.43 (1.16-1.77)*		1.39 (1.12-1.73)*
Forced Sex (No)				
Yes		1.17 (0.95-1.44)		1.12 (0.91-1.39)
Sexual Abuse (No)				
Yes		1.02 (0.79-1.31)		1.00 (0.77-1.30)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 16: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and STI/STD diagnosis across disability/biological sex groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	3.23 (2.86-3.66)*	3.87 (3.32-4.52)*	2.80 (2.39-3.28)*	3.50 (2.95-4.15)*
Mild/Male	0.93 (0.44-2.00)	1.03 (0.45-2.34)	1.21 (0.51-2.86)	1.45 (0.55-3.82)
Mild/Female	4.20 (3.00-5.87)*	5.02 (3.45-7.30)*	4.08 (2.74-6.06)*	5.11 (3.33-7.83)*
Moderate/Male	0.64 (0.25-1.64)	0.70 (0.28-1.75)	0.55 (0.16-1.88)	0.53 (0.15-1.88)
Moderate/Female	2.52 (1.36-4.64)*	2.79 (1.27-6.14)	2.25 (1.02-4.97)	3.23 (1.28-8.19)
Severe/Male	0.24 (0.07-0.84)	0.20 (0.05-0.75)	0.24 (0.06-1.07)	0.21 (0.03-1.31)
Severe/Female	1.85 (0.90-3.82)	2.46 (1.23-4.93)	1.78 (0.87-3.63)	2.43 (1.20-4.92)
Pre-18 Sexual Partners	1.06 (1.05-1.08)*	1.01 (1.00-1.02)*	1.05 (1.03-1.06)*	1.00 (0.99-1.02)
Physical Disability/Biological Sex * Pre-18 Sexual Partners (None/Male)				
None/Female			1.04 (1.02-1.07)*	1.03 (1.01-1.06)
Mild/Male			0.93 (0.80-1.08)	0.91 (0.75-1.11)
Mild/Female			1.00 (0.95-1.06)	1.00 (0.95-1.05)
Moderate/Male			1.02 (0.96-1.09)	1.04 (0.97-1.11)
Moderate/Female			1.02 (0.95-1.10)	0.97 (0.90-1.05)
Severe/Male			0.99 (0.85-1.16)	0.98 (0.79-1.22)
Severe/Female			1.01 (0.87-1.17)	1.00 (0.92-1.10)
Years Sexually Active		1.14 (1.11-1.18)*		1.14 (1.11-1.17)*
Post-18 Sexual Partners		1.03 (1.02-1.04)*		1.03 (1.02-1.04)*
Race/Ethnicity (NH White)				
Hispanic		1.51 (1.22-1.87)*		1.51 (1.22-1.87)*
NH Black		3.14 (2.65-3.72)*		3.17 (2.68-3.75)*
Parent Education (SES; College Grad)				
<HS		0.91 (0.69-1.20)		0.91 (0.69-1.19)
HS/GED		1.02 (0.86-1.22)		1.02 (0.86-1.21)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.13 (0.95-1.35)		1.11 (0.93-1.33)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.96 (0.76-1.21)		0.97 (0.77-1.23)
85-99		0.91 (0.78-1.07)		0.92 (0.79-1.08)
>114		1.07 (0.86-1.35)		1.08 (0.86-1.35)
Age at Wave IV		0.88 (0.83-0.93)*		0.88 (0.83-0.94)*
Coerced Sex (No)				
Yes		1.41 (1.12-1.77)*		1.38 (1.09-1.74)*
Forced Sex (No)				
Yes		1.24 (1.00-1.53)		1.21 (0.98-1.51)
Sexual Abuse (No)				
Yes		1.07 (0.82-1.40)		1.06 (0.81-1.39)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 17: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and STI/STD diagnosis across disability/race groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	1.28 (1.02-1.62)	1.51 (1.21-1.89)*	1.28 (0.49-3.30)	1.29 (0.47-3.59)
None/NH Black	2.69 (2.33-3.11)*	3.23 (2.75-3.79)*	2.75 (1.64-4.62)*	2.35 (1.37-4.03)*
Mild/Hispanic	1.15 (0.47-2.82)	1.47 (0.58-3.75)	0.26 (0.01-10.05)	0.13 (0.00-13.09)
Mild/NH Black	2.56 (1.29-5.10)	2.84 (1.63-4.95)*	9.80 (0.69-139.73)	7.52 (0.89-63.56)
Mild/NH White	1.33 (0.93-1.91)	1.26 (0.87-1.84)	15.74 (4.48-55.33)*	19.03 (3.91-92.70)*
Moderate/Hispanic	0.38 (0.05-3.10)	0.80 (0.11-5.93)	2.84 (0.20-40.95)	2.03 (0.11-38.40)
Moderate/NH Black	1.91 (0.70-5.24)	2.80 (1.13-6.92)	0.00 (0.00-9.72)	0.01 (0.00-17.62)
Moderate/NH White	0.75 (0.37-1.50)	0.57 (0.26-1.22)	5.79 (0.32-103.85)	8.33 (0.29-238.00)
Severe/Hispanic	1.04 (0.13-8.31)	0.94 (0.14-6.30)	2.91 (0.00-1946.90)	2.26 (0.00-7553.75)
Severe/NH Black	0.82 (0.17-3.92)	1.06 (0.27-4.18)	0.05 (0.00-4.23)	0.32 (0.00-33.04)
Severe/NH White	0.65 (0.35-1.20)	0.57 (0.30-1.08)	0.35 (0.01-13.50)	0.40 (0.01-16.73)
Years Sexually Active	1.11 (1.09-1.13)*	1.18 (1.15-1.21)*	1.11 (1.09-1.14)*	1.18 (1.14-1.21)*
Physical Disability/Race * Years Sexually Active (None/NH White)				
None/Hispanic			1.00 (0.94-1.07)	1.01 (0.94-1.09)
None/NH Black			1.00 (0.96-1.04)	1.02 (0.98-1.07)
Mild/Hispanic			1.11 (0.87-1.41)	1.19 (0.86-1.64)
Mild/NH Black			0.91 (0.75-1.10)	0.93 (0.80-1.09)
Mild/NH White			0.83 (0.76-0.92)*	0.82 (0.73-0.92)*
Moderate/Hispanic			0.86 (0.75-0.99)	0.93 (0.79-1.10)
Moderate/NH Black			1.56 (0.92-2.65)	1.42 (0.91-2.22)
Moderate/NH White			0.85 (0.68-1.06)	0.81 (0.63-1.05)
Severe/Hispanic			0.92 (0.59-1.45)	0.93 (0.54-1.62)
Severe/NH Black			1.22 (0.86-1.73)	1.09 (0.77-1.54)
Severe/NH White			1.04 (0.81-1.35)	1.03 (0.79-1.32)
Biological Sex (Male)				
Female		2.93 (2.58-3.33)*		2.95 (2.59-3.36)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Parent Education (SES; College Grad)				
<HS		0.78 (0.61-1.00)		0.79 (0.61-1.01)
HS/GED		0.93 (0.79-1.08)		0.93 (0.80-1.10)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.38 (1.16-1.63)*		1.38 (1.17-1.63)*
Cognitive Ability Score (100-114)				
<85		0.92 (0.73-1.15)		0.92 (0.73-1.16)
85-99		0.91 (0.78-1.06)		0.91 (0.78-1.06)
>114		1.08 (0.87-1.34)		1.08 (0.87-1.33)
Age at Wave IV				
		0.86 (0.81-0.90)*		0.86 (0.81-0.90)*
Coerced Sex (No)				
Yes		1.55 (1.26-1.89)*		1.54 (1.26-1.89)*
Forced Sex (No)				
Yes		1.29 (1.04-1.58)*		1.28 (1.04-1.58)*
Sexual Abuse (No)				
Yes		1.06 (0.82-1.37)		1.06 (0.82-1.37)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 188: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and STI/STD diagnosis across disability/race groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	1.33 (1.05-1.68)	1.50 (1.19-1.89)*	1.43 (1.08-1.89)	1.64 (1.24-2.18)*
None/NH Black	2.82 (2.45-3.25)*	3.11 (2.64-3.67)*	3.47 (2.96-4.06)*	3.63 (3.02-4.36)*
Mild/Hispanic	1.32 (0.53-3.25)	1.66 (0.64-4.30)	1.10 (0.37-3.26)	1.41 (0.50-3.92)
Mild/NH Black	2.72 (1.43-5.19)*	2.94 (1.66-5.20)*	3.30 (1.30-8.36)	3.65 (1.67-7.99)*
Mild/NH White	1.34 (0.94-1.91)	1.23 (0.84-1.80)	1.65 (1.09-2.51)	1.48 (0.92-2.36)
Moderate/Hispanic	0.43 (0.05-3.43)	0.91 (0.12-6.77)	0.84 (0.11-6.37)	1.56 (0.23-10.83)
Moderate/NH Black	2.09 (0.78-5.59)	2.92 (1.14-7.48)	0.48 (0.08-2.83)	0.83 (0.18-3.88)
Moderate/NH White	0.68 (0.34-1.36)	0.54 (0.25-1.16)	0.76 (0.30-1.96)	0.63 (0.21-1.90)
Severe/Hispanic	1.06 (0.13-8.74)	0.89 (0.11-7.28)	3.53 (0.20-61.36)	3.71 (0.26-52.97)
Severe/NH Black	0.82 (0.16-4.33)	1.13 (0.30-4.31)	1.69 (0.26-11.00)	1.84 (0.38-8.81)
Severe/NH White	0.73 (0.39-1.39)	0.64 (0.34-1.21)	0.86 (0.41-1.79)	0.68 (0.32-1.44)
Lifetime Sexual Partners	1.02 (1.02-1.03)*	1.03 (1.02-1.03)*	1.03 (1.02-1.03)*	1.03 (1.02-1.03)*
Physical Disability/Race * Lifetime Sexual Partners (None/NH White)				
None/Hispanic			1.00 (0.98-1.01)	0.99 (0.98-1.01)
None/NH Black			0.99 (0.98-0.99)*	0.99 (0.98-1.00)
Mild/Hispanic			1.02 (0.95-1.08)	1.02 (0.96-1.08)
Mild/NH Black			0.99 (0.95-1.03)	0.98 (0.95-1.02)
Mild/NH White			0.99 (0.97-1.00)	0.99 (0.97-1.01)
Moderate/Hispanic			0.94 (0.87-1.02)	0.95 (0.88- 1.04)
Moderate/NH Black			1.12 (0.99-1.27)	1.10 (0.98-1.24)
Moderate/NH White			0.99 (0.97-1.02)	0.99 (0.96-1.03)
Severe/Hispanic			0.91 (0.80-1.03)	0.90 (0.81-1.01)
Severe/NH Black			0.95 (0.91-1.00)	0.96 (0.92-1.01)
Severe/NH White			0.99 (0.95-1.03)	1.00 (0.96-1.04)
Years Sexually Active		1.13 (1.09-1.16)*		1.13 (1.09-1.16)*
Biological Sex (Male)				
Female		3.98 (3.43-4.61)*		3.95 (3.41-4.58)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Parent Education (SES; College Grad)				
<HS		0.87 (0.67-1.13)		0.86 (0.67-1.12)
HS/GED		0.99 (0.84-1.17)		0.98 (0.83-1.17)
Some College		1.00 (0.85-1.17)		0.99 (0.85-1.17)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.18 (1.00-1.39)*		1.18 (1.00-1.39)
Cognitive Ability Score (100-114)				
<85		0.97 (0.77-1.23)		0.96 (0.76-1.22)
85-99		0.91 (0.78-1.06)		0.92 (0.79-1.07)
>114		1.08 (0.87-1.33)		1.07 (0.87-1.33)
Age at Wave IV				
		0.88 (0.84-0.93)*		0.88 (0.84-0.93)*
Coerced Sex (No)				
Yes		1.43 (1.16-1.77)*		1.43 (1.16-1.77)*
Forced Sex (No)				
Yes		1.18 (0.96-1.45)		1.18 (0.96-1.45)
Sexual Abuse (No)				
Yes		1.01 (0.79-1.30)		1.01 (0.78-1.30)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * $p < 0.05$ with Holm-Bonferroni correction for multiple comparisons

Table 19: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and STI/STD diagnosis across disability/race groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	1.34 (1.06-1.69)	1.51 (1.22-1.88)*	1.40 (1.10-1.79)	1.61 (1.28-2.02)*
None/NH Black	3.00 (2.61-3.45)*	3.15 (2.65-3.73)*	3.10 (2.66-3.61)*	3.20 (2.70-3.79)*
Mild/Hispanic	1.39 (0.59-3.28)	1.74 (0.67-4.54)	1.03 (0.28-3.84)	1.45 (0.36-5.85)
Mild/NH Black	3.75 (2.02-6.94)*	3.39 (1.91-6.00)*	4.17 (1.95-8.91)*	3.87 (1.97-7.59)*
Mild/NH White	1.38 (0.99-1.92)	1.24 (0.85-1.82)	1.53 (1.02-2.29)	1.47 (0.93-2.33)
Moderate/Hispanic	0.40 (0.05-3.28)	0.92 (0.12-6.85)	1.38 (0.21-9.14)	3.14 (0.59-16.73)
Moderate/NH Black	1.87 (0.64-5.52)	2.78 (1.09-7.08)	1.05 (0.25-4.34)	2.18 (0.66-7.19)
Moderate/NH White	0.75 (0.37-1.51)	0.67 (0.31-1.45)	0.78 (0.33-1.84)	0.67 (0.25-1.80)
Severe/Hispanic	0.93 (0.09-9.97)	0.79 (0.10-6.29)	1.30(0.14-12.01)	1.11 (0.13-9.26)
Severe/NH Black	0.82 (0.16-4.28)	1.15 (0.30-4.47)	0.70 (0.14-3.63)	0.78 (0.18-3.43)
Severe/NH White	0.60 (0.32-1.15)	0.54 (0.28-1.08)	0.65 (0.31-1.36)	0.61 (0.27-1.38)
Pre-18 Sexual Partners	1.05 (1.04-1.06)*	1.01 (1.00-1.02)*	1.05 (1.04-1.07)*	1.02 (1.00-1.03)*
Physical Disability/Race *Pre-18 Sexual Partners (None/NH White)				
None/Hispanic			0.99 (0.95-1.03)	0.98 (0.95-1.02)
None/NH Black			0.99 (0.96-1.02)	1.00 (0.97-1.02)
Mild/Hispanic			1.09 (0.87-1.37)	1.05 (0.84-1.33)
Mild/NH Black			0.97 (0.86-1.09)	0.96 (0.86-1.07)
Mild/NH White			0.97 (0.92-1.03)	0.96 (0.90-1.01)
Moderate/Hispanic			1.00	1.00
Moderate/NH Black			1.12 (0.97-1.30)	1.06 (0.85-1.33)
Moderate/NH White			0.99 (0.93-1.05)	1.00 (0.92-1.08)
Severe/Hispanic			0.96 (0.89-1.04)	0.97 (0.90-1.04)
Severe/NH Black			1.03 (0.85-1.25)	1.08 (0.91-1.29)
Severe/NH White			0.96 (0.79-1.18)	0.95 (0.75-1.19)
Years Sexually Active		1.14 (1.11-1.18)*		1.14 (1.11-1.18)*
Post-18 Sexual Partners		1.03 (1.02-1.04)*		1.03 (1.02-1.04)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Biological Sex (Male)				
Female		3.93 (3.37-4.57)*		3.93 (3.38-4.57)*
Parent Education (SES; College Grad)				
<HS		0.91 (0.69-1.19)		0.90 (0.69-1.19)
HS/GED		1.02 (0.86-1.22)		1.02 (0.86-1.21)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)
Sexual Orientation (Heterosexual)				
Sexual Minority		1.14 (0.95-1.35)		1.14 (0.96-1.36)
Cognitive Ability Score (100-114)				
<85		0.96 (0.76-1.21)		0.96 (0.76-1.21)
85-99		0.91 (0.78-1.07)		0.91 (0.78-1.07)
>114		1.07 (0.86-1.35)		1.08 (0.86-1.35)
Age at Wave IV		0.88 (0.83-0.93)*		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.40 (1.12-1.77)*		1.40 (1.12-1.77)*
Forced Sex (No)				
Yes		1.24 (1.00-1.53)*		1.24 (1.00-1.53)
Sexual Abuse (No)				
Yes		1.07 (0.82-1.39)		1.06 (0.81-1.38)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 20: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and STI/STD diagnosis across disability/sexual orientation groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.96 (1.68-2.29)*	1.36 (1.15-1.61)*	3.08 (1.35-7.03)*	2.68 (1.07-6.68)
Mild/Heterosexual	1.02 (0.70-1.49)	1.07 (0.72-1.60)	11.13 (3.50-35.38)*	11.02 (2.24-54.33)*
Mild/Sexual Minority	3.81 (1.83-7.96)*	2.29 (1.11-4.74)	25.51 (1.24-525.41)	16.97 (0.66-437.53)
Moderate/Heterosexual	0.76 (0.41-1.40)	0.77 (0.41-1.43)	1.91 (0.06-63.72)	2.24 (0.07-77.33)
Moderate/Sexual Minority	1.13 (0.39-3.32)	0.52 (0.20-1.38)	0.07 (0.00-5.90)	0.14 (0.00-10.51)
Severe/Heterosexual	0.49 (0.24-0.96)	0.46 (0.24-0.86)	0.92 (0.05-18.58)	1.42 (0.04-45.24)
Severe/Sexual Minority	1.39 (0.47-4.09)	0.98 (0.29-3.30)	0.04 (0.00-46.04)	0.06 (0.00-193.16)
Years Sexually Active	1.12 (1.10-1.14)*	1.18 (1.15-1.21)*	1.13 (1.11-1.15)*	1.20 (1.16-1.23)*
Physical Disability/Sexual Orientation * Years Sexually Active (None/Heterosexual)				
None/Sexual Minority			0.97(0.91-1.03)	0.95(0.89-1.02)
Mild/Heterosexual			0.84 (0.77-0.91)*	0.84 (0.75-0.94)*
Mild/Sexual Minority			0.87 (0.70-1.08)	0.87 (0.69-1.09)
Moderate/Heterosexual			0.93 (0.73-1.20)	0.92 (0.72-1.19)
Moderate/Sexual Minority			1.19 (0.88-1.60)	1.08 (0.82-1.43)
Severe/Heterosexual			0.96 (0.77-1.18)	0.92 (0.73-1.17)
Severe/Sexual Minority			1.32 (0.79-2.20)	1.24 (0.69-2.24)
Biological Sex (Male)				
Female		2.93 (2.58-3.33)*		2.95 (2.59-3.36)*
Race/Ethnicity (NH White)				
Hispanic		1.50 (1.20-1.87)*		1.50 (1.21-1.87)*
NH Black		3.20 (2.73-3.74)*		3.17 (2.70-3.72)*
Parent Education (SES; College Grad)				
<HS		0.78 (0.61-1.00)		0.79 (0.62-1.01)
HS/GED		0.93 (0.79-1.08)		0.93 (0.80-1.09)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.92 (0.73-1.15)		0.91 (0.73-1.15)
85-99		0.91 (0.78-1.06)		0.91 (0.78-1.06)
>114		1.08 (0.88-1.34)		1.08 (0.87-1.34)
Age at Wave IV				
		0.86 (0.81-0.90)*		0.86 (0.81-0.90)*
Coerced Sex (No)				
Yes		1.54 (1.26-1.89)*		1.54 (1.26-1.88)*
Forced Sex (No)				
Yes		1.29 (1.05-1.58)*		1.28 (1.04-1.57)*
Sexual Abuse (No)				
Yes		1.07 (0.83-1.38)		1.07 (0.83-1.37)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 21: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and STI/STD diagnosis across disability/sexual orientation groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.82 (1.56-2.11)*	1.17 (0.99-1.38)	1.50 (1.18-1.89)*	1.09 (0.84-1.41)
Mild/Heterosexual	1.04 (0.72-1.51)	1.09 (0.74-1.62)	1.21 (0.82-1.79)	1.19 (0.76-1.86)
Mild/Sexual Minority	3.49 (1.65-7.36)*	1.90 (0.84-4.33)	4.05 (1.68-9.79)*	2.53 (1.04-6.16)
Moderate/Heterosexual	0.75 (0.41-1.36)	0.78 (0.42-1.43)	0.67 (0.31-1.42)	0.70 (0.31-1.59)
Moderate/Sexual Minority	0.98 (0.37-2.60)	0.38 (0.13-1.08)	0.62 (0.14-2.73)	0.40 (0.10-1.56)
Severe/Heterosexual	0.54 (0.27-1.08)	0.50 (0.26-0.93)	0.72 (0.33-1.60)	0.63 (0.29-1.35)
Severe/Sexual Minority	1.30 (0.41-4.13)	0.96 (0.28-3.29)	1.41 (0.34-5.93)	1.35 (0.31-5.88)
Lifetime Sexual Partners	1.02 (1.02-1.03)*	1.03 (1.02-1.03)*	1.02 (1.02-1.02)*	1.03 (1.02-1.03)*
Physical Disability/Sexual Orientation * Lifetime Sexual Partners (None/Heterosexual)				
None/Sexual Minority			1.01 (1.00-1.02)	1.00 (0.99-1.02)
Mild/Heterosexual			0.99 (0.97-1.01)	0.99 (0.97-1.02)
Mild/Sexual Minority			0.99 (0.96-1.02)	0.99 (0.95-1.02)
Moderate/Heterosexual			1.01 (0.98-1.03)	1.01 (0.98-1.03)
Moderate/Sexual Minority			1.02 (0.99-1.05)	1.00 (0.97-1.03)
Severe/Heterosexual			0.97 (0.94-1.01)	0.98 (0.95-1.01)
Severe/Sexual Minority			0.99 (0.92-1.07)	0.97 (0.90-1.04)
Years Sexually Active		1.13 (1.10-1.16)*		1.13 (1.09-1.16)*
Biological Sex (Male)				
Female		3.98 (3.43-4.61)*		3.96 (3.42-4.59)*
Race/Ethnicity (NH White)				
Hispanic		1.50 (1.19-1.88)*		1.50 (1.19-1.88)*
NH Black		3.09 (2.63-3.63)*		3.09 (2.64-3.63)*
Parent Education (SES; College Grad)				
<HS		0.87 (0.67-1.12)		0.87 (0.67-1.12)
HS/GED		0.99 (0.83-1.17)		0.99 (0.83-1.17)
Some College		1.00 (0.85-1.17)		1.00 (0.85-1.17)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.97 (0.77-1.23)		0.97 (0.77-1.23)
85-99		0.92 (0.79-1.07)		0.92 (0.79-1.07)
>114		1.08 (0.87-1.34)		1.08 (0.87-1.34)
Age at Wave IV				
		0.88 (0.84-0.93)*		0.88 (0.84-0.93)*
Coerced Sex (No)				
Yes		1.43 (1.15-1.77)*		1.43 (1.15-1.77)*
Forced Sex (No)				
Yes		1.18 (0.96-1.44)		1.17 (0.95-1.44)
Sexual Abuse (No)				
Yes		1.02 (0.79-1.32)		1.02 (0.79-1.32)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 22: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and STI/STD diagnosis across disability/sexual orientation groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.84 (1.56-2.16)*	1.13 (0.95-1.35)	1.72 (1.40-2.13)*	1.12 (0.90-1.39)
Mild/Heterosexual	1.10 (0.78-1.55)	1.12 (0.76-1.64)	1.37 (0.93-2.01)	1.45 (0.93-2.28)
Mild/Sexual Minority	3.40 (1.61-7.18)*	1.92 (0.83-4.42)	3.58 (1.52-8.41)*	2.07 (0.86-4.99)
Moderate/Heterosexual	0.73 (0.38-1.37)	0.93 (0.50-1.71)	0.75 (0.35-1.58)	0.90 (0.42-1.91)
Moderate/Sexual Minority	1.01 (0.37-2.78)	0.35 (0.12-1.04)	0.56 (0.13-2.44)	0.35 (0.09-1.45)
Severe/Heterosexual	0.58 (0.30-1.13)	0.50 (0.27-0.95)	0.46 (0.22-0.95)	0.41 (0.19-0.93)
Severe/Sexual Minority	0.56 (0.12-2.58)	0.51 (0.11-2.45)	0.71 (0.16-3.07)	0.66 (0.14-3.08)
Pre-18 Sexual Partners	1.05 (1.04-1.06)*	1.01 (1.00-1.02)	1.05 (1.03-1.06)*	1.01 (1.00-1.03)
Physical Disability/Sexual Orientation * Pre-18 Sexual Partners (None/Heterosexual)				
None/Sexual Minority			1.02 (0.98-1.05)	1.00 (0.98-1.03)
Mild/Heterosexual			0.93 (0.85-1.02)	0.91 (0.80-1.04)
Mild/Sexual Minority			0.99 (0.93-1.06)	0.99 (0.92-1.06)
Moderate/Heterosexual			0.99 (0.94-1.06)	1.01 (0.94-1.07)
Moderate/Sexual Minority			1.07 (0.98-1.17)	1.00 (0.92-1.09)
Severe/Heterosexual			1.07 (0.89-1.28)	1.06 (0.91-1.23)
Severe/Sexual Minority			0.95 (0.90-1.01)	0.95 (0.90-1.00)
Years Sexually Active		1.14 (1.11-1.18)*		1.14 (1.11-1.18)*
Post-18 Sexual Partners		1.03 (1.02-1.04)*		1.03 (1.02-1.04)*
Biological Sex (Male)				
Female		3.94 (3.38-4.58)*		3.94 (3.38-4.58)*
Race/Ethnicity (NH White)				
Hispanic		1.51 (1.22-1.87)*		1.51 (1.22-1.87)*
NH Black		3.14 (2.65-3.71)*		3.13 (2.65-3.70)*
Parent Education (SES; College Grad)				
<HS		0.91 (0.69-1.19)		0.91 (0.69-1.19)
HS/GED		1.02 (0.86-1.22)		1.02 (0.86-1.22)
Some College		0.96 (0.82-1.13)		0.96 (0.82-1.13)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.96 (0.76-1.21)		0.96 (0.76-1.21)
85-99		0.91 (0.78-1.07)		0.91 (0.78-1.07)
>114		1.08 (0.86-1.35)		1.08 (0.86-1.35)
Age at Wave IV		0.88 (0.83-0.93)*		0.88 (0.83-0.93)*
Coerced Sex (No)				
Yes		1.40 (1.11-1.76)*		1.40 (1.12-1.77)*
Forced Sex (No)				
Yes		1.24 (1.01-1.54)		1.24 (1.00-1.53)
Sexual Abuse (No)				
Yes		1.08 (0.83-1.40)		1.08 (0.83-1.40)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

CHAPTER 6: ASSOCIATIONS BETWEEN SEXUAL PATTERNS AND LIFETIME UNINTENDED PREGNANCY AMONG POPULATIONS WITH PHYSICAL DISABILITIES

Research Questions

How are timing of first sex, lifetime sexual partner counts, and pre-18 sexual partner counts related to lifetime unintended pregnancy across different levels of disability severity?

How do these relationships further vary by biological sex, race/ethnicity, and sexual orientation?

Methods

Approach

After examining descriptive statistics, I used adjusted logistic regression models to test relationships between each sexual pattern (timing, lifetime partners, pre-18 partners) and lifetime unintended pregnancy among disability severity groups compared to those without disabilities. For each predictor, I completed two sets of models. The first set included covariate models in which disability and the predictor of interest were included as separate variables:

Model 1:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i)$$

Model 2 included the main effects and all other covariates:

Model 2:

$$\begin{aligned} \log\left(\frac{p_i}{1-p_i}\right) = & \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(BioSex_i) + \beta_4(Race_i) \\ & + \beta_5(Age_i) + \beta_6(SES_i) + \beta_7(SexualOrientation_i) + \beta_8(CognitiveAbility_i) \\ & + \beta_9(CoercedSex_i) + \beta_{10}(ForcedSex_i) + \beta_{11}(SexualAbuse_i) \end{aligned}$$

The second set of models tested the interaction between disability and the sexual pattern of interest. Model 3 included only the interaction between disability and the predictor of interest, as well as the corresponding main effects:

Model 3:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(Disability_i * Predictor_i)$$

Model 4 included the interaction, main effects, and all other covariates:

Model 4:

$$\begin{aligned} \log\left(\frac{p_i}{1-p_i}\right) = & \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(Disability_i * Predictor_i) \\ & + \beta_4(BioSex_i) + \beta_5(Race_i) + \beta_6(Age_i) + \beta_7(SES_i) \\ & + \beta_8(SexualOrientation_i) + \beta_9(CognitiveAbility_i) + \beta_{10}(CoercedSex_i) \\ & + \beta_{11}(ForcedSex_i) + \beta_{12}(SexualAbuse_i) \end{aligned}$$

Lifetime partnering models included years sexually active as an additional covariate, and pre-18 partnering models included years sexually active and post-18 sexual partners as additional covariates. In moderation analyses, I repeated analyses using subgroups that interacted disability with the moderator of interest (biological sex, race/ethnicity, sexual orientation). For these analyses, I used the Holm-Bonferroni method¹⁰¹ to report only statistically significant differences at the 0.05 level after correction for multiple tests. All interaction models for the main disability models and significant interactions from moderation models are also presented as figures using predicted probabilities in the Appendix.

Results

Sample Characteristics

Table 23 presents descriptive statistics for analyses using the timing and lifetime partnering variables as predictors, and Table 24 presents those for the pre-18 partnering predictor. The majority of the sample (94.5%) had no disability, 3.4% had a mild disability, 1.2% had a moderate disability, and 0.9% had a severe disability. The samples were approximately evenly split between males and females, and the average age of respondents was about 28.3 years. Over 70% of each sample was NH White, while approximately 16% was NH Black and 12% was Hispanic. Regarding parent education, over 60% had attained a college degree or more. Almost 88% identified as heterosexual, and approximately 13%, 8%, and 5% of respondents reported experiencing coerced sex, forced sex, and sexual abuse, respectively.

The average age at first sex was about 16.2 years, and respondents had been sexually active for almost 13.0 years. On average, respondents reported 13.1 lifetime sexual partners and 3.0 pre-18 sexual partners. Lastly, approximately 35% of the sample reported a lifetime unintended pregnancy.

Logistic Regression Models

In every timing model, each additional year of sexual activity was associated with 1.18-1.20 times the odds of a lifetime unintended pregnancy. All of the lifetime partnering models showed that each additional sexual partner was associated with 1.01 times the odds of a lifetime unintended pregnancy. Similarly, results of the pre-18 partnering models suggested that each additional sexual partner before age 18 was associated with 1.02-1.03 times the odds of a lifetime unintended pregnancy. The detailed results of the regression analyses are presented below by 1) disability/moderator and 2) predictor of interest.

Disability

Timing. Table 25 presents the results of the timing models, for which the group without disabilities is the referent. When holding years sexually active and all other covariates constant, there were no differences in the odds of an unintended pregnancy across disability groups. A global test of the interaction between disability and years sexually active was not statistically significant ($F(3, 120.3)=1.18, p=0.32$), suggesting no differences in the odds of an unintended pregnancy with increasing years of sexual activity. The results of this interaction model are also presented in Figure 8 of the Appendix.

Lifetime sexual partners. Results of the lifetime partnering models can be found in Table 26. As with timing, the covariate models suggested that there were no differences in the odds of an unintended pregnancy across disability groups. A global test of the interaction between disability and lifetime sexual partners also was not statistically significant ($F(3, 125.5)=0.57, p=0.64$), suggesting no differences in the odds of an unintended pregnancy with increasing numbers of sexual partners. The interaction model is also presented in Figure 9 of the Appendix.

Pre-18 sexual partners. Lastly, Table 27 presents the results of the pre-18 partnering models. I did not observe any differences between the disability groups with regards to a lifetime unintended pregnancy, and the global test of the interaction between disability and the number of pre-18 sexual partners was not statistically significant ($F(3, 126)=0.78, p=0.51$). These results suggest no differences in the odds of an unintended pregnancy with increasing numbers of sexual partners before age 18 among disability groups. A visual representation of these results can be found in Figure 10 of the Appendix.

Disability/Biological Sex

Timing. Table 28 includes the results of the timing models, for which males without disabilities was the referent. Results of the covariate model showed that females without disabilities had 1.63 and females with mild disabilities had 1.94 times the odds of an unintended pregnancy compared to males without disabilities. Comparisons of the confidence intervals indicated further differences within disability groups. Among those with mild disabilities, females had greater odds of an unintended pregnancy compared to the odds for males. No such differences emerged among those with moderate or severe disabilities, or within biological sex groups, and the global test of the interaction was not significant ($F(7, 124.8)=1.16, p=0.33$), indicating no interaction between years sexually active and the disability/biological sex groups.

Lifetime sexual partners. Table 29 presents the results of the lifetime partnering models. The covariate model showed that females without disabilities had 1.76 and females with mild disabilities had 2.09 times the odds of an unintended pregnancy compared to males without disabilities. Comparing the confidence intervals, I also found that females with mild disabilities had greater odds of an unintended pregnancy compared to the odds for males with mild disabilities. No such differences emerged among those with moderate or severe disabilities, or within biological sex groups, and the global test of the interaction was not significant ($F(7, 125.5)=1.33, p=0.24$), indicating no interaction between number of lifetime sexual partners and the disability/biological sex groups.

Pre-18 sexual partners. The results of the pre-18 partnering models are shown in Table 30. As with the timing and lifetime partnering models, results of the full covariate model showed that females without disabilities had 1.72 and females with mild disabilities had 1.62 times the odds of an unintended pregnancy compared to males without disabilities. There were no other

statistically significant differences between groups, and the global test of the interaction was not significant ($F(7, 122)=0.59, p=0.77$), indicating no interaction between numbers of pre-18 sexual partners and the disability/biological sex groups.

Disability/Race

Timing. Table 31 presents the results of the timing models, in which NH Whites without disabilities are the referent. In the adjusted covariate model, I found that NH Blacks without disabilities ($aOR=3.23$) and with severe disabilities ($aOR=7.11$) had significantly greater odds of a lifetime unintended pregnancy compared to the odds of the referent. Comparisons of the confidence intervals indicated further differences by disability and by race. More specifically, NH Blacks had greater odds of an unintended pregnancy compared to the odds of Hispanics among those without disabilities, and NH Blacks had greater odds of an unintended pregnancy compared to the odds of NH Whites among those with severe disabilities. In addition, among NH Blacks, those with severe disabilities showed greater odds of an unintended pregnancy compared to those without disabilities. A global test suggested the presence of an interaction ($F(11, 125.3)=2.78, p<0.01$) for NH Black respondents without disabilities and Hispanics with moderate disabilities compared to NH Whites without disabilities. NH Blacks without disabilities had 0.92 times the odds of an unintended pregnancy compared to the odds of NH Whites without disabilities with each additional year of sexual activity. The main effect for this group was also significant, such that NH Blacks without disabilities had an average of 5.69 times the odds of a lifetime unintended pregnancy across all years of sexual activity compared to the referent. Hispanics with moderate disabilities had 0.56 times the odds of an unintended pregnancy compared to the referent with each additional year of sexual activity. Although the main effect for this group was significant, the coefficient and confidence interval were extremely large due

to small cell sizes, making it uninterpretable. The results of this interaction model are also shown in Figure 11 of the Appendix. No other differences emerged between and within disability/race groups in covariate or interaction models.

Lifetime sexual partners. Lifetime partnering models for the disability/race groups can be found in Table 32. Similar to the results for timing, results of the covariate model showed that NH Blacks without disabilities (aOR=1.83) and with severe disabilities (aOR=7.15) had significantly greater odds of a lifetime unintended pregnancy compared to the odds of the referent. The confidence intervals also suggested further differences by race and by disability. Among those without disabilities, NH Blacks had greater odds of an unintended pregnancy compared to the odds of Hispanics, and among those with severe disabilities, NH Blacks had greater odds of an unintended pregnancy compared to the odds of NH Whites. Also, among NH Blacks, those with severe disabilities had greater odds of an unintended pregnancy compared to those without disabilities. The global test did not indicate the presence of an interaction ($F(11, 123.3)=0.89, p=0.55$), suggesting no differences in the odds of unintended pregnancy across disability/race subgroups with increasing numbers of lifetime sexual partners.

Pre-18 sexual partners. Table 33 includes the results of the pre-18 partnering models. As with timing and lifetime partnering, the covariate model showed that NH Blacks without disabilities (aOR=2.09) and with severe disabilities (aOR=9.14) had significantly greater odds of a lifetime unintended pregnancy compared to NH Whites without disabilities. Comparisons of the confidence intervals also suggested that NH Blacks had greater odds of an unintended pregnancy compared to the odds of Hispanics among those without disabilities, and NH Blacks had greater odds of an unintended pregnancy compared to the odds of NH Whites among those with severe disabilities. In addition, among NH Blacks, those with severe disabilities showed

greater odds of an unintended pregnancy compared to those without disabilities. The global test of the interaction was significant ($F(10, 119)=3.33, p<0.01$), and further investigation showed that NH Black respondents without disabilities had 0.96 times the odds of an unintended pregnancy with each additional pre-18 sexual partner compared to NH Whites without disabilities. The main effect for this group was also significant, such that NH Blacks without disabilities had an average of 2.44 times the odds of an unintended pregnancy across all numbers of pre-18 sexual partners compared to the referent. These interaction results are also presented using predicted probabilities in Figure 12 of the Appendix. No other differences emerged between and within disability/race groups in covariate or interaction models.

Disability/Sexual Orientation

Timing. Table 34 presents the results of the timing models in which heterosexuals without disabilities are the referent. When holding years sexually active and all other covariates constant, there were no differences in the odds of an unintended pregnancy across disability/sexual orientation groups. A global test of the interaction between the disability/sexual orientation subgroups and years sexually active was not statistically significant ($F(7, 125.1)=0.88, p=0.53$), suggesting no differences in the odds of an unintended pregnancy with increasing years of sexual activity across groups.

Lifetime sexual partners. Results of the lifetime partnering models for the disability/sexual orientation groups are shown in Table 35. As with timing, the covariate models showed no differences in the odds of an unintended pregnancy across disability/sexual orientation groups. Again, the global test of the interaction between disability/sexual orientation and numbers of lifetime sexual partners was not statistically significant ($F(7, 118.1)=1.11,$

$p=0.36$), suggesting no differences in the odds of an unintended pregnancy with increasing numbers of sexual partners across disability/sexual orientation groups.

Pre-18 sexual partners. Finally, Table 36 presents the results of the pre-18 partnering models. Results of the covariate model indicated no differences in the odds of an unintended pregnancy across disability/sexual orientation groups. However, the global test of the interaction between the disability/sexual orientation subgroups and pre-18 partners was statistically significant ($F(7, 122)=3.68, p<0.01$). The results of the interaction model showed that sexual minorities without disabilities had 0.95 and sexual minorities with severe disabilities had 1.13 times the odds of an unintended pregnancy with each additional pre-18 sexual partner compared to the odds of the referent. When comparing the confidence intervals, I also found that sexual minorities with severe disabilities had greater odds of an unintended pregnancy with each additional pre-18 sexual partner compared to the odds of their peers without disabilities. A visual representation of these interaction results is shown in Figure 13 of the Appendix.

Discussion

This chapter focused on the relationship between sexual patterns and the odds of a lifetime unintended pregnancy among the physical disability groups. Timing of first sex, lifetime sexual partnering, and pre-18 sexual partnering were all associated with increased odds of an unintended pregnancy. Regarding disability, I found that females with mild disabilities and NH Blacks with mild and severe disabilities had greater odds of a lifetime unintended pregnancy compared to their majority counterparts without disabilities. I also found that sexual minorities with severe disabilities had greater odds of an unintended pregnancy with each additional pre-18 partner compared to both heterosexuals and sexual minorities without disabilities. These results provide support for increased research and attention to the needs of these particular populations

with disabilities. Patterns of results are discussed in the sections below and organized by the moderator of interest.

Disability

Across all models, I found that each additional year of sexual activity, lifetime sexual partner, and pre-18 partner was associated with increased odds of a lifetime unintended pregnancy. These results are consistent with those from previous research, which has shown that earlier sexual debut, more sexual partners, and particularly more sexual partners during adolescence, are all associated with greater risk for unintended pregnancies.^{51,62–65} However, I did not find differences across the disability severity groups, which conflicts with past research indicating that people with disabilities are at greater risk for pregnancy. These discrepancies may be due to differences in the disabilities or time periods studied, or the way that pregnancy is defined. Much of this past research quantifies pregnancy risk using measures of contraceptive use rather than looking at the actual pregnancy outcomes. This chapter thus represents an important contribution to the literature by showing the odds of unintended pregnancy among these disability groups. Furthermore, the fact that I did not observe statistically significant differences between disability groups suggests that these individuals do not experience unintended pregnancy differentially compared to their non-disabled peers, and thus require the same pregnancy prevention education.¹¹⁹

Disability/Biological Sex

Results from the disability/biological sex models tell a different story. In the covariate models for each of the predictors of interest, females without and with mild disabilities had significantly greater odds of experiencing an unintended pregnancy compared to males without disabilities. Females with mild disabilities also had significantly greater odds of a lifetime

unintended pregnancy compared to males with mild disabilities in both the timing and lifetime partnering models. I did, of course, expect that females would be more likely to report an unintended pregnancy since they are more likely to be aware of their pregnancy status.^{121,122} Importantly, I did find that females with mild disabilities had greater odds of a lifetime unintended pregnancy, which suggests the need for increased and/or targeted pregnancy prevention for this group. The fact that I did not see the same results in the interaction models or among those with moderate and severe disabilities may reflect equivalent risk in these groups compared to the referent, but could also be related to statistical power due to small sample sizes. Overall, these results warrant further research on sexual behavior and unintended pregnancy among populations with disabilities.

Disability/Race

In covariate models for timing, I found that NH Blacks without disabilities and with severe disabilities had significantly greater odds of a lifetime unintended pregnancy compared to NH Whites without disabilities. The interaction model also showed that NH Blacks without disabilities had greater odds of an unintended pregnancy across all years of sexual activity. These results are consistent with past literature focused on the general population, which suggests that racial/ethnic minorities, particularly NH Blacks, are more likely to experience unintended pregnancies.^{56–59} Within disability and racial/ethnic group comparisons showed particular vulnerability among NH Blacks with severe disabilities, who had greater odds of a lifetime unintended pregnancy compared to NH Whites with severe disabilities and NH Blacks without disabilities. These results clearly indicate a need for better sexual health education and support to this group. While the interaction model also showed increased odds of a lifetime unintended pregnancy among Hispanics with moderate disabilities, the large estimate and confidence

intervals make it imprudent to interpret. This and the fact that I did not see further differences among the disability/race groups in the interaction model are likely indications of insufficient statistical power. Future research should make a concerted effort to include these marginalized groups in sexual health research to obtain more stable estimates that can have a stronger influence on sexual health and education practices and policies.

Results of the covariate models for the lifetime and pre-18 partnering variables matched those described above. Non-Hispanic Blacks without disabilities and with severe disabilities still showed increased odds of a lifetime unintended pregnancy compared to NH Whites without disabilities. Within group comparisons were also consistent, showing that NH Blacks with severe disabilities had greater odds of an unintended pregnancy compared to both their NH White and non-disabled peers. No significant results emerged from either of the interaction models, suggesting that each additional partner was not associated with differences in unintended pregnancies across disability/race groups. Overall, these results further support the need for improved sexual health education and pregnancy prevention for NH Blacks, particularly those with severe disabilities, who disproportionately experience unintended pregnancies compared to same-aged peers.

Disability/Sexual Orientation

Analyses of the disability/sexual orientation subgroups yielded few significant results. None of the covariate models showed variations in the odds of unintended pregnancy compared to heterosexuals without disabilities for all three predictors. This is not surprising given that pregnancy is only a risk in heterosexual partnerships, which the majority of sexual minorities would be unlikely to experience. Interestingly, the interaction model for pre-18 sexual partners was significant, and showed that sexual minorities without disabilities had lower odds and sexual

minorities with severe disabilities had greater odds of an unintended pregnancy with each additional pre-18 partner. This also meant that within the sexual minority group, the odds of an unintended pregnancy were greater for those with severe disabilities compared to those without disabilities with each additional partner during adolescence. This is consistent with research by Goldberg, Reese, and Halpern,⁶¹ which showed that sexual minority women, particularly bisexual women, had increased odds of teen pregnancy. Importantly, present results also showed that sexual minorities with severe disabilities may be even more vulnerable to unintended pregnancy, and thus need further support and education. Regardless, these findings indicate a critical need for more research at the intersection of disability and sexual orientation to understand the unique risks faced by this minority group.¹¹³ In particular, future studies should consider further variations by sexual orientation identities (e.g., bisexual, lesbian) and biological sex,^{61,123} as well as associations between only opposite sex partner counts and unintended pregnancies among disability/sexual minority groups.

Strengths and Limitations

This chapter is one of the first to study longitudinal associations between sexual behavior patterns and experiences of unintended pregnancy among individuals with physical disabilities at a population level. Most of the past literature focuses on pregnancy risk by examining contraceptive use outcomes, which does not shed light on actual unintended pregnancy experiences.^{62,65} For this reason, the results of my research fill an important gap in the literature and can inform future studies that seek to understand relationships between sexual patterns and unintended pregnancy among individuals with physical disabilities.¹¹³

Of course, this research comes with limitations, particularly those related to secondary data analysis. As with the STI/STD models, I could not establish temporality in the partnering

models because I could not identify how many sexual partners the respondent had before their first unintended pregnancy. Although I cannot say these results represent a causal relationship between the variables, they do, at the very least, show associations between sexual behaviors and unintended pregnancies in this understudied population. Future research should build on these analyses to better understand the experiences of those with disabilities and to inform pregnancy prevention policies and programs for this population.

Unfortunately, I was also limited by the measures available in Add Health, particularly with regards to contraceptive use. The majority of the contraceptive measures in Add Health are focused on a particular time period (e.g., past 12 months) or are asked in the context of a particular relationship, making it difficult to know when and how consistently contraception was used over the 15-year study period. Similar to the STI/STD models, consistent contraceptive use is an important mediator in the relationship between sexual behavior patterns and experiences of unintended pregnancy, and thus represents an important consideration for future research. Contraceptive use is also particularly salient for populations with disabilities, who have been subjected to historical restrictions on their sexuality and fertility for eugenic purposes.^{3,4} Understanding longitudinal relationships between sexual behavior, contraceptive use, fertility, and unintended pregnancy among populations with disabilities thus represents an important avenue for further research.

Conclusion

The results of this chapter fill an important gap in the literature by considering how timing of first sex and sexual partnering patterns are related to unintended pregnancy among populations with physical disabilities. In particular, females with mild disabilities, NH Blacks with mild and severe disabilities, and sexual minorities with severe disabilities may need greater

support to combat the disproportionate burden that they face with regards to unintended pregnancies. Future sexual health research, practice, and policies should aim to better understand and educate these particularly vulnerable populations in order to decrease such unintended pregnancy disparities.^{113,119,120}

Table 23: Descriptive statistics by physical disability severity for unintended pregnancy analyses using timing and lifetime partnering as main predictors

<i>n</i> =12,719	<u>None</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Total</u>
% (95% CI)	94.5 (93.9-95.1)	3.4 (2.9-3.9)	1.2 (0.9-1.4)	0.9 (0.7-1.1)	100.0
Biological Sex					
Male	49.8 (48.4-51.2)	49.4 (42.4-56.5)	51.7 (40.7-62.6)	46.7 (34.3-59.0)	49.8 (48.4-51.2)
Female	50.2 (48.8-51.6)	50.6 (43.5-57.6)	48.3 (37.4-59.3)	53.3 (41.0-65.7)	50.2 (48.8-51.6)
Race/Ethnicity					
Hispanic	12.7 (9.1-16.3)	9.7 (5.3-14.0)	9.5 (1.9-17.1)	8.1 (1.1-15.2)	12.5 (8.9-16.1)
NH Black	16.9 (12.5-21.4)	12.1 (7.4-16.8)	22.8 (11.5-34.0)	15.7 (6.0-25.4)	16.8 (12.4-21.2)
NH White	70.4 (64.7-76.0)	78.3 (71.9-84.6)	67.7 (55.6-79.9)	76.1 (64.2-88.0)	70.7 (65.1-76.3)
Parent Education (SES)					
<HS	12.2 (9.8-14.6)	11.5 (6.8-16.3)	19.2 (7.8-30.6)	12.7 (4.1-21.3)	12.3 (9.9-14.7)
HS/GED	27.8 (25.5-30.1)	24.1 (18.5-29.8)	15.3 (8.0-22.6)	32.1 (19.8-44.5)	27.6 (25.3-29.9)
Some College	30.2 (28.5-31.9)	29.7 (23.2-36.2)	33.0 (23.2-42.8)	33.4 (22.1-44.8)	30.3 (28.6-32.0)
College Grad	29.7 (26.2-33.3)	34.6 (26.9-42.4)	32.5 (21.8-43.2)	21.8 (13.4-30.1)	29.9 (26.4-33.4)
Sexual Orientation					
Heterosexual	87.6 (86.6-88.6)	87.3 (83.5-91.1)	83.5 (75.3-91.8)	87.2 (79.2-95.1)	87.6 (86.5-88.6)
Sexual Minority	12.4 (11.4-13.4)	12.7 (8.9-16.5)	16.5 (8.2-24.7)	12.8 (4.9-20.8)	12.4 (11.4-13.5)
Cognitive Ability Score					
<85	12.7 (10.3-15.0)	10.7 (6.1-15.2)	12.5 (1.8-23.1)	15.9 (6.9-24.8)	12.6 (10.3-15.0)
85-99	33.8 (31.8-35.8)	38.4 (31.7-45.2)	34.1 (24.0-44.1)	34.5 (23.2-45.7)	34.0 (32.0-36.0)
100-114	36.4 (34.2-38.6)	35.1 (28.8-41.5)	31.9 (22.0-41.9)	30.3 (19.4-41.2)	36.3 (34.1-38.4)
>114	17.1 (14.9-19.3)	15.8 (11.4-20.2)	21.5 (12.3-30.8)	19.4 (10.1-28.7)	17.1 (14.9-19.3)
Coerced Sex					
No	87.4 (86.6-88.3)	84.0 (79.3-88.8)	71.9 (61.4-82.5)	80.8 (71.2-90.3)	87.1 (86.2-87.9)
Yes	12.6 (11.7-13.4)	16.0 (11.2-20.7)	28.1 (17.5-38.6)	19.2 (9.7-28.8)	12.9 (12.1-13.8)
Forced Sex					
No	92.1 (91.4-92.8)	87.2 (82.9-91.5)	83.2 (75.7-90.7)	86.0 (77.7-94.3)	91.8 (91.1-92.4)
Yes	7.9 (7.2-8.6)	12.8 (8.5-17.1)	16.8 (9.3-24.3)	14.0 (5.7-22.3)	8.2 (7.6-8.9)
Sexual Abuse					
No	95.2 (94.6-95.8)	94.0 (91.0-96.9)	92.7 (87.5-97.9)	91.1 (83.5-98.6)	95.1 (94.5-95.7)
Yes	4.8 (4.2-5.4)	6.0 (3.1-9.0)	7.3 (2.1-12.5)	8.9 (1.4-16.5)	4.9 (4.3-5.5)

<i>n=12,719</i>	<u>None</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Total</u>
<i>% (95% CI)</i>	94.5 (93.9-95.1)	3.4 (2.9-3.9)	1.2 (0.9-1.4)	0.9 (0.7-1.1)	100.0
Ever Had an Unintended Pregnancy					
No	64.9 (63.1-66.7)	63.8 (57.7-70.0)	65.1 (54.3-75.9)	62.9 (50.4-75.4)	64.9 (63.0-66.7)
Yes	35.1 (33.3-36.9)	36.2 (30.0-42.3)	34.9 (24.1-45.7)	37.1 (24.6-49.6)	35.1 (33.3-37.0)
MEANS (95% CI)					
Age at Wave IV	28.3 (28.1-28.6)	28.3 (28.0-28.7)	28.8 (28.4-29.2)	28.7 (28.2-29.2)	28.3 (28.1-28.6)
Age at First Sex	16.2 (16.1-16.4)	15.9 (15.4-16.3)	16.6 (15.8-17.3)	16.2 (15.6-16.9)	16.2 (16.1-16.4)
Number of Lifetime Sexual Partners	13.1 (12.6-13.6)	14.5 (12.1-17.0)	15.2 (11.0-19.3)	10.8 (8.2-13.5)	13.1 (12.6-13.7)
Years Sexually Active	13.1 (12.8-13.3)	13.5 (13.0-14.0)	13.2 (12.3-14.1)	13.5 (12.8-14.2)	13.1 (12.9-13.3)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development

Table 24: Descriptive statistics by physical disability severity for unintended pregnancy analyses using pre-18 partnering as the main predictor

<i>n (%)</i>	<u>None</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Total</u>
	10,278 (94.5)	409 (3.4)	153 (1.2)	108 (0.9)	10,948 (100.0)
Biological Sex					
Male	4,635 (49.2)	186 (45.4)	78 (55.3)	46 (45.5)	4,945 (49.2)
Female	5,643 (50.8)	223 (54.6)	75 (44.7)	62 (54.5)	6,003 (50.9)
Race/Ethnicity					
Hispanic	1,784 (12.2)	60 (10.3)	22 (10.8)	13 (6.7)	1,879 (12.0)
NH Black	2,328 (15.6)	69 (9.3)	29 (22.0)	15 (17.2)	2,441 (15.5)
NH White	6,166 (72.2)	280 (80.4)	102 (67.2)	80 (76.2)	6,628 (72.5)
Parent Education (SES)					
<HS	1,303 (11.7)	45 (10.7)	19 (19.4)	10 (9.1)	1,377 (11.7)
HS/GED	2,629 (27.5)	100 (22.5)	36 (15.8)	33 (34.8)	2,798 (27.2)
Some College	3,032 (29.7)	132 (31.7)	50 (32.3)	38 (33.2)	3,252 (29.8)
College Grad	3,314 (31.1)	132 (35.1)	48 (32.5)	27 (23.0)	3,521 (31.2)
Sexual Orientation					
Heterosexual	8,993 (87.7)	352 (86.1)	127 (82.0)	94 (90.7)	9,566 (87.6)
Sexual Minority	1,285 (12.3)	57 (13.9)	26 (18.0)	14 (9.3)	1,382 (12.4)
Cognitive Ability Score					
<85	1,370 (11.4)	43 (9.1)	14 (10.5)	14 (15.6)	1,441 (11.3)
85-99	3,520 (33.3)	142 (36.8)	59 (37.4)	34 (33.9)	3,755 (33.4)
100-114	3,643 (37.1)	155 (37.4)	48 (29.2)	39 (29.0)	3,885 (37.0)
>114	1,745 (18.3)	69 (16.7)	32 (23.0)	21 (21.5)	1,867 (18.3)
Coerced Sex					
No	9,013 (87.6)	339 (82.8)	124 (75.9)	85 (81.2)	9,561 (87.3)
Yes	1,265 (12.4)	70 (17.2)	29 (24.1)	23 (18.8)	1,387 (12.7)
Forced Sex					
No	9,467 (92.3)	355 (86.4)	137 (86.8)	91 (86.9)	10,050 (92.0)
Yes	811 (7.7)	54 (13.6)	16 (13.2)	17 (13.1)	898 (8.1)
Sexual Abuse					
No	9,788 (95.5)	383 (93.8)	141 (92.5)	101 (89.9)	10,413 (95.4)
Yes	490 (4.5)	26 (6.3)	12 (7.5)	7 (10.1)	535 (4.7)

<i>n (%)</i>	<u>None</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Total</u>
	10,278 (94.5)	409 (3.4)	153 (1.2)	108 (0.9)	10,948 (100.0)
Ever Had an Unintended Pregnancy					
No	6,451 (63.8)	253 (63.7)	94 (66.4)	66 (59.5)	6,864 (63.8)
Yes	3,827 (36.2)	156 (36.4)	59 (33.6)	42 (40.5)	4,084 (36.2)
MEANS (SD)					
Age at Wave IV	28.2 (1.8)	28.2 (1.9)	28.6 (1.7)	28.6 (2.0)	28.2 (1.8)
Age at First Sex	16.3 (2.7)	16.0 (2.8)	16.7 (3.6)	16.3 (2.9)	16.3 (2.7)
Number of Pre-18 Sexual Partners	3.0 (5.5)	3.4 (5.9)	4.5 (8.7)	3.0 (5.2)	3.0 (5.6)
Number of Post-18 Sexual Partners	9.7 (13.3)	9.6 (14.9)	10.8 (15.1)	8.1 (11.4)	9.7 (13.4)
Years Sexually Active	12.9 (3.2)	13.3 (3.3)	13.0 (4.2)	13.3 (3.1)	12.9 (3.2)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; SD = standard deviation

Table 25: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and unintended pregnancy across disability groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	0.99 (0.76-1.29)	1.01 (0.77-1.32)	0.74 (0.19-2.92)	0.56 (0.13-2.33)
Moderate	0.96 (0.60-1.54)	0.95 (0.59-1.53)	0.59 (0.09-3.87)	0.82 (0.13-5.41)
Severe	1.04 (0.59-1.83)	1.01 (0.59-1.75)	4.47 (0.53-37.54)	6.41 (0.73-56.69)
Years Sexually Active	1.15 (1.13-1.17)*	1.18 (1.15-1.21)*	1.15 (1.13-1.17)*	1.18 (1.15-1.21)*
Physical Disability * Years Sexually Active (None)				
Mild			1.02 (0.93-1.13)	1.04 (0.94-1.16)
Moderate			1.04 (0.90-1.19)	1.01 (0.88-1.16)
Severe			0.90 (0.77-1.04)	0.87 (0.75-1.02)
Biological Sex (Male)				
Female		1.65 (1.44-1.90)*		1.66 (1.44-1.90)*
Race/Ethnicity (NH White)				
Hispanic		1.20 (0.97-1.48)		1.20 (0.97-1.48)
NH Black		1.88 (1.59-2.21)*		1.88 (1.59-2.22)*
Parent Education (SES; College Grad)				
<HS		1.53 (1.27-1.85)*		1.53 (1.27-1.85)*
HS/GED		1.55 (1.34-1.78)*		1.55 (1.34-1.78)*
Some College		1.37 (1.20-1.55)*		1.37 (1.20-1.55)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.93 (0.79-1.11)		0.93 (0.78-1.11)
Cognitive Ability Score (100-114)				
<85		0.87 (0.70-1.08)		0.87 (0.70-1.08)
85-99		0.98 (0.86-1.11)		0.97 (0.86-1.11)
>114		0.73 (0.61-0.87)*		0.73 (0.61-0.87)*
Age at Wave IV		0.89 (0.86-0.93)*		0.89 (0.86-0.93)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Coerced Sex (No)				
Yes		1.32 (1.08-1.62)*		1.32 (1.08-1.62)*
Forced Sex (No)				
Yes		1.32 (1.03-1.69)*		1.32 (1.03-1.69)*
Sexual Abuse (No)				
Yes		1.25 (0.97-1.62)		1.25 (0.97-1.62)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 26: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and unintended pregnancy across disability groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	1.03 (0.79-1.33)	1.01 (0.77-1.32)	1.18 (0.84-1.65)	1.11 (0.78-1.56)
Moderate	0.96 (0.61-1.53)	0.94 (0.58-1.52)	0.72 (0.41-1.27)	0.79 (0.43-1.42)
Severe	1.13 (0.66-1.92)	1.04 (0.60-1.79)	1.22 (0.60-2.47)	1.09 (0.52-2.28)
Lifetime Sexual Partners	1.01 (1.01-1.02)*	1.01 (1.01-1.01)*	1.01 (1.01-1.02)*	1.01 (1.01-1.01)*
Physical Disability * Lifetime Sexual Partners (None)				
Mild			0.99 (0.98-1.01)	0.99 (0.98-1.01)
Moderate			1.02 (0.99-1.04)	1.01 (0.99-1.04)
Severe			0.99 (0.96-1.03)	1.00 (0.96-1.04)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Biological Sex (Male)				
Female		1.78 (1.55-2.04)*		1.78 (1.55-2.04)*
Race/Ethnicity (NH White)				
Hispanic		1.19 (0.97-1.47)		1.19 (0.97-1.47)
NH Black		1.84 (1.56-2.17)*		1.84 (1.56-2.17)*
Parent Education (SES; College Grad)				
<HS		1.59 (1.32-1.93)*		1.60 (1.32-1.93)*
HS/GED		1.58 (1.37-1.83)*		1.58 (1.37-1.83)*
Some College		1.39 (1.22-1.58)*		1.38 (1.22-1.57)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.89 (0.75-1.06)		0.89 (0.75-1.06)
Cognitive Ability Score (100-114)				
<85		0.88 (0.71-1.10)		0.88 (0.71-1.10)
85-99		0.98 (0.86-1.12)		0.98 (0.86-1.12)
>114		0.73 (0.61-0.87)*		0.73 (0.61-0.87)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Age at Wave IV		0.91 (0.87-0.94)*		0.91 (0.87-0.94)*
Coerced Sex (No)				
Yes		1.28 (1.04-1.57)*		1.28 (1.04-1.58)*
Forced Sex (No)				
Yes		1.28 (0.99-1.64)		1.27 (0.99-1.63)
Sexual Abuse (No)				
Yes		1.23 (0.96-1.59)		1.23 (0.96-1.59)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 27: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and unintended pregnancy across disability groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	0.97 (0.73-1.30)	0.95 (0.71-1.28)	0.84 (0.57-1.23)	0.82 (0.56-1.19)
Moderate	0.80 (0.49-1.30)	0.83 (0.48-1.42)	0.69 (0.39-1.20)	0.71 (0.38-1.34)
Severe	1.21 (0.70-2.08)	1.11 (0.63-1.95)	1.22 (0.65-2.31)	1.16 (0.61-2.20)
Pre-18 Sexual Partners	1.07 (1.05-1.09)*	1.02 (1.01-1.04)*	1.07 (1.05-1.09)*	1.02 (1.01-1.03)*
Physical Disability * Pre-18 Sexual Partners (None)				
Mild			1.05 (0.97-1.13)	1.04 (0.98-1.11)
Moderate			1.04 (0.97-1.11)	1.03 (0.97-1.10)
Severe			0.99 (0.90-1.10)	0.99 (0.91-1.07)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Post-18 Sexual Partners		1.01 (1.00-1.01)*		1.01 (1.00-1.01)*
Biological Sex (Male)				
Female		1.72 (1.50-1.97)*		1.72 (1.50-1.97)*
Race/Ethnicity (NH White)				
Hispanic		1.27 (1.03-1.56)*		1.27 (1.03-1.57)*
NH Black		2.12 (1.81-2.48)*		2.12 (1.81-2.48)*
Parent Education (SES; College Grad)				
<HS		1.60 (1.33-1.91)*		1.59 (1.33-1.91)*
HS/GED		1.56 (1.35-1.81)*		1.56 (1.35-1.81)*
Some College		1.40 (1.22-1.61)*		1.40 (1.22-1.61)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.92 (0.76-1.10)		0.91 (0.76-1.10)
Cognitive Ability Score (100-114)				
<85		0.99 (0.80-1.23)		0.99 (0.80-1.23)
85-99		1.01 (0.88-1.15)		1.01 (0.88-1.15)
>114		0.72 (0.61-0.86)*		0.72 (0.61-0.86)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Age at Wave IV		0.91 (0.87-0.95)*		0.91 (0.87-0.95)*
Coerced Sex (No)				
Yes		1.29 (1.05-1.59)*		1.29 (1.05-1.59)*
Forced Sex (No)				
Yes		1.39 (1.07-1.80)*		1.39 (1.08-1.81)*
Sexual Abuse (No)				
Yes		1.31 (0.97-1.78)		1.31 (0.97-1.78)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 28: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and unintended pregnancy across disability/biological sex groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	1.81 (1.59-2.05)*	1.63 (1.42-1.87)*	1.24 (0.80-1.92)	1.07 (0.67-1.70)
Mild/Male	0.77 (0.50-1.18)	0.82 (0.54-1.24)	0.34 (0.03-3.93)	0.28 (0.02-3.53)
Mild/Female	2.17 (1.56-3.02)*	1.94 (1.37-2.73)*	1.05 (0.20-5.51)	0.74 (0.13-4.17)
Moderate/Male	0.88 (0.47-1.64)	0.81 (0.41-1.62)	0.45 (0.01-14.34)	0.49 (0.01-22.37)
Moderate/Female	1.94 (0.98-3.83)	1.79 (0.88-3.65)	0.95 (0.11-8.20)	1.21 (0.16-9.02)
Severe/Male	1.15 (0.48-2.71)	1.06 (0.48-2.33)	5.95 (0.23-150.92)	4.74 (0.18-126.33)
Severe/Female	1.68 (0.83-3.40)	1.59 (0.77-3.28)	5.77 (0.37-90.11)	8.85 (0.56-139.80)
Years Sexually Active	1.16 (1.14-1.18)*	1.18 (1.15-1.21)*	1.14 (1.11-1.18)*	1.16 (1.12-1.20)*
Physical Disability/Biological Sex * Years Sexually Active (None/Male)				
None/Female			1.03 (0.99-1.06)	1.03 (1.00-1.07)
Mild/Male			1.06 (0.90-1.24)	1.08 (0.91-1.28)
Mild/Female			1.05 (0.93-1.19)	1.07 (0.94-1.22)
Moderate/Male			1.05 (0.82-1.34)	1.04 (0.80-1.35)
Moderate/Female			1.05 (0.90-1.24)	1.03 (0.89-1.20)
Severe/Male			0.89 (0.70-1.11)	0.90 (0.71-1.14)
Severe/Female			0.91 (0.76-1.10)	0.88 (0.73-1.07)
Race/Ethnicity (NH White)				
Hispanic		1.20 (0.97-1.48)		1.21 (0.98-1.49)
NH Black		1.88 (1.59-2.21)*		1.89 (1.60-2.23)*
Parent Education (SES; College Grad)				
<HS		1.54 (1.28-1.86)*		1.53 (1.27-1.84)*
HS/GED		1.55 (1.34-1.78)*		1.54 (1.34-1.78)*
Some College		1.36 (1.20-1.55)*		1.36 (1.20-1.55)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.93 (0.79-1.11)		0.93 (0.78-1.10)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.87 (0.70-1.09)		0.87 (0.70-1.09)
85-99		0.98 (0.86-1.11)		0.98 (0.86-1.11)
>114		0.73 (0.61-0.87)*		0.73 (0.61-0.87)*
Age at Wave IV				
		0.90 (0.86-0.93)*		0.89 (0.86-0.93)*
Coerced Sex (No)				
Yes		1.32 (1.07-1.62)*		1.32 (1.07-1.62)*
Forced Sex (No)				
Yes		1.31 (1.02-1.68)*		1.31 (1.01-1.68)*
Sexual Abuse (No)				
Yes		1.25 (0.97-1.62)		1.25 (0.96-1.61)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 29: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and unintended pregnancy across disability/biological sex groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	1.90 (1.68-2.14)*	1.76 (1.53-2.02)*	1.65 (1.40-1.94)*	1.62 (1.37-1.91)*
Mild/Male	0.81 (0.53-1.26)	0.82 (0.53-1.25)	1.07 (0.65-1.76)	1.03 (0.62-1.72)
Mild/Female	2.31 (1.68-3.17)*	2.09 (1.48-2.94)*	1.95 (1.23-3.08)	1.76 (1.09-2.86)
Moderate/Male	0.94 (0.51-1.74)	0.82 (0.42-1.61)	0.71 (0.27-1.86)	0.59 (0.22-1.60)
Moderate/Female	1.87 (0.97-3.60)	1.90 (0.93-3.86)	1.36 (0.63-2.96)	1.67 (0.74-3.75)
Severe/Male	1.19 (0.54-2.64)	1.08 (0.49-2.39)	1.35 (0.43-4.30)	1.28 (0.42-3.90)
Severe/Female	2.02 (1.04-3.94)	1.76 (0.86-3.59)	1.71 (0.69-4.21)	1.52 (0.54-4.29)
Lifetime Sexual Partners	1.02 (1.01-1.02)*	1.01 (1.01-1.01)*	1.01 (1.01-1.02)*	1.01 (1.00-1.01)*
Physical Disability/Biological Sex * Lifetime Sexual Partners (None/Male)				
None/Female			1.01 (1.00-1.02)	1.01 (1.00-1.02)
Mild/Male			0.99 (0.97-1.00)	0.99 (0.97-1.01)
Mild/Female			1.01 (0.99-1.04)	1.02 (0.99-1.04)
Moderate/Male			1.02 (0.98-1.06)	1.02 (0.98-1.05)
Moderate/Female			1.02 (0.98-1.06)	1.01 (0.98-1.04)
Severe/Male			0.99 (0.94-1.05)	0.99 (0.93-1.05)
Severe/Female			1.02 (0.95-1.09)	1.02 (0.95-1.09)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Race/Ethnicity (NH White)				
Hispanic		1.19 (0.97-1.47)		1.20 (0.97-1.48)
NH Black		1.84 (1.56-2.17)*		1.85 (1.57-2.18)*
Parent Education (SES; College Grad)				
<HS		1.60 (1.33-1.93)*		1.60 (1.33-1.92)*
HS/GED		1.58 (1.37-1.83)*		1.59 (1.37-1.83)*
Some College		1.39 (1.22-1.58)*		1.38 (1.22-1.57)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.89 (0.75-1.06)		0.86 (0.72-1.02)

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.89 (0.71-1.10)		0.89 (0.71-1.11)
85-99		0.98 (0.86-1.12)		0.98 (0.86-1.12)
>114		0.73 (0.61-0.87)*		0.73 (0.61-0.87)*
Age at Wave IV				
		0.91 (0.87-0.95)*		0.91 (0.87-0.95)*
Coerced Sex (No)				
Yes		1.28 (1.04-1.57)*		1.26 (1.02-1.55)*
Forced Sex (No)				
Yes		1.27 (0.99-1.63)		1.25 (0.97-1.60)
Sexual Abuse (No)				
Yes		1.23 (0.95-1.59)		1.23 (0.95-1.59)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 30: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and unintended pregnancy across disability/biological sex groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	1.80 (1.60-2.03)*	1.72 (1.50-1.97)*	1.66 (1.41-1.94)*	1.67 (1.43-1.95)*
Mild/Male	0.90 (0.55-1.50)	0.97 (0.59-1.59)	0.70 (0.35-1.40)	0.76 (0.39-1.50)
Mild/Female	1.77 (1.26-2.49)*	1.62 (1.14-2.31)*	1.55 (0.99-2.43)	1.44 (0.93-2.25)
Moderate/Male	0.79 (0.42-1.49)	0.71 (0.35-1.47)	0.59 (0.23-1.50)	0.48 (0.17-1.38)
Moderate/Female	1.54 (0.74-3.19)	1.69 (0.73-3.90)	1.38 (0.62-3.11)	1.70 (0.70-4.12)
Severe/Male	1.46 (0.64-3.31)	1.29 (0.56-2.98)	1.70 (0.63-4.59)	1.72 (0.61-4.81)
Severe/Female	1.82 (0.89-3.73)	1.69 (0.79-3.60)	1.49 (0.54-4.10)	1.58 (0.65-3.86)
Pre-18 Sexual Partners	1.08 (1.06-1.09)*	1.02 (1.01-1.04)*	1.06 (1.04-1.09)*	1.02 (1.00-1.03)*
Physical Disability/Biological Sex * Pre-18 Sexual Partners (None/Male)				
None/Female			1.03 (0.99-1.07)	1.01 (0.98-1.04)
Mild/Male			1.07 (0.94-1.22)	1.06 (0.94-1.19)
Mild/Female			1.04 (0.95-1.15)	1.04 (0.97-1.11)
Moderate/Male			1.07 (0.94-1.23)	1.07 (0.96-1.20)
Moderate/Female			1.03 (0.95-1.12)	1.00 (0.93-1.07)
Severe/Male			0.96 (0.80-1.14)	0.92 (0.73-1.16)
Severe/Female			1.09 (0.83-1.44)	1.03 (0.92-1.14)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Post-18 Sexual Partners		1.01 (1.00-1.01)*		1.01 (1.00-1.01)*
Race/Ethnicity (NH White)				
Hispanic		1.27 (1.03-1.56)*		1.27 (1.03-1.57)*
NH Black		2.12 (1.81-2.48)*		2.13 (1.82-2.49)*
Parent Education (SES; College Grad)				
<HS		1.60 (1.33-1.92)*		1.60 (1.33-1.91)*
HS/GED		1.56 (1.35-1.81)*		1.56 (1.35-1.81)*
Some College		1.40 (1.22-1.61)*		1.40 (1.22-1.60)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Sexual Orientation (Heterosexual)				
Sexual Minority		0.91 (0.76-1.10)		0.90 (0.75-1.09)
Cognitive Ability Score (100-114)				
<85		1.00 (0.80-1.23)		1.00 (0.81-1.24)
85-99		1.01 (0.88-1.15)		1.01 (0.89-1.15)
>114		0.72 (0.60-0.86)*		0.72 (0.61-0.86)*
Age at Wave IV		0.91 (0.87-0.95)*		0.91 (0.88-0.95)*
Coerced Sex (No)				
Yes		1.29 (1.04-1.58)*		1.28 (1.04-1.58)*
Forced Sex (No)				
Yes		1.39 (1.08-1.80)*		1.39 (1.07-1.80)*
Sexual Abuse (No)				
Yes		1.31 (0.97-1.77)		1.31 (0.97-1.78)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 31: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and unintended pregnancy across disability/race groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	1.24 (0.98-1.56)	1.17 (0.94-1.45)	1.87 (0.91-3.81)	1.50 (0.68-3.31)
None/NH Black	1.95 (1.62-2.35)*	1.86 (1.58-2.20)*	7.11 (3.79-13.37)*	5.69 (2.98-10.85)*
Mild/Hispanic	1.72 (0.78-3.80)	1.73 (0.82-3.62)	2.86 (0.06-130.80)	2.21 (0.05-99.18)
Mild/NH Black	1.69 (0.79-3.61)	1.54 (0.80-2.97)	17.77 (0.75-420.61)	9.85 (0.48-201.25)
Mild/NH White	1.03 (0.76-1.39)	0.99 (0.73-1.35)	0.48 (0.11-2.11)	0.37 (0.08-1.69)
Moderate/Hispanic	2.78 (0.91-8.47)	4.10 (1.34-12.60)	42567 (110.72-163658)*	15709 (275-896674)*
Moderate/NH Black	1.29 (0.47-3.51)	1.26 (0.54-2.94)	0.22 (0.00-87.68)	0.41 (0.00-69.67)
Moderate/NH White	0.91 (0.50-1.66)	0.87 (0.47-1.61)	0.63 (0.08-4.80)	0.68 (0.08-5.58)
Severe/Hispanic	0.86 (0.12-6.04)	0.65 (0.14-3.09)	6.98 (0.02-2194.21)	6.49 (0.04-1016.10)
Severe/NH Black	6.41 (1.90-21.58)*	7.11 (2.34-21.58)*	2476 (0.35-17400000)	2955 (1.20-7302412)
Severe/NH White	0.87 (0.45-1.68)	0.80 (0.41-1.58)	3.53 (0.27-47.00)	4.78 (0.31-74.51)
Years Sexually Active	1.14 (1.12-1.16)*	1.18 (1.15-1.21)*	1.17 (1.14-1.20)*	1.20 (1.17-1.24)*
Physical Disability/Race * Years Sexually Active (None/NH White)				
None/Hispanic			0.97 (0.92-1.02)	0.98 (0.93-1.04)
None/NH Black			0.91 (0.87-0.95)*	0.92 (0.88-0.97)*
Mild/Hispanic			0.96 (0.74-1.26)	0.98 (0.75-1.29)
Mild/NH Black			0.84 (0.66-1.07)	0.87 (0.70-1.10)
Mild/NH White			1.05 (0.95-1.17)	1.07 (0.96-1.19)
Moderate/Hispanic			0.59 (0.44-0.80)*	0.56 (0.40-0.78)*
Moderate/NH Black			1.12 (0.77-1.64)	1.08 (0.78-1.49)
Moderate/NH White			1.03 (0.88-1.20)	1.02 (0.86-1.20)
Severe/Hispanic			0.87 (0.59-1.27)	0.86 (0.61-1.20)
Severe/NH Black			0.65 (0.37-1.16)	0.65 (0.39-1.09)
Severe/NH White			0.90 (0.75-1.08)	0.88 (0.72-1.07)
Biological Sex (Male)				
Female		1.66 (1.45-1.90)*		1.65 (1.44-1.90)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Parent Education (SES; College Grad)				
<HS		1.54 (1.27-1.86)*		1.54 (1.28-1.85)*
HS/GED		1.55 (1.34-1.79)*		1.53 (1.33-1.77)*
Some College		1.36 (1.20-1.55)*		1.36 (1.19-1.54)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.94 (0.79-1.11)		0.93 (0.79-1.11)
Cognitive Ability Score (100-114)				
<85		0.87 (0.70-1.09)		0.88 (0.71-1.09)
85-99		0.97 (0.86-1.11)		0.97 (0.86-1.11)
>114		0.72 (0.61-0.86)*		0.73 (0.61-0.87)*
Age at Wave IV				
		0.90 (0.86-0.93)*		0.89 (0.86-0.93)*
Coerced Sex (No)				
Yes		1.32 (1.08-1.62)*		1.32 (1.08-1.62)*
Forced Sex (No)				
Yes		1.32 (1.03-1.69)*		1.32 (1.03-1.70)*
Sexual Abuse (No)				
Yes		1.25 (0.97-1.62)		1.26 (0.98-1.63)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * $p < 0.05$ with Holm-Bonferroni correction for multiple comparisons

Table 32: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and unintended pregnancy across disability/race groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	1.25 (1.00-1.56)	1.16 (0.93-1.45)	1.25 (0.94-1.66)	1.18 (0.89-1.57)
None/NH Black	2.11 (1.78-2.51)*	1.83 (1.54-2.16)*	2.51 (2.03-3.10)*	2.09 (1.69-2.59)*
Mild/Hispanic	1.86 (0.87-3.99)	1.79 (0.84-3.81)	1.93 (0.65-5.76)	2.01 (0.67-6.05)
Mild/NH Black	1.80 (0.96-3.40)	1.53 (0.79-2.96)	1.89 (0.71-5.01)	1.60 (0.61-4.23)
Mild/NH White	1.07 (0.79-1.47)	0.98 (0.72-1.34)	1.27 (0.85-1.90)	1.11 (0.74-1.67)
Moderate/Hispanic	3.14 (1.04-9.47)	4.23 (1.35-13.23)	10.36 (1.05-102.55)	27.70 (1.11-692.79)
Moderate/NH Black	1.51 (0.54-4.20)	1.25 (0.54-2.90)	0.58 (0.11-3.12)	0.64 (0.14-2.88)
Moderate/NH White	0.87 (0.49-1.56)	0.85 (0.46-1.58)	0.69 (0.34-1.40)	0.72 (0.36-1.46)
Severe/Hispanic	1.03 (0.17-6.44)	0.64 (0.13-3.02)	0.67 (0.03-17.41)	0.42 (0.03-6.79)
Severe/NH Black	6.81 (2.13-21.79)*	7.15 (2.40-21.26)*	4.82 (0.85-27.32)	4.74 (0.94-24.01)
Severe/NH White	0.96 (0.51-1.80)	0.83 (0.42-1.62)	1.48 (0.62-3.50)	1.20 (0.47-3.05)
Lifetime Sexual Partners	1.01 (1.01-1.02)*	1.01 (1.01-1.01)*	1.02 (1.01-1.02)*	1.01 (1.01-1.02)*
Physical Disability/Race * Lifetime Sexual Partners (None/NH White)				
None/Hispanic			1.00 (0.99-1.01)	1.00 (0.99-1.01)
None/NH Black			0.99 (0.98-1.00)*	0.99 (0.98-1.00)
Mild/Hispanic			1.00 (0.93-1.07)	0.99 (0.92-1.06)
Mild/NH Black			1.00 (0.95-1.04)	1.00 (0.95-1.05)
Mild/NH White			0.99 (0.97-1.01)	0.99 (0.97-1.01)
Moderate/Hispanic			0.91 (0.76-1.09)	0.86 (0.69-1.08)
Moderate/NH Black			1.09 (0.97-1.22)	1.06 (0.96-1.17)
Moderate/NH White			1.01 (0.99-1.04)	1.01 (0.98-1.03)
Severe/Hispanic			1.02 (0.93-1.12)	1.02 (0.94-1.11)
Severe/NH Black			1.03 (0.96-1.11)	1.04 (0.97-1.11)
Severe/NH White			0.95 (0.89-1.02)	0.96 (0.90-1.03)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Biological Sex (Male)				
Female		1.79 (1.56-2.05)*		1.78 (1.55-2.04)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Parent Education (SES; College Grad)				
<HS		1.60 (1.32-1.93)*		1.60 (1.33-1.93)*
HS/GED		1.59 (1.37-1.83)*		1.58 (1.37-1.83)*
Some College		1.38 (1.22-1.57)*		1.38 (1.22-1.57)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.90 (0.75-1.07)		0.89 (0.75-1.06)
Cognitive Ability Score (100-114)				
<85		0.89 (0.71-1.11)		0.89 (0.71-1.11)
85-99		0.98 (0.86-1.11)		0.98 (0.86-1.12)
>114		0.72 (0.61-0.86)*		0.72 (0.60-0.86)*
Age at Wave IV				
		0.91 (0.87-0.95)*		0.91 (0.87-0.95)*
Coerced Sex (No)				
Yes		1.28 (1.04-1.57)*		1.28 (1.00-1.65)*
Forced Sex (No)				
Yes		1.28 (1.00-1.65)*		1.28 (1.00-1.65)*
Sexual Abuse (No)				
Yes		1.23 (0.96-1.59)		1.23 (0.95-1.59)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 33: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and unintended pregnancy across disability/race groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	1.37 (1.10-1.71)*	1.23 (0.99-1.53)	1.45 (1.09-1.92)	1.28 (0.98-1.66)
None/NH Black	2.46 (2.10-2.89)*	2.09 (1.77-2.46)*	3.03 (2.53-3.63)*	2.44 (2.06-2.89)*
Mild/Hispanic	2.04 (0.88-4.74)	1.83 (0.77-4.31)	1.19 (0.37-3.83)	1.18 (0.32-4.33)
Mild/NH Black	2.85 (1.52-5.32)*	2.17 (1.09-4.29)	2.51 (1.20-5.24)	1.82 (0.80-4.10)
Mild/NH White	0.98 (0.70-1.35)	0.88 (0.64-1.22)	0.89 (0.56-1.41)	0.80 (0.51-1.24)
Moderate/Hispanic	2.97 (1.02-8.62)	4.12 (1.34-12.66)	5.11 (2.23-11.72)*	9.28 (3.81-22.60)*
Moderate/NH Black	1.29 (0.41-4.03)	1.10 (0.42-2.89)	0.84 (0.19-3.61)	0.83 (0.24-2.87)
Moderate/NH White	0.70 (0.37-1.32)	0.75 (0.37-1.48)	0.63 (0.30-1.33)	0.63 (0.28-1.41)
Severe/Hispanic	1.18 (0.17-8.34)	0.68 (0.11-4.24)	0.00...	0.00...
Severe/NH Black	8.52 (2.16-33.65)*	9.14 (2.66-31.39)*	8.05 (1.04-62.58)	8.42 (1.57-45.10)
Severe/NH White	1.01 (0.53-1.93)	0.87 (0.44-1.72)	1.88 (0.81-4.38)	1.91 (0.78-4.69)
Pre-18 Sexual Partners	1.07 (1.05-1.09)*	1.02 (1.01-1.04)*	1.08 (1.06-1.11)*	1.03 (1.01-1.05)*
Physical Disability/Race *Pre-18 Sexual Partners (None/NH White)				
None/Hispanic			0.98 (0.93-1.03)	0.99 (0.95-1.02)
None/NH Black			0.94 (0.91-0.97)*	0.96 (0.93-0.98)*
Mild/Hispanic			1.24 (0.89-1.73)	1.18 (0.86-1.62)
Mild/NH Black			1.05 (0.92-1.20)	1.06 (0.95-1.19)
Mild/NH White			1.02 (0.94-1.12)	1.03 (0.95-1.10)
Moderate/Hispanic			0.87 (0.64-1.17)	0.81 (0.56-1.17)
Moderate/NH Black			1.12 (0.86-1.45)	1.08 (0.90-1.29)
Moderate/NH White			1.02 (0.94-1.11)	1.03 (0.96-1.10)
Severe/Hispanic			12206.95...	9359.54...
Severe/NH Black			1.02 (0.75-1.38)	1.02 (0.83-1.25)
Severe/NH White			0.70 (0.50-0.97)	0.63 (0.41-0.97)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Post-18 Sexual Partners		1.01 (1.00-1.01)*		1.01 (1.00-1.01)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Biological Sex (Male)				
Female		1.73 (1.51-1.98)*		1.72 (1.50-1.97)*
Parent Education (SES; College Grad)				
<HS		1.60 (1.33-1.92)*		1.60 (1.34-1.91)*
HS/GED		1.57 (1.36-1.82)*		1.55 (1.34-1.80)*
Some College		1.40 (1.22-1.60)*		1.40 (1.22-1.60)*
Sexual Orientation (Heterosexual)				
Sexual Minority		0.92 (0.76-1.11)		0.91 (0.76-1.10)
Cognitive Ability Score (100-114)				
<85		1.00 (0.81-1.24)		1.00 (0.81-1.24)
85-99		1.01 (0.88-1.15)		1.01 (0.89-1.16)
>114		0.72 (0.60-0.85)*		0.72 (0.61-0.85)*
Age at Wave IV		0.91 (0.88-0.95)*		0.91 (0.87-0.95)*
Coerced Sex (No)				
Yes		1.29 (1.05-1.58)*		1.29 (1.05-1.58)*
Forced Sex (No)				
Yes		1.40 (1.08-1.81)*		1.40 (1.08-1.81)*
Sexual Abuse (No)				
Yes		1.32 (0.98-1.78)		1.32 (0.97-1.79)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 34: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between timing of sexual activity and unintended pregnancy across disability/sexual orientation groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.18 (0.99-1.41)	0.94 (0.78-1.12)	1.38 (0.67-2.87)	1.37 (0.65-2.88)
Mild/Heterosexual	0.91 (0.67-1.24)	0.95 (0.69-1.31)	0.78 (0.19-3.27)	0.63 (0.14-2.84)
Mild/Sexual Minority	1.98 (1.11-3.53)	1.33 (0.76-2.32)	0.48 (0.01-23.88)	0.21 (0.00-9.61)
Moderate/Heterosexual	1.00 (0.60-1.67)	1.04 (0.61-1.77)	0.72 (0.10-5.33)	0.80 (0.10-6.19)
Moderate/Sexual Minority	0.91 (0.33-2.50)	0.55 (0.20-1.47)	0.13 (0.00-16.16)	0.28 (0.00-26.46)
Severe/Heterosexual	1.18 (0.65-2.15)	1.14 (0.65-2.02)	9.42 (0.88-100.69)	12.43 (1.20-128.89)
Severe/Sexual Minority	0.43 (0.10-1.80)	0.33 (0.06-1.74)	0.09 (0.00-4.47)	0.19 (0.00-15.21)
Years Sexually Active	1.15 (1.13-1.17)*	1.18 (1.15-1.21)*	1.15 (1.13-1.17)*	1.18 (1.15-1.21)*
Physical Disability/Sexual Orientation * Years Sexually Active (None/Heterosexual)				
None/Sexual Minority			0.99 (0.94-1.04)	0.97 (0.92-1.02)
Mild/Heterosexual			1.01 (0.91-1.12)	1.03 (0.92-1.15)
Mild/Sexual Minority			1.11 (0.83-1.48)	1.14 (0.86-1.51)
Moderate/Heterosexual			1.02 (0.88-1.19)	1.02 (0.88-1.19)
Moderate/Sexual Minority			1.13 (0.82-1.56)	1.04 (0.77-1.41)
Severe/Heterosexual			0.86 (0.73-1.01)	0.84 (0.71-0.99)
Severe/Sexual Minority			1.11 (0.81-1.53)	1.04 (0.72-1.50)
Biological Sex (Male)				
Female		1.65 (1.44-1.90)*		1.66 (1.44-1.90)*
Race/Ethnicity (NH White)				
Hispanic		1.20 (0.97-1.48)		1.20 (0.97-1.48)
NH Black		1.87 (1.59-2.21)*		1.87 (1.59-2.21)*
Parent Education (SES; College Grad)				
<HS		1.53 (1.27-1.85)*		1.53 (1.27-1.84)*
HS/GED		1.54 (1.34-1.78)*		1.54 (1.34-1.78)*
Some College		1.36 (1.20-1.55)*		1.36 (1.20-1.55)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.87 (0.69-1.08)		0.87 (0.69-1.08)
85-99		0.98 (0.86-1.11)		0.97 (0.86-1.11)
>114		0.73 (0.61-0.87)*		0.73 (0.61-0.87)*
Age at Wave IV				
		0.89 (0.86-0.93)*		0.89 (0.86-0.93)*
Coerced Sex (No)				
Yes		1.32 (1.07-1.62)*		1.32 (1.07-1.63)*
Forced Sex (No)				
Yes		1.32 (1.03-1.69)*		1.32 (1.03-1.70)*
Sexual Abuse (No)				
Yes		1.25 (0.97-1.62)		1.26 (0.97-1.63)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 35: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of lifetime sexual partners and unintended pregnancy across disability/sexual orientation groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.17 (0.98-1.40)	0.89 (0.75-1.07)	1.26 (1.02-1.56)	1.05 (0.84-1.30)
Mild/Heterosexual	0.95 (0.70-1.30)	0.96 (0.69-1.32)	1.18 (0.82-1.69)	1.13 (0.78-1.65)
Mild/Sexual Minority	1.95 (1.10-3.46)	1.24 (0.71-2.15)	1.73 (0.78-3.80)	1.12 (0.52-2.42)
Moderate/Heterosexual	0.97 (0.59-1.60)	1.04 (0.62-1.76)	0.81 (0.42-1.57)	0.92 (0.47-1.79)
Moderate/Sexual Minority	1.03 (0.39-2.74)	0.51 (0.19-1.34)	0.52 (0.14-1.96)	0.30 (0.09-1.07)
Severe/Heterosexual	1.30 (0.74-2.26)	1.17 (0.66-2.06)	1.51 (0.73-3.14)	1.35 (0.62-2.91)
Severe/Sexual Minority	0.43 (0.10-1.78)	0.32 (0.06-1.62)	0.11 (0.00-3.03)	0.07 (0.00-2.44)
Lifetime Sexual Partners	1.01 (1.01-1.02)*	1.01 (1.01-1.01)*	1.01 (1.01-1.02)*	1.01 (1.01-1.01)*
Physical Disability/Sexual Orientation * Lifetime Sexual Partners (None/Heterosexual)				
None/Sexual Minority			1.00 (0.99-1.00)	0.99 (0.98-1.00)
Mild/Heterosexual			0.98 (0.97-1.00)	0.99 (0.97-1.01)
Mild/Sexual Minority			1.01 (0.98-1.04)	1.00 (0.98-1.03)
Moderate/Heterosexual			1.01 (0.98-1.05)	1.01 (0.98-1.04)
Moderate/Sexual Minority			1.03 (0.99-1.07)	1.02 (0.98-1.07)
Severe/Heterosexual			0.99 (0.94-1.03)	0.99 (0.94-1.04)
Severe/Sexual Minority			1.09 (0.91-1.31)	1.11 (0.90-1.37)
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Biological Sex (Male)				
Female		1.78 (1.55-2.04)*		1.80 (1.56-2.06)*
Race/Ethnicity (NH White)				
Hispanic		1.19 (0.97-1.47)		1.19 (0.97-1.47)
NH Black		1.84 (1.56-2.17)*		1.83 (1.55-2.16)*
Parent Education (SES; College Grad)				
<HS		1.59 (1.32-1.92)*		1.60 (1.32-1.92)*
HS/GED		1.58 (1.37-1.83)*		1.58 (1.37-1.83)*
Some College		1.38 (1.22-1.57)*		1.38 (1.21-1.57)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.88 (0.71-1.10)		0.89 (0.71-1.11)
85-99		0.98 (0.86-1.12)		0.98 (0.86-1.12)
>114		0.73 (0.61-0.87)*		0.73 (0.61-0.87)*
Age at Wave IV				
		0.91 (0.87-0.94)*		0.91 (0.87-0.95)*
Coerced Sex (No)				
Yes		1.28 (1.04-1.57)*		1.29 (1.05-1.59)*
Forced Sex (No)				
Yes		1.28 (1.00-1.64)		1.28 (1.00-1.64)
Sexual Abuse (No)				
Yes		1.23 (0.96-1.59)		1.24 (0.96-1.60)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 36: Adjusted odds ratios (and 95% confidence intervals) from logistic regressions testing the association between number of pre-18 sexual partners and unintended pregnancy across disability/sexual orientation groups

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	1.15 (0.96-1.38)	0.92 (0.76-1.11)	1.42 (1.13-1.78)*	1.13 (0.91-1.41)
Mild/Heterosexual	0.91 (0.64-1.28)	0.91 (0.64-1.29)	0.81 (0.52-1.27)	0.80 (0.51-1.25)
Mild/Sexual Minority	1.66 (0.90-3.07)	1.13 (0.62-2.05)	1.72 (0.85-3.50)	1.06 (0.54-2.10)
Moderate/Heterosexual	0.80 (0.47-1.37)	0.92 (0.51-1.66)	0.78 (0.42-1.45)	0.85 (0.43-1.68)
Moderate/Sexual Minority	0.86 (0.32-2.29)	0.47 (0.16-1.33)	0.52 (0.13-2.03)	0.27 (0.07-1.09)
Severe/Heterosexual	1.41 (0.80-2.46)	1.21 (0.67-2.18)	1.54 (0.77-3.10)	1.44 (0.68-3.05)
Severe/Sexual Minority	0.16 (0.05-0.54)*	0.24 (0.07-0.86)	0.05 (0.01-0.37)*	0.07 (0.01-0.52)
Pre-18 Sexual Partners	1.07 (1.05-1.09)*	1.02 (1.01-1.04)*	1.08 (1.06-1.10)*	1.03 (1.02-1.05)*
Physical Disability/Sexual Orientation * Pre-18 Sexual Partners (None/Heterosexual)				
None/Sexual Minority			0.95 (0.91-0.98)*	0.95 (0.92-0.98)*
Mild/Heterosexual			1.04 (0.94-1.14)	1.04 (0.96-1.14)
Mild/Sexual Minority			0.99 (0.89-1.09)	1.00 (0.93-1.09)
Moderate/Heterosexual			1.01 (0.93-1.10)	1.02 (0.95-1.09)
Moderate/Sexual Minority			1.08 (0.96-1.21)	1.08 (0.94-1.23)
Severe/Heterosexual			0.97 (0.83-1.13)	0.94 (0.79-1.11)
Severe/Sexual Minority			1.13 (1.05-1.22)*	1.13 (1.05-1.22)*
Years Sexually Active		1.16 (1.13-1.19)*		1.16 (1.13-1.19)*
Post-18 Sexual Partners		1.01 (1.00-1.01)*		1.01 (1.00-1.01)*
Biological Sex (Male)				
Female		1.72 (1.50-1.97)*		1.73 (1.51-1.99)*
Race/Ethnicity (NH White)				
Hispanic		1.27 (1.03-1.57)*		1.28 (1.04-1.57)*
NH Black		2.12 (1.81-2.48)*		2.13 (1.81-2.49)*
Parent Education (SES; College Grad)				
<HS		1.59 (1.33-1.90)*		1.59 (1.33-1.90)*
HS/GED		1.56 (1.35-1.80)*		1.56 (1.35-1.80)*
Some College		1.40 (1.22-1.60)*		1.39 (1.21-1.60)*

<i>aOR (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.99 (0.80-1.23)		0.99 (0.80-1.22)
85-99		1.01 (0.88-1.15)		1.01 (0.88-1.15)
>114		0.72 (0.61-0.86)*		0.72 (0.61-0.85)*
Age at Wave IV		0.91 (0.87-0.95)*		0.91 (0.88-0.95)*
Coerced Sex (No)				
Yes		1.29 (1.04-1.59)*		1.31 (1.06-1.62)*
Forced Sex (No)				
Yes		1.39 (1.08-1.80)*		1.41 (1.08-1.83)*
Sexual Abuse (No)				
Yes		1.31 (0.97-1.78)		1.32 (0.98-1.80)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; aOR = adjusted odds ratio; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

CHAPTER 7: ASSOCIATIONS BETWEEN SEXUAL PATTERNS AND ROMANTIC RELATIONSHIP QUALITY AMONG POPULATIONS WITH PHYSICAL DISABILITIES

Research Questions

How are timing of first sex, lifetime sexual partner counts, and pre-18 sexual partner counts related to romantic relationship quality in the current or most recent relationship across different levels of disability severity? How do these associations further vary by biological sex, race/ethnicity, and sexual orientation?

Methods

Approach

After examining descriptive statistics, I used adjusted ordinary least squares (OLS) regression models to test relationships between each sexual pattern (timing, lifetime partners, pre-18 partners) and romantic relationship quality in the current or most recent relationship among disability severity groups to those without disabilities. For each predictor, I completed two sets of models. The first set included covariate models in which disability and the predictor of interest were included as separate variables:

Model 1:

$$RelQuality_i = \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \varepsilon_i$$

Model 2 included the main effects and all other covariates:

Model 2:

$$\begin{aligned}
RelQuality_i = & \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(BioSex_i) + \beta_4(Race_i) \\
& + \beta_5(Age_i) + \beta_6(SES_i) + \beta_7(SexualOrientation_i) + \beta_8(CognitiveAbility_i) \\
& + \beta_9(CoercedSex_i) + \beta_{10}(ForcedSex_i) + \beta_{11}(SexualAbuse_i) \\
& + \beta_{12}(RelType_i) + \beta_{13}(RelCurrent_i) + \beta_{14}(RelDuration_i) \\
& + \beta_{15}(PartnerSex_i) + \varepsilon_i
\end{aligned}$$

The second set of models tested the interaction between disability and the sexual pattern of interest. Model 3 included only the interaction between disability and the predictor of interest, as well as the corresponding main effects:

Model 3:

$$RelQuality_i = \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(Disability_i * Predictor_i) + \varepsilon_i$$

Model 4 included the interaction, main effects, and all other covariates:

Model 4:

$$\begin{aligned}
RelQuality_i = & \beta_0 + \beta_1(Disability_i) + \beta_2(Predictor_i) + \beta_3(Disability_i * Predictor_i) \\
& + \beta_4(BioSex_i) + \beta_5(Race_i) + \beta_6(Age_i) + \beta_7(SES_i) \\
& + \beta_8(SexualOrientation_i) + \beta_9(CognitiveAbility_i) + \beta_{10}(CoercedSex_i) \\
& + \beta_{11}(ForcedSex_i) + \beta_{12}(SexualAbuse_i) + \beta_{13}(RelType_i) \\
& + \beta_{14}(RelCurrent_i) + \beta_{15}(RelDuration_i) + \beta_{16}(PartnerSex_i) + \varepsilon_i
\end{aligned}$$

Lifetime partnering models included years sexually active as an additional covariate, and pre-18 partnering models included years sexually active and post-18 sexual partners as additional covariates. In moderation analyses, I repeated analyses using subgroups that interacted disability with the moderator of interest (biological sex, race/ethnicity, sexual orientation). For these analyses, I used the Holm-Bonferroni method¹⁰¹ to report only statistically significant differences at the 0.05 level after correction for multiple tests. All interaction models for the main disability

models and significant interactions from moderation models are also presented as figures using linear predictions in the Appendix.

Results

Sample Characteristics

Table 37 presents descriptive statistics for analyses using the timing and lifetime partnering variables as predictors, and Table 38 presents those for the pre-18 partnering predictor. The majority of the sample (94.5%) had no disability, 3.4% had a mild disability, 1.2% had a moderate disability, and 0.9% had a severe disability. The samples were approximately evenly split between males and females, and the average age of respondents was about 28.3 years. Over 70% of each sample was NH White, while approximately 16% was NH Black and 12% was Hispanic. Regarding parent education, about 60% had attained a college degree or more. About 87% identified as heterosexual, and approximately 15%, 8%, and 5% of respondents reported experiencing coerced sex, forced sex, and sexual abuse, respectively.

The average age at first sex was about 16.3 years, and respondents had been sexually active for about 13.0 years. On average, respondents reported about 13 lifetime sexual partners and 3.1 pre-18 sexual partners. Regarding the described relationships, about 46% were married, 28% were cohabiting, 16% were currently dating, 2% were in a pregnancy partnership, and 8% reported on a recent dating relationship. Over 80% of the reported relationships were current and had lasted an average of about five years (59.2-59.7 months). The vast majority (97.8%) of these relationships were with partners of the opposite sex. Finally, the average romantic relationship quality score was 4.2 out of 5 possible points.

OLS Regression Models

In every timing model, each additional year of sexual activity was associated with a 0.012-point decrease in romantic relationship quality. Similarly, each additional lifetime sexual partner was associated with a 0.003-0.004-point decrease in romantic relationship quality. In contrast, the number of pre-18 sexual partners was not associated with statistically significant variation in romantic relationship quality in any of the corresponding models. The detailed results of the regression analyses are presented below by 1) disability/moderator and 2) predictor of interest.

Disability

Timing. The results of the timing models are found in Table 39. Neither the disability coefficients in the covariate model nor the global test of the interaction was significant ($F(3, 124.1)=0.38, p=0.77$), indicating no differences in romantic relationship quality between the disability groups, both on average and with increasing years of sexual activity. A graph of these interaction results can also be found in Figure 14 of the Appendix.

Lifetime sexual partners. Table 40 shows the results for the lifetime partnering models. Again, neither the disability coefficients in the full covariate model nor the global test of the interaction was significant ($F(3, 126.0)=0.79, p=0.50$), indicating no differences in romantic relationship quality between the disability groups, both on average and with each additional lifetime sexual partner. These results are also shown in Figure 15 of the Appendix.

Pre-18 sexual partners. Table 41 presents the results of the pre-18 partnering models. In the covariate model comparing the different disability groups, none of the disability coefficients was statistically significant. The global test of the interaction between disability and number of pre-18 sexual partners was statistically significant ($F(3, 126)=3.19, p=0.03$), and the full

interaction model showed that each additional sexual partner before age 18 was associated in a 0.022-point decrease in romantic relationship quality among those with mild disabilities compared to those without disabilities. No other statistically significant differences emerged for the covariate and interaction models. These interaction results are also presented in Figure 16 of the Appendix.

Disability/Biological Sex

Timing. Table 42 presents the results of the timing models by disability/biological sex. Similar to the main disability models described above, the coefficients in the covariate model for the disability/sex groups and the global test of the interaction were not significant ($F(7, 125.4)=1.48, 0.18$), indicating no differences in romantic relationship quality across disability groups by biological sex, both on average and with increasing years of sexual activity.

Lifetime sexual partners. The models for lifetime partnering are shown in Table 43. Again, the coefficients in the covariate model for the disability/sex groups and the global test of the interaction were not significant ($F(7, 126.0)=1.67, 0.12$), indicating no differences in romantic relationship quality across disability groups by biological sex, both on average and with increasing numbers of lifetime sexual partners.

Pre-18 sexual partners. Table 44 provides the models for the pre-18 partnering predictor. Results of the covariate model suggested no significant differences in romantic relationship quality among the disability groups. However, the global test of the interaction was statistically significant ($F(7, 122)=3.16, 0.00$), and further exploration indicated that females with mild disabilities reported a 0.026-point decrease in romantic relationship quality with each additional pre-18 sexual partner compared to males without disabilities. No other significant differences emerged in the covariate and interaction models, and comparisons of the confidence intervals did

not indicate further differences within disability or sex groups. The results of this interaction model are also presented in Figure 17 of the Appendix.

Disability/Race

Timing. Table 45 shows the results of the timing models, for which NH Whites without disabilities are the referent. NH Blacks without disabilities reported romantic relationship quality scores that were 0.146 points lower than those of the referent. Comparing confidence intervals, I also found that NH Blacks without disabilities reported lower romantic relationship quality compared to Hispanics without disabilities. Although the global test indicated an interaction ($F(11, 125.0)=2.07, p=0.03$), none of the coefficients were statistically significant after the Holm-Bonferroni correction for multiple tests.

Lifetime sexual partners. Table 46 presents the results of the lifetime partnering models. Again, NH Blacks without disabilities reported romantic relationship quality scores that were 0.140 points lower than those of NH Whites without disabilities in the covariate model. The global test of the interaction was statistically significant ($F(11, 125.7)=3.43, p<0.01$), indicating variation in relationship quality across disability/race groups with increasing numbers of lifetime sexual partners. The resulting interaction model showed that Hispanics with severe disabilities experienced a 0.026-point increase in romantic relationship quality with each additional sexual partner compared to NH Whites without disabilities, but that the main effect was -0.724, suggesting significantly lower romantic relationship quality among Hispanics with severe disabilities on average. No other differences emerged in either the covariate or the interaction model. A visual representation of this interaction model is presented in Figure 18 of the Appendix.

Pre-18 sexual partners. The results of the pre-18 partnering models are shown in Table 47. As with the timing and lifetime partnering predictors, NH Blacks without disabilities reported romantic relationship quality scores that were 0.135 points lower than those of NH Whites without disabilities in covariate models. The global test of the interaction was statistically significant ($F(11, 118)=5.85, p<0.01$), illuminating a number of subgroup differences. With each additional pre-18 sexual partner, NH Whites with mild disabilities reported a 0.023-point decrease, Hispanics with severe disabilities reported a 0.027-point increase, and NH Blacks with severe disabilities reported a 0.077-point decrease in romantic relationship quality compared to NH Whites without disabilities. Comparisons of the confidence intervals also showed significant within group differences. Among those with severe disabilities, NH Blacks reported worse romantic relationship quality than Hispanics, and among NH Blacks, those with severe disabilities reported worse relationship quality than those without disabilities with each additional pre-18 partner. No other significant differences emerged in the covariate or interaction models. This interaction model is presented using linear predictions in Figure 19 of the Appendix.

Disability/Sexual Orientation

Timing. Table 48 provides the results of the timing models for the pre-18 partnering predictor, for which heterosexuals without disabilities are the referent. The full covariate model showed that sexual minorities without disabilities reported significantly lower romantic relationship quality ($a\beta=-0.128$) compared to heterosexuals without disabilities. The global test of the interaction was not significant ($F(7, 125.2)=0.88, p=0.52$), indicating no differences across disability/sexual orientation groups with increasing years of sexual activity.

Lifetime sexual partners. The lifetime partnering models are shown in Table 49. Similar to timing, sexual minorities without disabilities reported significantly lower romantic relationship quality ($\alpha\beta=-0.113$) compared to heterosexuals without disabilities in the covariate model. The global test of the interaction was not significant ($F(7, 126.0)=1.80, p=0.09$), indicating no differences across disability/sexual orientation groups with increasing years of sexual activity.

Pre-18 sexual partners. Finally, Table 50 presents the results of the pre-18 partnering models. Again, sexual minorities without disabilities reported significantly lower romantic relationship quality ($\alpha\beta=-0.109$) compared to heterosexuals without disabilities in the full covariate model. The global test of the interaction was significant ($F(7, 122)=6.14, p<0.01$), and the interaction model showed that sexual minorities with severe disabilities reported a 0.026-point increase in romantic relationship quality with each additional sexual partner before age 18 compared to heterosexuals without disabilities. Confidence intervals showed that sexual minorities with severe disabilities also had better relationship quality compared to heterosexuals with severe disabilities and compared to sexual minorities in every other disability severity group with each additional pre-18 sexual partner. The results of this interaction model are also presented in Figure 20 of the Appendix.

Discussion

The results in this chapter suggest few differences in the associations between sexual behavior patterns and romantic relationship quality across disability groups. Similar to previous research,^{51,71} earlier timing was associated with lower romantic relationship quality overall. In addition, additional lifetime partners were associated with a statistically significant yet relatively insubstantial decrease in romantic relationship quality. There were also important differences

among those without disabilities, such that NH Blacks and sexual minorities reported significantly lower overall romantic relationship quality scores compared to NH Whites and heterosexuals, respectively. Finally, interaction models suggested differences in romantic relationship quality, particularly among subgroups with mild and severe disabilities, with each additional pre-18 partner. These results and their implications for sexual health research, practice, and policies are discussed below.

Disability

There were no differences between disability groups in any of the timing or lifetime partnering models, suggesting similar romantic relationship quality scores regardless of disability severity. While there were also no significant differences in the covariate model for the pre-18 partnering predictor, the interaction model showed that each additional partner during adolescence was associated with a statistically significant decrease in romantic relationship quality among those with mild disabilities compared to those without disabilities. Such findings suggest that populations with mild disabilities may require more targeted sexuality education focused on developing positive romantic relationships during adolescence. Overall, these results make an important contribution to the literature, as no previous work has considered such variations in relationship quality among people with physical disabilities at the population level. Future research should further investigate these differences in relationship quality, the results of which can be used to inform the design of sexuality education programming.

Disability/Biological Sex

As with the main disability models, none of the timing or lifetime partnering models showed significant differences in romantic relationship quality between the disability/biological sex groups. The covariate model for pre-18 partnering also did not show significant differences

between groups, but the interaction model did show that females with mild disabilities experienced a significant decrease in romantic relationship quality with each additional pre-18 partner compared to males without disabilities. This finding supports those of previous literature with convenience samples,^{124,125} suggesting that females with disabilities may be further disadvantaged in romantic relationships due to gender ideologies²⁰ and disability stigma.⁵ These analyses build upon this literature by considering variations in romantic relationship quality at a population level, and further justify the need for more research to better understand and support healthy relationships among women with disabilities.

Disability/Race

The results for the disability/race groups were more mixed. Similar to past research in the general population,¹²⁶ all covariate models showed that NH Blacks without disabilities reported significantly lower romantic relationship quality in a current or most recent relationship compared to NH Whites without disabilities. No other statistically significant results emerged in these models.

While all three interaction models were statistically significant, many of the estimates were unstable due to small sample sizes. In the timing interaction model, results did not hold after correcting for multiple tests. The interaction model for lifetime partnering indicated one significant difference. Hispanics with severe disabilities experienced a significant increase in romantic relationship quality with each additional sexual partner, though the main effects suggested their overall romantic relationship quality was lower. Unfortunately, this particular subgroup was quite small, so it is unclear if these results would be replicable in a larger sample. Thus, future research should aim to include more members of both racial/ethnic minorities and disability groups in order to adequately represent their experiences in the literature.

Lastly, the interaction model for the pre-18 partnering predictor showed that every additional partner during adolescence was associated with a significant decrease in romantic relationship quality among NH Whites with mild disabilities and NH Blacks with severe disabilities, and a significant increase in romantic relationship quality among Hispanics with severe disabilities compared to NH Whites without disabilities. In addition, NH Blacks with severe disabilities had a significant decrease in romantic relationship quality with each additional pre-18 partner compared to Hispanics with severe disabilities and NH Blacks without disabilities. One explanation may be that these populations experience minority stress in romantic relationships due to disability stigma, which could be exacerbated by racial discrimination.⁸⁶ However, these results should be interpreted with caution because the sample sizes for Hispanics and NH Blacks with severe disabilities were quite small. Importantly, these findings can be used to justify future research focused on disparities in sexual health and romantic relationship quality, as well as for more targeted healthy relationship education programming among racial/ethnic minority populations with disabilities.

Disability/Sexual Orientation

In every covariate model, sexual minorities without disabilities had significantly lower romantic relationship quality compared to their heterosexual peers. As shown in past research, such variations in romantic relationship quality among sexual minorities may be attributable to minority stress from internalized homophobia about being in a same sex partnership.^{127,128} Neither the timing nor the lifetime partnering interaction model was significant, suggesting similar changes in relationship quality across disability/sexual orientation groups with additional years of sexual activity and lifetime partners. In contrast, the interaction model for pre-18 partnering showed that each additional partner during adolescence was associated with a

significant increase in romantic relationship quality among sexual minorities with severe disabilities compared to heterosexuals without and with severe disabilities, as well as all other sexual minorities. This result is somewhat surprising, as the literature implies that sexual minorities with disabilities may experience added minority stress in relationships from both the aforementioned internalized homophobia as well as disability stigma.⁷⁰ One possible explanation is that there are other variables that better explain the relationship between pre-18 partners and romantic relationship quality that were not included in the model. It is also possible that this is a false positive result due to small sample sizes. Regardless, these findings indicate a need for further research to understand the unique patterns of sexual behavior and romantic relationship quality among sexual minorities with disabilities.

Strengths and Limitations

To my knowledge, no other research has considered associations between sexual behavior patterns and romantic relationship quality from adolescence to early adulthood in populations with disabilities. The recent research on romantic relationships among individuals with disabilities has used convenience samples and cross-sectional data, which makes it difficult to understand how these associations vary over time and at a population level.⁴⁰ Also, this research does not compare groups with disabilities to those without disabilities, which affects our ability to discern how the experiences of people with disabilities compare to those of the majority. Similarly, my attempt to better understand variations in these associations by biological sex, race/ethnicity, and sexual orientation contributes to a very limited research base on romantic relationship quality among marginalized populations. For these reasons, results in this chapter make important contributions to the literature and can thus be used to encourage further inclusion of individuals with disabilities in population-based, sexual health research.¹¹³

Of course, these analyses are not without limitations. One important consideration is the fact that relationship quality is more distally related to sexual behaviors than are the other health outcomes that I studied in this dissertation. This is important because despite adding other control variables like relationship duration and type, much of the variation in romantic relationship quality is likely explained by other unmeasured factors. Therefore, future research can build on the results presented here by adding other theoretically-motivated variables to these models.

Another crucial limitation of my results is statistical power, particularly in the pre-18 partnering analyses. Since my multiple imputation model would not converge, I had to use listwise deletion for these analyses. This resulted in some very small sample sizes in the race/ethnicity and sexual orientation moderation models, and particularly in the interaction models for these subgroups. Given these limitations, these results help to shed light on the need for greater inclusion of populations with disabilities from a variety of backgrounds in future sexual health research.

Conclusion

This chapter represents one of the first attempts to understand how variations in sexual behavior patterns are related to romantic relationship quality among populations with disabilities. In general, NH Blacks and sexual minorities without disabilities exhibited significantly lower overall romantic relationship quality scores compared to their NH Whites and heterosexual peers. Partnering during adolescence was also associated with variations in romantic relationship quality among females and NH Whites with mild disabilities, and among Hispanics, NH Blacks, and sexual minorities with severe disabilities. Despite data limitations, these analyses are an important first step in understanding associations between sexual behavior patterns and romantic

relationship quality among populations with disabilities. Future research with larger samples should continue investigating these differences in romantic relationship quality across disability groups, which can help build the evidence base for including healthy relationship topics in sexuality education curriculums.

Table 37: Descriptive statistics by physical disability severity for romantic relationship quality analyses using timing and lifetime partnering as main predictors

<i>n</i> =12,877	<u>None</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Total</u>
% (95% CI)	94.5 (93.9-95.1)	3.4 (2.9-3.8)	1.2 (0.9-1.5)	0.9 (0.7-1.2)	100.0
Biological Sex					
Male	50.5 (49.2-51.8)	49.0 (41.9-56.1)	52.2 (41.4-62.9)	45.9 (33.7-58.1)	50.4 (49.1-51.7)
Female	49.5 (48.2-50.8)	51.0 (43.9-58.1)	47.8 (37.1-58.6)	54.1 (41.9-66.3)	49.6 (48.3-50.9)
Race/Ethnicity					
Hispanic	12.6 (9.0-16.3)	9.8 (5.4-14.1)	9.9 (2.5-17.3)	9.5 (2.5-16.6)	12.5 (8.8-16.1)
NH Black	16.9 (12.4-21.4)	12.8 (8.0-17.7)	23.6 (12.5-34.7)	16.2 (6.9-25.6)	16.8 (12.4-21.3)
NH White	70.5 (64.8-76.2)	77.4 (70.9-83.9)	66.5 (54.6-78.3)	74.2 (62.6-85.8)	70.7 (65.1-76.4)
Parent Education (SES)					
<HS	12.3 (9.8-14.7)	11.6 (6.7-16.5)	19.5 (8.2-30.9)	13.6 (5.4-21.7)	12.3 (9.9-14.8)
HS/GED	27.8 (25.5-30.1)	23.9 (18.4-29.5)	15.7 (8.4-23.0)	35.2 (23.6-46.8)	27.6 (25.4-29.9)
Some College	30.0 (28.3-31.7)	29.8 (23.4-36.3)	33.0 (23.3-42.8)	29.9 (19.2-40.7)	30.0 (28.3-31.7)
College Grad	29.9 (26.4-33.5)	34.6 (26.8-42.4)	31.7 (21.4-42.0)	21.3 (13.5-29.2)	30.0 (26.5-33.6)
Sexual Orientation					
Heterosexual	86.8 (85.8-87.8)	87.5 (83.7-91.3)	82.1 (73.8-90.4)	81.6 (72.2-91.0)	86.7 (85.7-87.8)
Sexual Minority	13.2 (12.2-14.2)	12.5 (8.7-16.3)	17.9 (9.6-26.2)	18.4 (9.0-27.8)	13.3 (12.2-14.3)
Cognitive Ability Score					
<85	12.4 (10.1-14.7)	10.8 (6.4-15.1)	13.5 (3.2-23.8)	17.8 (8.9-26.8)	12.4 (10.2-14.7)
85-99	33.9 (31.9-36.0)	38.5 (31.8-45.2)	34.9 (24.9-44.9)	33.8 (22.8-44.9)	34.1 (32.1-36.1)
100-114	36.3 (34.1-38.5)	35.6 (29.6-41.7)	30.2 (20.7-39.6)	30.8 (19.9-41.6)	36.2 (34.0-38.3)
>114	17.3 (15.1-19.5)	15.2 (10.9-19.4)	21.4 (12.0-30.8)	17.6 (9.1-26.1)	17.3 (15.2-19.5)
Coerced Sex					
No	87.4 (86.5-88.2)	83.9 (79.1-88.6)	73.5 (63.4-83.7)	81.3 (72.2-90.4)	87.0 (86.2-87.9)
Yes	12.6 (11.8-13.5)	16.1 (11.4-20.9)	26.5 (16.3-36.6)	18.7 (9.6-27.8)	13.0 (12.1-13.8)
Forced Sex					
No	92.0 (91.3-92.6)	87.3 (83.0-91.6)	83.4 (75.7-91.1)	85.7 (77.6-93.9)	91.6 (91.0-92.3)
Yes	8.0 (7.4-8.7)	12.7 (8.4-17.0)	16.6 (8.9-24.3)	14.3 (6.1-22.4)	8.4 (7.7-9.0)
Sexual Abuse					
No	95.1 (94.5-95.8)	93.5 (90.4-96.5)	92.0 (86.8-97.1)	90.4 (82.9-97.9)	95.0 (94.4-95.6)
Yes	4.9 (4.2-5.5)	6.5 (3.5-9.6)	8.0 (2.9-13.2)	9.6 (2.1-17.1)	5.0 (4.4-5.6)

<i>n</i> =12,877	<u>None</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Total</u>
% (95% CI)	94.5 (93.9-95.1)	3.4 (2.9-3.8)	1.2 (0.9-1.5)	0.9 (0.7-1.2)	100.0
Relationship Type					
Married	45.3 (42.8-47.9)	50.3 (43.9-56.6)	36.5 (26.3-46.7)	43.4 (32.3-54.5)	45.4 (42.9-47.9)
Cohabiting	27.9 (26.1-29.7)	28.5 (23.2-33.8)	24.1 (15.3-32.9)	26.9 (16.8-36.9)	27.9 (26.1-29.6)
Pregnancy	2.2 (1.7-2.6)	1.7 (0.0-3.8)	8.8 (0.0-18.9)	5.5 (0.0-11.1)	2.3 (1.8-2.7)
Currently Dating	16.0 (14.7-17.3)	12.5 (8.9-16.0)	19.6 (10.9-28.3)	12.5 (4.9-20.1)	15.9 (14.6-17.2)
Recent	8.6 (7.8-9.4)	7.0 (3.3-10.8)	11.0 (4.3-17.7)	11.7 (4.5-19.0)	8.6 (7.8-9.4)
Current Relationship					
No	19.3 (18.0-20.6)	20.4 (14.9-25.9)	17.2 (10.4-24.0)	21.5 (12.3-30.7)	19.3 (18.1-20.5)
Yes	80.7 (79.4-82.0)	79.6 (74.1-85.1)	82.8 (76.0-89.6)	78.5 (69.3-87.7)	80.7 (79.5-81.9)
Partner Sex					
Opposite	97.8 (97.5-98.2)	99.6 (99.2-100.0)	94.0 (89.0-99.0)	95.3 (91.0-99.6)	97.8 (97.5-98.2)
Same	2.2 (1.8-2.5)	0.4 (0.0-0.8)	6.0 (1.0-11.0)	4.7 (0.4-9.0)	2.2 (1.8-2.5)
MEANS (95% CI)					
Age at Wave IV	28.3 (28.1-28.6)	28.3 (28.0-28.7)	28.7 (28.3-29.1)	28.7 (28.2-29.2)	28.3 (28.1-28.6)
Age at First Sex	16.3 (16.2-16.4)	15.9 (15.5-16.4)	16.6 (15.9-17.4)	16.5 (15.8-17.1)	16.3 (16.2-16.4)
Lifetime Sexual Partners	13.2 (12.7-13.8)	14.3 (11.9-16.7)	15.0 (11.0-19.0)	10.8 (8.3-13.3)	13.3 (12.8-13.8)
Years Sexually Active	13.0 (12.8-13.3)	13.4 (12.9-13.9)	13.1 (12.2-14.0)	13.2 (12.5-13.9)	13.1 (12.8-13.3)
Relationship Quality (Range: 1-5)	4.1 (4.1-4.2)	4.1 (4.1-4.2)	4.1 (3.9-4.3)	4.1 (4.0-4.3)	4.1 (4.1-4.2)
Relationship Duration (Months)	59.1 (57.0-61.2)	62.4 (55.6-69.1)	56.2 (46.4-65.9)	58.9 (48.1-69.8)	59.2 (57.1-61.3)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development

Table 38: Descriptive statistics by physical disability severity for romantic relationship quality analyses using pre-18 partnering as the main predictor

<i>n (%)</i>	<u>None</u> 10,455 (94.5)	<u>Mild</u> 413 (3.4)	<u>Moderate</u> 156 (1.2)	<u>Severe</u> 111 (0.9)	<u>Total</u> 11,135 (100.0)
Biological Sex					
Male	4,772 (49.9)	191 (46.7)	78 (54.3)	47 (45.6)	5,088 (49.8)
Female	5,683 (50.1)	222 (53.3)	78 (45.7)	64 (54.4)	6,047 (50.2)
Race/Ethnicity					
Hispanic	1,822 (12.3)	60 (10.1)	23 (11.2)	14 (7.3)	1,919 (12.1)
NH Black	2,351 (15.5)	72 (10.5)	29 (20.9)	16 (17.9)	2,468 (15.4)
NH White	6,282 (72.3)	281 (79.4)	104 (67.9)	81 (74.8)	6,748 (72.5)
Parent Education (SES)					
<HS	1,302 (11.6)	43 (10.5)	19 (17.9)	12 (10.3)	1,376 (11.7)
HS/GED	2,677 (27.4)	103 (23.1)	36 (16.5)	35 (37.0)	2,851 (27.2)
Some College	3,085 (29.7)	132 (31.7)	52 (33.0)	37 (29.9)	3,306 (29.9)
College Grad	3,391 (31.3)	135 (34.8)	49 (32.6)	27 (22.8)	3,602 (31.3)
Sexual Orientation					
Heterosexual	9,033 (86.8)	356 (86.4)	126 (79.8)	92 (85.4)	9,607 (86.7)
Sexual Minority	1,422 (13.2)	57 (13.6)	30 (20.2)	19 (14.6)	1,528 (13.3)
Cognitive Ability Score					
<85	1,377 (11.3)	42 (9.6)	15 (10.8)	16 (17.5)	1,450 (11.3)
85-99	3,569 (33.1)	141 (36.3)	61 (37.5)	34 (33.2)	3,805 (33.2)
100-114	3,717 (37.3)	158 (37.5)	47 (28.6)	40 (29.1)	3,962 (37.1)
>114	1,792 (18.4)	72 (16.7)	33 (23.2)	21 (20.3)	1,918 (18.4)
Coerced Sex					
No	9,156 (87.5)	342 (83.0)	125 (75.7)	88 (81.0)	9,711 (87.1)
Yes	1,299 (12.5)	71 (17.0)	31 (24.3)	23 (19.0)	1,424 (12.9)
Forced Sex					
No	9,623 (92.1)	360 (86.9)	138 (86.4)	92 (85.5)	10,213 (91.8)
Yes	832 (7.9)	53 (13.1)	18 (13.6)	19 (14.5)	922 (8.2)
Sexual Abuse					
No	9,945 (95.3)	385 (93.4)	143 (92.1)	102 (88.9)	10,575 (95.2)
Yes	510 (4.7)	28 (6.6)	13 (7.9)	9 (11.1)	560 (4.8)

<i>n (%)</i>	<u>None</u> 10,455 (94.5)	<u>Mild</u> 413 (3.4)	<u>Moderate</u> 156 (1.2)	<u>Severe</u> 111 (0.9)	<u>Total</u> 11,135 (100.0)
Relationship Type					
Married	4,864 (46.2)	203 (51.9)	65 (37.3)	54 (48.0)	5,186 (46.3)
Cohabiting	2,766 (27.6)	117 (28.3)	36 (23.4)	29 (23.8)	2,948 (27.5)
Pregnancy	275 (2.0)	7 (2.0)	7 (8.4)	6 (6.2)	295 (2.1)
Currently Dating	1,683 (16.0)	63 (12.3)	33 (19.3)	13 (12.5)	1,792 (15.8)
Recent	867 (8.2)	23 (5.5)	15 (11.6)	9 (9.5)	914 (8.2)
Current Relationship					
No	1,918 (18.5)	68 (20.2)	23 (16.9)	20 (15.0)	2,029 (18.5)
Yes	8,537 (81.5)	345 (79.8)	133 (83.2)	91 (85.0)	9,106 (81.5)
Partner Sex					
Opposite	10,213 (97.8)	405 (99.6)	148 (93.5)	106 (96.3)	10,872 (97.8)
Same	242 (2.2)	8 (0.5)	8 (6.5)	5 (3.8)	263 (2.2)
MEANS (SD)					
Age at Wave IV	28.3 (1.8)	28.2 (1.9)	28.6 (1.7)	28.6 (2.0)	28.3 (1.8)
Age at First Sex	16.4 (2.8)	16.0 (2.8)	16.8 (3.7)	16.6 (3.0)	16.3 (2.8)
Number of Pre-18 Sexual Partners	3.0 (5.6)	3.4 (5.9)	4.5 (8.7)	2.8 (5.1)	3.1 (5.6)
Number of Post-18 Sexual Partners	9.9 (13.6)	9.8 (14.9)	10.8 (15.0)	8.4 (11.2)	9.9 (13.6)
Years Sexually Active	12.9 (3.2)	13.2 (3.3)	12.8 (4.3)	13.0 (3.1)	12.9 (3.3)
Relationship Quality (Range: 1-5)	4.2 (0.79)	4.1 (0.80)	4.1 (0.84)	4.2 (0.82)	4.2 (0.79)
Relationship Duration (Months)	59.6 (46.3)	64.8 (49.6)	54.7 (46.3)	59.8 (52.7)	59.7 (46.5)

Notes: Percentages and means are weighted to yield national probability estimates; Percentages may not sum to 100 due to rounding; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; SD = standard deviation

Table 39: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between timing of sexual activity and romantic relationship quality across disability groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	0.004 (-0.081-0.089)	0.005 (-0.077-0.087)	0.157 (-0.204-0.517)	0.125 (-0.187-0.436)
Moderate	-0.042 (-0.230-0.145)	-0.001 (-0.168-0.166)	-0.319 (-1.025-0.387)	-0.184 (-0.759-0.392)
Severe	-0.011 (-0.176-0.155)	0.032 (-0.113-0.177)	0.226 (-0.336-0.788)	0.171 (-0.386-0.728)
Years Sexually Active	-0.017 (-0.022--0.011)*	-0.012 (-0.018--0.006)*	-0.016 (-0.022--0.011)*	-0.012 (-0.018--0.006)*
Physical Disability * Years Sexually Active (None)				
Mild			-0.011 (-0.037-0.014)	-0.009 (-0.031-0.013)
Moderate			0.021 (-0.031-0.074)	0.014 (-0.029-0.057)
Severe			-0.018 (-0.061-0.025)	-0.011 (-0.053-0.032)
Biological Sex (Male)				
Female		0.021 (-0.017-0.060)		0.021 (-0.017-0.060)
Race/Ethnicity (NH White)				
Hispanic		-0.065 (-0.123--0.007)*		-0.066 (-0.123--0.008)*
NH Black		-0.145 (-0.193--0.097)*		-0.146 (-0.194--0.098)*
Parent Education (SES; College Grad)				
<HS		-0.048 (-0.110-0.014)		-0.047 (-0.110-0.015)
HS/GED		-0.076 (-0.119--0.032)*		-0.075 (-0.119--0.032)*
Some College		-0.082 (-0.128--0.036)*		-0.082 (-0.128--0.036)*
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.129 (-0.192--0.065)*		-0.129 (-0.193--0.066)*
Cognitive Ability Score (100-114)				
<85		0.044 (-0.018-0.106)		0.044 (-0.018-0.106)
85-99		-0.013 (-0.055-0.030)		-0.012 (-0.055-0.030)
>114		0.026 (-0.023-0.075)		0.027 (-0.023-0.076)
Age at Wave IV		-0.011 (-0.023-0.002)		-0.011 (-0.023-0.002)

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Coerced Sex (No)				
Yes		-0.142 (-0.212--0.071)*		-0.141 (-0.212--0.071)*
Forced Sex (No)				
Yes		-0.065 (-0.145-0.016)		-0.065 (-0.146-0.015)
Sexual Abuse (No)				
Yes		-0.110 (-0.190--0.030)*		-0.111 (-0.191--0.031)*
Current Relationship (No)				
Yes		0.661 (0.589-0.732)*		0.660 (0.588-0.732)*
Relationship Type (Married)				
Cohabiting		0.045 (-0.010-0.099)		0.045 (-0.010-0.099)
Pregnancy		-0.128 (-0.270-0.014)		-0.127 (-0.269-0.014)
Currently Dating		-0.140 (-0.201--0.080)*		-0.140 (-0.200--0.079)*
Recent		-0.126 (-0.217--0.036)*		-0.126 (-0.216--0.036)*
Relationship Duration (Months)		0.000 (-0.001-0.000)		0.000 (-0.001-0.000)
Partner Sex (Opposite)				
Same		0.123 (-0.003-0.248)		0.123 (-0.002-0.249)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 40: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of lifetime sexual partners and romantic relationship quality across disability groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	0.004 (-0.081-0.089)	0.007 (-0.075-0.089)	0.037 (-0.096-0.170)	0.046 (-0.075-0.166)
Moderate	-0.033 (-0.216-0.149)	0.000 (-0.166-0.167)	-0.065 (-0.288-0.158)	-0.026 (-0.229-0.177)
Severe	-0.026 (-0.190-0.138)	0.024 (-0.119-0.166)	0.034 (-0.176-0.244)	0.116 (-0.079-0.311)
Lifetime Sexual Partners	-0.005 (-0.007--0.004)*	-0.003 (-0.005--0.002)*	-0.005 (-0.007--0.004)*	-0.003 (-0.005--0.002)*
Physical Disability * Lifetime Sexual Partners (None)				
Mild			-0.002 (-0.011-0.006)	-0.003 (-0.009-0.004)
Moderate			0.002 (-0.005-0.009)	0.002 (-0.004-0.008)
Severe			-0.005 (-0.020-0.009)	-0.008 (-0.022-0.005)
Years Sexually Active		-0.006 (-0.012-0.001)		-0.006 (-0.012-0.000)
Biological Sex (Male)				
Female		-0.001 (-0.039-0.037)		-0.002 (-0.039-0.036)
Race/Ethnicity (NH White)				
Hispanic		-0.064 (-0.121--0.007)*		-0.064 (-0.121--0.006)*
NH Black		-0.140 (-0.188--0.092)*		-0.140 (-0.188--0.092)*
Parent Education (SES; College Grad)				
<HS		-0.060 (-0.121-0.002)		-0.060 (-0.121-0.002)
HS/GED		-0.083 (-0.126--0.040)*		-0.083 (-0.126--0.040)*
Some College		-0.085 (-0.131--0.040)*		-0.086 (-0.132--0.041)*
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.113 (-0.174--0.052)*		-0.113 (-0.174--0.052)*
Cognitive Ability Score (100-114)				
<85		0.037 (-0.025-0.099)		0.037 (-0.025-0.099)
85-99		-0.014 (-0.057-0.029)		-0.014 (-0.056-0.029)
>114		0.025 (-0.024-0.074)		0.025 (-0.024-0.074)
Age at Wave IV		-0.014 (-0.026--0.002)*		-0.014 (-0.026--0.002)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Coerced Sex (No)				
Yes		-0.131 (-0.201--0.060)*		-0.131 (-0.201--0.061)*
Forced Sex (No)				
Yes		-0.054 (-0.133-0.026)		-0.054 (-0.134-0.026)
Sexual Abuse (No)				
Yes		-0.102 (-0.181--0.022)*		-0.103 (-0.182--0.023)*
Current Relationship (No)				
Yes		0.658 (0.587-0.730)*		0.658 (0.586-0.730)*
Relationship Type (Married)				
Cohabiting		0.051 (-0.003-0.106)		0.051 (-0.003-0.105)
Pregnancy		-0.116 (-0.257-0.025)		-0.114 (-0.255-0.026)
Currently Dating		-0.130 (-0.191--0.068)*		-0.130 (-0.192--0.069)*
Recent		-0.129 (-0.219--0.039)*		-0.131 (-0.222--0.041)*
Relationship Duration (Months)				
		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.127 (0.002-0.253)*		0.126 (0.001-0.252)*

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 41: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of pre-18 sexual partners and romantic relationship quality across disability groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability (None)				
Mild	-0.033 (-0.127-0.061)	-0.023 (-0.116-0.071)	0.065 (-0.053-0.183)	0.054 (-0.061-0.169)
Moderate	0.000 (-0.181-0.181)	0.028 (-0.141-0.198)	-0.002 (-0.198-0.194)	0.011 (-0.172-0.194)
Severe	0.021 (-0.154-0.196)	0.030 (-0.122-0.181)	0.032 (-0.179-0.243)	0.050 (-0.132-0.233)
Pre-18 Sexual Partners	-0.010 (-0.015--0.006)*	-0.002 (-0.006-0.002)	-0.009 (-0.014--0.005)*	-0.001 (-0.005-0.003)
Physical Disability * Pre-18 Sexual Partners (None)				
Mild			-0.029 (-0.046--0.011)*	-0.022 (-0.037--0.008)*
Moderate			0.000 (-0.016-0.016)	0.003 (-0.012-0.019)
Severe			-0.004 (-0.055-0.047)	-0.007 (-0.051-0.036)
Years Sexually Active		-0.008 (-0.015--0.001)*		-0.008 (-0.014--0.001)*
Post-18 Sexual Partners		-0.004 (-0.005--0.002)*		-0.004 (-0.005--0.002)*
Biological Sex (Male)				
Female		0.004 (-0.035-0.042)		0.004 (-0.035-0.042)
Race/Ethnicity (NH White)				
Hispanic		-0.055 (-0.116-0.006)		-0.055 (-0.116-0.006)
NH Black		-0.136 (-0.191--0.081)*		-0.138 (-0.192--0.083)*
Parent Education (SES; College Grad)				
<HS		-0.045 (-0.115-0.025)		-0.045 (-0.116-0.025)
HS/GED		-0.080 (-0.127--0.032)*		-0.080 (-0.128--0.033)*
Some College		-0.090 (-0.138--0.041)*		-0.091 (-0.139--0.042)*
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.108 (-0.174--0.042)*		-0.105 (-0.171--0.040)*
Cognitive Ability Score (100-114)				
<85		0.008 (-0.054-0.070)		0.009 (-0.053-0.070)
85-99		-0.026 (-0.073-0.021)		-0.026 (-0.072-0.021)
>114		0.024 (-0.025-0.073)		0.024 (-0.025-0.073)

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Age at Wave IV		-0.010 (-0.022-0.003)		-0.010 (-0.022-0.003)
Coerced Sex (No)				
Yes		-0.136 (-0.208--0.064)*		-0.136 (-0.208--0.063)*
Forced Sex (No)				
Yes		-0.066 (-0.158-0.026)		-0.066 (-0.158-0.026)
Sexual Abuse (No)				
Yes		-0.130 (-0.221--0.038)*		-0.132 (-0.222--0.041)*
Current Relationship (No)				
Yes		0.693 (0.612-0.774)*		0.692 (0.611-0.773)*
Relationship Type (Married)				
Cohabiting		0.051 (-0.008-0.110)		0.051 (-0.008-0.110)
Pregnancy		-0.130 (-0.270-0.011)		-0.119 (-0.260-0.022)
Currently Dating		-0.142 (-0.208--0.076)*		-0.143 (-0.209--0.077)*
Recent		-0.137 (-0.244--0.030)*		-0.138 (-0.246--0.031)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.119 (-0.013-0.251)		0.117 (-0.015-0.249)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05

Table 42: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between timing of sexual activity and romantic relationship quality across disability/biological sex groups

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	-0.014 (-0.054-0.026)	0.018 (-0.020-0.057)	0.127 (-0.011-0.265)	0.050 (-0.076-0.176)
Mild/Male	-0.024 (-0.151-0.102)	0.007 (-0.124-0.137)	-0.015 (-0.495-0.465)	-0.032 (-0.464-0.400)
Mild/Female	0.018 (-0.100-0.136)	0.022 (-0.081-0.125)	0.517 (0.047-0.988)	0.401 (-0.003-0.805)
Moderate/Male	-0.033 (-0.282-0.216)	-0.059 (-0.311-0.193)	0.218 (-0.974-1.410)	0.147 (-0.939-1.234)
Moderate/Female	-0.067 (-0.333-0.199)	0.080 (-0.132-0.293)	-0.551 (-1.314-0.211)	-0.351 (-0.910-0.207)
Severe/Male	-0.133 (-0.382-0.116)	-0.054 (-0.252-0.145)	0.530 (-0.516-1.577)	0.467 (-0.370-1.303)
Severe/Female	0.080 (-0.122-0.283)	0.124 (-0.069-0.317)	0.119 (-0.527-0.765)	0.010 (-0.689-0.709)
Years Sexually Active	-0.017 (-0.022--0.011)*	-0.012 (-0.018--0.006)*	-0.012 (-0.019--0.004)*	-0.011 (-0.018--0.003)*
Physical Disability/Biological Sex * Years Sexually Active (None/Male)				
None/Female			-0.011 (-0.021-0.000)	-0.002 (-0.012-0.008)
Mild/Male			-0.001 (-0.035-0.033)	0.003 (-0.027-0.033)
Mild/Female			-0.038 (-0.072--0.003)	-0.029 (-0.059-0.002)
Moderate/Male			-0.019 (-0.107-0.070)	-0.015 (-0.094-0.064)
Moderate/Female			0.039 (-0.017-0.095)	0.034 (-0.008-0.076)
Severe/Male			-0.050 (-0.128-0.028)	-0.040 (-0.102-0.023)
Severe/Female			-0.003 (-0.054-0.048)	0.009 (-0.045-0.062)
Race/Ethnicity (NH White)				
Hispanic		-0.065 (-0.122--0.007)*		-0.065 (-0.124--0.007)*
NH Black		-0.144 (-0.192--0.097)*		-0.146 (-0.193--0.099)*
Parent Education (SES; College Grad)				
<HS		-0.047 (-0.109-0.015)		-0.046 (-0.108-0.016)
HS/GED		-0.076 (-0.120--0.032)*		-0.075 (-0.119--0.031)*
Some College		-0.082 (-0.128--0.036)*		-0.081 (-0.128--0.035)*
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.129 (-0.193--0.066)*		-0.129 (-0.193--0.065)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.044 (-0.018-0.106)		0.045 (-0.017-0.107)
85-99		-0.013 (-0.055-0.030)		-0.012 (-0.055-0.030)
>114		0.026 (-0.023-0.075)		0.027 (-0.022-0.076)
Age at Wave IV		-0.011 (-0.023-0.001)		-0.011 (-0.023-0.002)
Coerced Sex (No)				
Yes		-0.142 (-0.213--0.071)*		-0.142 (-0.213--0.071)*
Forced Sex (No)				
Yes		-0.066 (-0.146-0.015)		-0.065 (-0.146-0.015)
Sexual Abuse (No)				
Yes		-0.110 (-0.190--0.029)*		-0.111 (-0.191--0.030)*
Current Relationship (No)				
Yes		0.661 (0.589-0.733)*		0.660 (0.588-0.732)*
Relationship Type (Married)				
Cohabiting		0.045 (-0.009-0.099)		0.046 (-0.009-0.100)
Pregnancy		-0.127 (-0.270-0.016)		-0.127 (-0.269-0.016)
Currently Dating		-0.141 (-0.201--0.080)*		-0.139 (-0.200--0.079)*
Recent		-0.127 (-0.217--0.037)*		-0.125 (-0.215--0.035)*
Relationship Duration (Months)		0.000 (-0.001-0.000)		0.000 (-0.001-0.000)
Partner Sex (Opposite)				
Same		0.122 (-0.003-0.247)		0.123 (-0.006-0.246)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 43: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of lifetime sexual partners and romantic relationship quality across disability/biological sex groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	-0.043 (-0.083--0.004)	-0.004 (-0.042-0.034)	0.010 (-0.039-0.060)	0.022 (-0.025-0.068)
Mild/Male	-0.025 (-0.155-0.105)	0.009 (-0.122-0.141)	-0.051 (-0.227-0.125)	0.023 (-0.165-0.210)
Mild/Female	-0.010 (-0.126-0.106)	0.000 (-0.102-0.103)	0.146 (-0.017-0.309)	0.102 (-0.036-0.241)
Moderate/Male	-0.045 (-0.291-0.200)	-0.063 (-0.314-0.188)	-0.086 (-0.409-0.238)	-0.061 (-0.397-0.274)
Moderate/Female	-0.065 (-0.325-0.195)	0.065 (-0.147-0.278)	-0.061 (-0.387-0.266)	0.031 (-0.218-0.280)
Severe/Male	-0.144 (-0.392-0.104)	-0.063 (-0.255-0.129)	-0.109 (-0.437-0.220)	0.029 (-0.230-0.289)
Severe/Female	0.033 (-0.167-0.233)	0.093 (-0.100-0.286)	0.131 (-0.169-0.431)	0.186 (-0.121-0.493)
Lifetime Sexual Partners	-0.006 (-0.007--0.004)*	-0.003 (-0.005--0.002)*	-0.004 (-0.006--0.003)*	-0.003 (-0.004--0.001)*
Physical Disability/Biological Sex * Lifetime Sexual Partners (None/Male)				
None/Female			-0.005 (-0.008--0.002)*	-0.002 (-0.005-0.000)
Mild/Male			0.001 (-0.006-0.009)	-0.001 (-0.008-0.006)
Mild/Female			-0.013 (-0.024--0.002)	-0.009 (-0.018-0.000)
Moderate/Male			0.003 (-0.010-0.015)	0.000 (-0.012-0.011)
Moderate/Female			0.000 (-0.008-0.008)	0.002 (-0.004-0.008)
Severe/Male			-0.002 (-0.018-0.013)	-0.006 (-0.021-0.008)
Severe/Female			-0.011 (-0.045-0.023)	-0.011 (-0.044-0.021)
Years Sexually Active		-0.006 (-0.012-0.001)		-0.005 (-0.012-0.001)
Race/Ethnicity (NH White)				
Hispanic		-0.063 (-0.120--0.006)*		-0.065 (-0.122--0.007)*
NH Black		-0.139 (-0.187--0.091)*		-0.141 (-0.189--0.094)*
Parent Education (SES; College Grad)				
<HS		-0.059 (-0.120-0.002)		-0.058 (-0.120-0.003)
HS/GED		-0.083 (-0.126--0.040)*		-0.083 (-0.126--0.040)*
Some College		-0.085 (-0.131--0.040)*		-0.086 (-0.131--0.040)*
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.113 (-0.175--0.052)*		-0.101 (-0.164--0.039)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.037 (-0.025-0.100)		0.037 (-0.025-0.099)
85-99		-0.014 (-0.057-0.029)		-0.014 (-0.057-0.028)
>114		0.025 (-0.024-0.074)		0.025 (-0.025-0.074)
Age at Wave IV		-0.014 (-0.026--0.002)*		-0.014 (-0.026--0.002)*
Coerced Sex (No)				
Yes		-0.131 (-0.202--0.061)*		-0.126 (-0.196--0.056)*
Forced Sex (No)				
Yes		-0.055 (-0.135-0.025)		-0.049 (-0.129-0.030)
Sexual Abuse (No)				
Yes		-0.102 (-0.181--0.022)*		-0.101 (-0.181--0.020)*
Current Relationship (No)				
Yes		0.659 (0.587-0.730)*		0.658 (0.587-0.730)*
Relationship Type (Married)				
Cohabiting		0.052 (-0.002-0.106)		0.051 (-0.003-0.105)
Pregnancy		-0.115 (-0.258-0.027)		-0.107 (-0.248-0.035)
Currently Dating		-0.130 (-0.192--0.069)*		-0.132 (-0.193--0.071)*
Recent		-0.129 (-0.219--0.040)*		-0.133 (-0.223--0.044)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.127 (0.001-0.252)*		0.116 (0.010-0.242)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 44: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of pre-18 sexual partners and romantic relationship quality across disability/biological sex groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Biological Sex (None/Male)				
None/Female	-0.017 (-0.058-0.024)	-0.001 (-0.039-0.038)	0.025 (-0.022-0.071)	0.023 (-0.018-0.064)
Mild/Male	-0.088 (-0.228-0.051)	-0.049 (-0.201-0.104)	0.006 (-0.174-0.186)	0.036 (-0.158-0.230)
Mild/Female	-0.001 (-0.123-0.121)	0.000 (-0.108-0.108)	0.126 (-0.018-0.269)	0.084 (-0.040-0.209)
Moderate/Male	0.013 (-0.234-0.261)	-0.035 (-0.294-0.224)	0.010 (-0.253-0.273)	-0.030 (-0.317-0.258)
Moderate/Female	-0.035 (-0.276-0.207)	0.103 (-0.091-0.297)	-0.001 (-0.292-0.290)	0.076 (-0.137-0.290)
Severe/Male	-0.087 (-0.359-0.185)	-0.055 (-0.280-0.169)	0.047 (-0.313-0.408)	0.065 (-0.210-0.341)
Severe/Female	0.096 (-0.123-0.314)	0.101 (-0.094-0.296)	0.081 (-0.162-0.324)	0.092 (-0.125-0.310)
Pre-18 Sexual Partners	-0.010 (-0.015--0.006)*	-0.002 (-0.006-0.002)	-0.005 (-0.010-0.000)	0.002 (-0.003-0.006)
Physical Disability/Biological Sex * Pre-18 Sexual Partners (None/Male)				
None/Female			-0.014 (-0.023--0.005)*	-0.009 (-0.017--0.002)
Mild/Male			-0.028 (-0.050--0.005)	-0.025 (-0.047--0.003)
Mild/Female			-0.037 (-0.058--0.015)*	-0.026 (-0.044--0.008)*
Moderate/Male			-0.001 (-0.025-0.023)	-0.002 (-0.025-0.020)
Moderate/Female			-0.009 (-0.028-0.009)	0.004 (-0.010-0.018)
Severe/Male			-0.042 (-0.126-0.043)	-0.038 (-0.098-0.023)
Severe/Female			0.008 (-0.021-0.036)	0.003 (-0.027-0.032)
Years Sexually Active		-0.008 (-0.014--0.001)*		-0.007 (-0.014-0.000)*
Post-18 Sexual Partners		-0.004 (-0.005--0.002)*		-0.004 (-0.006--0.003)*
Race/Ethnicity (NH White)				
Hispanic		-0.054 (-0.115-0.007)		-0.056 (-0.117-0.005)
NH Black		-0.135 (-0.190--0.080)*		-0.138 (-0.193--0.084)*
Parent Education (SES; College Grad)				
<HS		-0.045 (-0.115-0.026)		-0.044 (-0.114-0.027)
HS/GED		-0.080 (-0.128--0.033)*		-0.080 (-0.128--0.033)*
Some College		-0.090 (-0.138--0.041)*		-0.091 (-0.139--0.043)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.109 (-0.174--0.043)*		-0.098 (-0.166--0.031)*
Cognitive Ability Score (100-114)				
<85		0.008 (-0.054-0.070)		0.007 (-0.054-0.068)
85-99		-0.026 (-0.073-0.021)		-0.027 (-0.073-0.020)
>114		0.024 (-0.025-0.073)		0.023 (-0.026-0.072)
Age at Wave IV		-0.010 (-0.022-0.003)		-0.010 (-0.022-0.002)
Coerced Sex (No)				
Yes		-0.136 (-0.208--0.064)*		-0.130 (-0.203--0.058)*
Forced Sex (No)				
Yes		-0.068 (-0.160-0.024)		-0.061 (-0.152-0.030)
Sexual Abuse (No)				
Yes		-0.130 (-0.221--0.039)*		-0.130 (-0.221--0.039)*
Current Relationship (No)				
Yes		0.693 (0.612-0.774)*		0.690 (0.609-0.771)*
Relationship Type (Married)				
Cohabiting		0.052 (-0.008-0.111)		0.051 (-0.008-0.110)
Pregnancy		-0.128 (-0.270-0.014)		-0.120 (-0.263-0.023)
Currently Dating		-0.142 (-0.208--0.076)*		-0.142 (-0.208--0.075)*
Recent		-0.137 (-0.244--0.030)*		-0.139 (-0.245--0.032)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.119 (-0.013-0.251)		0.110 (-0.021-0.242)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * $p < 0.05$ with Holm-Bonferroni correction for multiple comparisons

Table 455: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between timing of sexual activity and romantic relationship quality across disability/race groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	-0.083 (-0.138--0.028)*	-0.070 (-0.129--0.010)	-0.185 (-0.418-0.048)	-0.166 (-0.368-0.035)
None/NH Black	-0.222 (-0.267--0.177)*	-0.146 (-0.194--0.097)*	-0.382 (-0.552--0.212)*	-0.294 (-0.458--0.130)*
Mild/Hispanic	0.119 (-0.150-0.388)	0.243 (-0.036-0.521)	0.384 (-0.381-1.149)	0.166 (-0.429-0.761)
Mild/NH Black	-0.227 (-0.535-0.082)	-0.161 (-0.449-0.127)	0.100 (-0.747-0.946)	-0.069 (-1.080-0.942)
Mild/NH White	-0.035 (-0.128-0.057)	-0.031 (-0.122-0.060)	0.071 (-0.341-0.482)	0.072 (-0.268-0.411)
Moderate/Hispanic	-0.243 (-0.637-0.151)	-0.299 (-0.673-0.075)	2.103 (-0.546-4.752)	1.666 (-0.530-3.861)
Moderate/NH Black	-0.199 (-0.662-0.263)	-0.071 (-0.487-0.346)	0.120 (-1.727-1.967)	0.130 (-1.658-1.918)
Moderate/NH White	-0.029 (-0.241-0.183)	0.006 (-0.171-0.183)	-0.895 (-1.549--0.241)	-0.584 (-1.103--0.064)
Severe/Hispanic	-0.355 (-0.803-0.093)	-0.294 (-0.593-0.004)	-0.821 (-1.741-0.099)	-0.873 (-1.351--0.396)*
Severe/NH Black	-0.253 (-0.747-0.241)	-0.182 (-0.619-0.255)	0.459 (-2.328-3.246)	0.538 (-1.822-2.897)
Severe/NH White	0.021 (-0.156-0.199)	0.080 (-0.082-0.243)	0.276 (-0.338-0.890)	0.178 (-0.459-0.815)
Years Sexually Active	-0.014 (-0.019--0.009)*	-0.012 (-0.018--0.006)*	-0.017 (-0.023--0.011)*	-0.015 (-0.021--0.009)*
Physical Disability/Race * Years Sexually Active (None/NH White)				
None/Hispanic			0.008 (-0.010-0.026)	0.007 (-0.008-0.023)
None/NH Black			0.012 (-0.001-0.024)	0.011 (-0.001-0.023)
Mild/Hispanic			-0.020 (-0.075-0.036)	0.006 (-0.046-0.057)
Mild/NH Black			-0.025 (-0.083-0.034)	-0.008 (-0.080-0.065)
Mild/NH White			-0.008 (-0.038-0.023)	-0.008 (-0.033-0.018)
Moderate/Hispanic			-0.173 (-0.379-0.033)	-0.145 (-0.313-0.023)
Moderate/NH Black			-0.022 (-0.125-0.082)	-0.013 (-0.116-0.089)
Moderate/NH White			0.069 (0.019-0.120)	0.047 (0.006-0.089)
Severe/Hispanic			0.034 (-0.012-0.080)	0.042 (0.011-0.072)
Severe/NH Black			-0.055 (-0.267-0.158)	-0.055 (-0.236-0.125)
Severe/NH White			-0.019 (-0.067-0.029)	-0.007 (-0.057-0.042)
Biological Sex (Male)				
Female		0.021 (-0.017-0.060)		0.023 (-0.015-0.061)
Parent Education (SES; College Grad)				
<HS		-0.049 (-0.110-0.013)		-0.044 (-0.105-0.018)
HS/GED		-0.076 (-0.120--0.032)*		-0.074 (-0.118--0.030)*
Some College		-0.084 (-0.130--0.037)*		-0.082 (-0.128--0.036)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.128 (-0.192--0.065)*		-0.129 (-0.192--0.065)*
Cognitive Ability Score (100-114)				
<85		0.043 (-0.019-0.105)		0.043 (-0.019-0.105)
85-99		-0.013 (-0.055-0.030)		-0.012 (-0.055-0.030)
>114		0.025 (-0.024-0.074)		0.023 (-0.025-0.072)
Age at Wave IV		-0.011 (-0.023-0.002)		-0.010 (-0.023-0.002)
Coerced Sex (No)				
Yes		-0.142 (-0.214--0.071)*		-0.141 (-0.212--0.071)*
Forced Sex (No)				
Yes		-0.065 (-0.146-0.016)		-0.066 (-0.147-0.015)
Sexual Abuse (No)				
Yes		-0.110 (-0.190--0.030)*		-0.114 (-0.194--0.033)*
Current Relationship (No)				
Yes		0.661 (0.589-0.732)*		0.659 (0.588-0.731)*
Relationship Type (Married)				
Cohabiting		0.044 (-0.010-0.099)		0.045 (-0.009-0.099)
Pregnancy		-0.130 (-0.270-0.010)		-0.131 (-0.270-0.009)
Currently Dating		-0.140 (-0.201--0.080)*		-0.140 (-0.201--0.079)*
Recent		-0.130 (-0.220--0.039)*		-0.128 (-0.219--0.037)*
Relationship Duration (Months)		0.000 (-0.001-0.000)		0.000 (-0.001-0.000)
Partner Sex (Opposite)				
Same		0.122 (-0.003-0.248)		0.122 (-0.005-0.248)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 46: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of lifetime sexual partners and romantic relationship quality across disability/race groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	-0.088 (-0.144--0.033)*	-0.068 (-0.127--0.009)	-0.107 (-0.168--0.045)*	-0.088 (-0.153--0.023)
None/NH Black	-0.222 (-0.267--0.176)*	-0.140 (-0.189--0.092)*	-0.238 (-0.287--0.189)*	-0.147 (-0.195--0.099)*
Mild/Hispanic	0.097 (-0.172-0.366)	0.232 (-0.040-0.504)	0.134 (-0.218-0.486)	0.280 (-0.079-0.640)
Mild/NH Black	-0.229 (-0.544-0.085)	-0.161 (-0.449-0.127)	-0.308 (-0.770-0.154)	-0.228 (-0.660-0.205)
Mild/NH White	-0.032 (-0.123-0.059)	-0.026 (-0.116-0.065)	0.007 (-0.128-0.143)	0.011 (-0.113-0.134)
Moderate/Hispanic	-0.258 (-0.647-0.131)	-0.310 (-0.677-0.057)	0.716 (0.120-1.313)	0.581 (0.058-1.103)
Moderate/NH Black	-0.204 (-0.651-0.243)	-0.063 (-0.474-0.348)	-0.158 (-0.732-0.416)	-0.061 (-0.598-0.477)
Moderate/NH White	-0.013 (-0.222-0.195)	0.010 (-0.168-0.187)	-0.132 (-0.404-0.141)	-0.066 (-0.289-0.158)
Severe/Hispanic	-0.348 (-0.792-0.096)	-0.285 (-0.587-0.017)	-0.701 (-1.205--0.196)	-0.724 (-1.074--0.373)*
Severe/NH Black	-0.245 (-0.724-0.234)	-0.186 (-0.600-0.229)	0.068 (-0.509-0.644)	0.161 (-0.307-0.629)
Severe/NH White	-0.001 (-0.179-0.176)	0.070 (-0.093-0.232)	-0.004 (-0.225-0.217)	0.128 (-0.090-0.345)
Lifetime Sexual Partners	-0.005 (-0.006--0.004)*	-0.003 (-0.005--0.002)*	-0.005 (-0.007--0.004)*	-0.004 (-0.005--0.002)*
Physical Disability/Race * Lifetime Sexual Partners (None/NH White)				
None/Hispanic			0.002 (-0.001-0.004)	0.002 (-0.001-0.004)
None/NH Black			0.001 (-0.001-0.004)	0.000 (-0.002-0.003)
Mild/Hispanic			-0.004 (-0.020-0.012)	-0.005 (-0.019-0.009)
Mild/NH Black			0.006 (-0.009-0.021)	0.005 (-0.011-0.020)
Mild/NH White			-0.003 (-0.011-0.006)	-0.002 (-0.009-0.004)
Moderate/Hispanic			-0.083(-0.148--0.017)	-0.076 (-0.126--0.026)
Moderate/NH Black			-0.003 (-0.012-0.007)	0.000 (-0.010-0.009)
Moderate/NH White			0.008 (-0.003-0.019)	0.005 (-0.004-0.015)
Severe/Hispanic			0.021 (-0.001-0.043)	0.026 (0.011-0.040)*
Severe/NH Black			-0.021 (-0.051-0.009)	-0.023 (-0.049-0.002)
Severe/NH White			0.000 (-0.017-0.017)	-0.006 (-0.025-0.012)
Years Sexually Active		-0.006 (-0.012-0.000)		-0.006 (-0.012-0.000)
Biological Sex (Male)				
Female		-0.001 (-0.039-0.037)		-0.001 (-0.038-0.037)
Parent Education (SES; College Grad)				
<HS		-0.060 (-0.121-0.000)		-0.056 (-0.117-0.004)
HS/GED		-0.084 (-0.126--0.041)*		-0.084 (-0.126--0.041)*
Some College		-0.087 (-0.133--0.041)*		-0.087 (-0.133--0.042)*

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.113 (-0.174--0.051)*		-0.113 (-0.175--0.052)*
Cognitive Ability Score (100-114)				
<85		0.037 (-0.026-0.099)		0.039 (-0.024-0.101)
85-99		-0.014 (-0.057-0.029)		-0.012 (-0.055-0.030)
>114		0.024 (-0.025-0.074)		0.025 (-0.025-0.074)
Age at Wave IV		-0.014 (-0.026--0.002)*		-0.014 (-0.026--0.002)*
Coerced Sex (No)				
Yes		-0.132 (-0.202--0.061)*		-0.132 (-0.203--0.062)*
Forced Sex (No)				
Yes		-0.054 (-0.134-0.026)		-0.054 (-0.133-0.026)
Sexual Abuse (No)				
Yes		-0.102 (-0.181--0.022)*		-0.102 (-0.182--0.022)*
Current Relationship (No)				
Yes		0.658 (0.587-0.730)*		0.657 (0.586-0.729)*
Relationship Type (Married)				
Cohabiting		0.051 (-0.003-0.105)		0.050 (-0.004-0.105)
Pregnancy		-0.119 (-0.258-0.020)		-0.122 (-0.260-0.017)
Currently Dating		-0.130 (-0.192--0.068)*		-0.131 (-0.193--0.069)*
Recent		-0.133 (-0.222--0.043)*		-0.136 (-0.226--0.045)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.127 (0.001-0.253)*		0.124 (-0.002-0.249)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 47: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of pre-18 sexual partners and romantic relationship quality across disability/race groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Race (None/NH White)				
None/Hispanic	-0.074 (-0.135--0.013)	-0.059 (-0.123-0.005)	-0.100 (-0.161--0.039)*	-0.080 (-0.146--0.015)
None/NH Black	-0.226 (-0.278--0.174)*	-0.135 (-0.189--0.080)*	-0.254 (-0.310--0.197)*	-0.159 (-0.216--0.102)*
Mild/Hispanic	0.049 (-0.201-0.299)	0.214 (-0.042-0.470)	0.010 (-0.271-0.291)	0.212 (-0.077-0.502)
Mild/NH Black	-0.330 (-0.704-0.044)	-0.320 (-0.672-0.032)	-0.358 (-0.814-0.097)	-0.329 (-0.767-0.109)
Mild/NH White	-0.060 (-0.164-0.044)	-0.039 (-0.142-0.065)	0.056 (-0.063-0.175)	0.044 (-0.073-0.160)
Moderate/Hispanic	-0.253 (-0.673-0.167)	-0.322 (-0.705-0.061)	0.095 (-0.293-0.483)	-0.019 (-0.467-0.430)
Moderate/NH Black	-0.033 (-0.493-0.426)	0.163 (-0.196-0.522)	0.062 (-0.478-0.603)	0.168 (-0.287-0.623)
Moderate/NH White	-0.015 (-0.215-0.186)	-0.005 (-0.178-0.168)	-0.062 (-0.288-0.164)	-0.039 (-0.230-0.151)
Severe/Hispanic	-0.059 (-0.412-0.293)	-0.107 (-0.440-0.226)	-0.358 (-0.658--0.059)	-0.367 (-0.675--0.058)
Severe/NH Black	-0.276 (-0.795-0.242)	-0.210 (-0.648-0.229)	0.051 (-0.525-0.626)	0.088 (-0.372-0.548)
Severe/NH White	0.042 (-0.153-0.236)	0.063 (-0.104-0.229)	0.019 (-0.243-0.280)	0.078 (-0.147-0.303)
Pre-18 Sexual Partners	-0.010 (-0.014--0.005)*	-0.002 (-0.006-0.002)	-0.011 (-0.017--0.006)*	-0.004 (-0.009-0.002)
Physical Disability/Race *Pre-18 Sexual Partners (None/NH White)				
None/Hispanic			0.009 (0.000-0.018)	0.007 (-0.002-0.016)
None/NH Black			0.008 (0.000-0.015)	0.006 (-0.001-0.013)
Mild/Hispanic			0.013 (-0.036-0.063)	0.000 (-0.041-0.041)
Mild/NH Black			0.009 (-0.025-0.044)	0.003 (-0.033-0.038)
Mild/NH White			-0.033 (-0.048--0.017)*	-0.023 (-0.037--0.009)*
Moderate/Hispanic			-0.092 (-0.284-0.100)	-0.081 (-0.234-0.072)
Moderate/NH Black			-0.014 (-0.032-0.005)	-0.001 (-0.019-0.017)
Moderate/NH White			0.012 (-0.012-0.037)	0.009 (-0.014-0.032)
Severe/Hispanic			0.032 (0.018-0.045)*	0.027 (0.015-0.039)*
Severe/NH Black			-0.084 (-0.141--0.026)*	-0.077 (-0.113--0.041)*
Severe/NH White			0.011 (-0.052-0.075)	-0.009 (-0.075-0.058)
Years Sexually Active		-0.008 (-0.015--0.001)*		-0.008 (-0.014--0.001)*
Post-18 Sexual Partners		-0.004 (-0.005--0.002)*		-0.004 (-0.006--0.002)*
Biological Sex (Male)				
Female		0.005 (-0.033-0.043)		0.005 (-0.033-0.043)

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Parent Education (SES; College Grad)				
<HS		-0.047 (-0.117-0.023)		-0.044 (-0.113-0.026)
HS/GED		-0.081 (-0.128--0.033)*		-0.080 (-0.128--0.033)*
Some College		-0.091 (-0.140--0.042)*		-0.092 (-0.140--0.044)*
Sexual Orientation (Heterosexual)				
Sexual Minority		-0.108 (-0.173--0.042)*		-0.105 (-0.171--0.040)*
Cognitive Ability Score (100-114)				
<85		0.007 (-0.055-0.068)		0.007 (-0.055-0.069)
85-99		-0.026 (-0.073-0.021)		-0.025 (-0.072-0.021)
>114		0.023 (-0.026-0.072)		0.022 (-0.027-0.071)
Age at Wave IV		-0.010 (-0.022-0.003)		-0.010 (-0.023-0.002)
Coerced Sex (No)				
Yes		-0.136 (-0.209--0.064)*		-0.137 (-0.209--0.064)*
Forced Sex (No)				
Yes		-0.067 (-0.159-0.025)		-0.065 (-0.157-0.028)
Sexual Abuse (No)				
Yes		-0.131 (-0.222--0.039)*		-0.131 (-0.222--0.041)*
Current Relationship (No)				
Yes		0.694 (0.613-0.775)*		0.690 (0.609-0.772)*
Relationship Type (Married)				
Cohabiting		0.050 (-0.009-0.109)		0.050 (-0.009-0.109)
Pregnancy		-0.140 (-0.275--0.004)*		-0.129 (-0.266-0.007)
Currently Dating		-0.143 (-0.210--0.077)*		-0.143 (-0.209--0.077)*
Recent		-0.140 (-0.248--0.033)*		-0.143 (-0.250--0.036)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.121 (-0.011-0.253)		0.119 (-0.013-0.251)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 488: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between timing of sexual activity and romantic relationship quality across disability/sexual orientation groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	-0.158 (-0.224--0.091)*	-0.128 (-0.195--0.062)*	0.006 (-0.223-0.235)	-0.011 (-0.220-0.198)
Mild/Heterosexual	0.022 (-0.072-0.117)	0.019 (-0.073-0.112)	0.149 (-0.214-0.511)	0.091 (-0.229-0.411)
Mild/Sexual Minority	-0.290 (-0.554--0.027)	-0.223 (-0.465-0.019)	0.205 (-1.056-1.465)	0.475 (-0.482-1.431)
Moderate/Heterosexual	-0.085 (-0.302-0.133)	-0.051(-0.248-0.146)	-0.333 (-1.188-0.523)	-0.143 (-0.837-0.551)
Moderate/Sexual Minority	0.035 (-0.279-0.349)	0.098 (-0.134-0.330)	-0.119 (-1.278-1.040)	-0.132 (-0.874-0.609)
Severe/Heterosexual	0.001 (-0.185-0.187)	0.036 (-0.119-0.191)	0.387 (-0.238-1.011)	0.363 (-0.202-0.929)
Severe/Sexual Minority	-0.177 (-0.514-0.161)	-0.113 (-0.470-0.245)	-0.015 (-1.362-1.332)	-0.446 (-1.859-0.967)
Years Sexually Active	-0.016 (-0.021--0.010)*	-0.012 (-0.018--0.006)*	-0.014 (-0.020--0.008)*	-0.011 (-0.017--0.004)*
Physical Disability/Sexual Orientation * Years Sexually Active (None/Heterosexual)				
None/Sexual Minority			-0.012 (-0.029-0.005)	-0.009 (-0.024-0.006)
Mild/Heterosexual			-0.010 (-0.036-0.017)	-0.005 (-0.028-0.018)
Mild/Sexual Minority			-0.036 (-0.124-0.052)	-0.050 (-0.120-0.019)
Moderate/Heterosexual			0.019 (-0.046-0.085)	0.007 (-0.046-0.061)
Moderate/Sexual Minority			0.011 (-0.062-0.083)	0.016 (-0.031-0.062)
Severe/Heterosexual			-0.029 (-0.075-0.018)	-0.024 (-0.066-0.017)
Severe/Sexual Minority			-0.014 (-0.126-0.099)	0.028 (-0.092-0.147)
Biological Sex (Male)				
Female		0.021 (-0.018-0.059)		0.022 (-0.017-0.060)
Race/Ethnicity (NH White)				
Hispanic		-0.065 (-0.123--0.007)*		-0.065 (-0.123--0.007)*
NH Black		-0.145 (-0.193--0.097)*		-0.147 (-0.194--0.099)*
Parent Education (SES; College Grad)				
<HS		-0.047 (-0.110-0.015)		-0.047 (-0.109-0.016)
HS/GED		-0.076 (-0.119--0.032)*		-0.075 (-0.119--0.031)*
Some College		-0.082 (-0.128--0.036)*		-0.082 (-0.128--0.036)*
Cognitive Ability Score (100-114)				
<85		0.044 (-0.018-0.106)		0.044 (-0.018-0.106)
85-99		-0.014 (-0.056-0.029)		-0.013 (-0.056-0.029)
>114		0.025 (-0.023-0.074)		0.026 (-0.023-0.074)

<i>aβ (95% CI)</i>	Model 1	<u>Covariates</u>	Model 2	Model 3	<u>Interaction</u>	Model 4
Age at Wave IV			-0.011 (-0.023-0.002)			-0.011 (-0.023-0.002)
Coerced Sex (No)						
Yes			-0.141 (-0.212--0.070)*			-0.141 (-0.212--0.070)*
Forced Sex (No)						
Yes			-0.065 (-0.146-0.016)			-0.065 (-0.146-0.015)
Sexual Abuse (No)						
Yes			-0.112 (-0.193--0.031)*			-0.113 (-0.193--0.032)*
Current Relationship (No)						
Yes			0.661 (0.589-0.733)*			0.660 (0.589-0.731)*
Relationship Type (Married)						
Cohabiting			0.045 (-0.009-0.100)			0.045 (-0.009-0.099)
Pregnancy			-0.125 (-0.267-0.017)			-0.125 (-0.266-0.016)
Currently Dating			-0.141 (-0.201--0.080)*			-0.141 (-0.202--0.080)*
Recent			-0.126 (-0.216--0.035)*			-0.127 (-0.217--0.037)*
Relationship Duration (Months)			0.000 (-0.001-0.000)			0.000 (-0.001-0.000)
Partner Sex (Opposite)						
Same			0.118 (-0.008-0.244)			0.118 (-0.007-0.244)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 49: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of lifetime sexual partners and romantic relationship quality across disability/sexual orientation groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	-0.137 (-0.202--0.072)*	-0.113 (-0.177--0.049)*	-0.158 (-0.237--0.078)*	-0.131 (-0.204--0.058)*
Mild/Heterosexual	0.021 (-0.075-0.116)	0.020 (-0.073-0.112)	0.005 (-0.127-0.136)	0.021 (-0.110-0.152)
Mild/Sexual Minority	-0.260 (-0.505--0.015)	-0.195 (-0.425-0.036)	0.055 (-0.288-0.398)	0.061 (-0.271-0.394)
Moderate/Heterosexual	-0.079 (-0.292-0.134)	-0.053 (-0.249-0.144)	-0.127 (-0.401-0.147)	-0.056 (-0.308-0.196)
Moderate/Sexual Minority	0.071 (-0.217-0.360)	0.129 (-0.100-0.357)	0.101 (-0.281-0.483)	0.101 (-0.188-0.389)
Severe/Heterosexual	-0.016 (-0.200-0.168)	0.030 (-0.122-0.182)	0.086 (-0.150-0.322)	0.155 (-0.048-0.359)
Severe/Sexual Minority	-0.167 (-0.510-0.176)	-0.118 (-0.477-0.240)	-0.354 (-0.702--0.006)	-0.237 (-0.756-0.283)
Lifetime Sexual Partners	-0.005 (-0.006--0.004)*	-0.003 (-0.005--0.002)*	-0.005 (-0.007--0.004)*	-0.004 (-0.005--0.002)*
Physical Disability/Sexual Orientation * Lifetime Sexual Partners (None/Heterosexual)				
None/Sexual Minority			0.001 (-0.001-0.004)	0.001 (-0.001-0.004)
Mild/Heterosexual			0.001 (-0.006-0.008)	0.000 (-0.006-0.006)
Mild/Sexual Minority			-0.015 (-0.026--0.003)	-0.012 (-0.021--0.002)
Moderate/Heterosexual			0.004 (-0.008-0.016)	0.000 (-0.010-0.011)
Moderate/Sexual Minority			-0.001 (-0.008-0.006)	0.001 (-0.004-0.007)
Severe/Heterosexual			-0.009 (-0.026-0.007)	-0.012 (-0.027-0.003)
Severe/Sexual Minority			0.016 (-0.006-0.038)	0.010 (-0.015-0.036)
Years Sexually Active		-0.006 (-0.012-0.000)		-0.006 (-0.012-0.001)
Biological Sex (Male)				
Female		-0.002 (-0.040-0.036)		-0.003 (-0.041-0.035)
Race/Ethnicity (NH White)				
Hispanic		-0.064 (-0.121--0.007)*		-0.065 (-0.122--0.007)*
NH Black		-0.140 (-0.188--0.092)*		-0.140 (-0.188--0.092)*
Parent Education (SES; College Grad)				
<HS		-0.059 (-0.120-0.002)		-0.058 (-0.120-0.004)
HS/GED		-0.083 (-0.126--0.040)*		-0.084 (-0.127--0.041)*
Some College		-0.086 (-0.131--0.040)*		-0.086 (-0.132--0.041)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.037 (-0.025-0.100)		0.037 (-0.025-0.100)
85-99		-0.015 (-0.057-0.028)		-0.014 (-0.056-0.028)
>114		0.024 (-0.024-0.073)		0.025 (-0.024-0.073)
Age at Wave IV		-0.014 (-0.026--0.002)*		-0.014 (-0.026--0.002)*
Coerced Sex (No)				
Yes		-0.130 (-0.201--0.060)*		-0.132 (-0.201--0.062)*
Forced Sex (No)				
Yes		-0.054 (-0.134-0.026)		-0.054 (-0.134-0.025)
Sexual Abuse (No)				
Yes		-0.104 (-0.184--0.024)*		-0.106 (-0.186--0.025)*
Current Relationship (No)				
Yes		0.659 (0.587-0.730)*		0.658 (0.586-0.729)*
Relationship Type (Married)				
Cohabiting		0.052 (-0.002-0.106)		0.052 (-0.003-0.106)
Pregnancy		-0.113 (-0.255-0.028)		-0.103 (-0.244-0.038)
Currently Dating		-0.130 (-0.192--0.068)*		-0.130 (-0.192--0.068)*
Recent		-0.129 (-0.219--0.039)*		-0.130 (-0.221--0.040)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.123 (0.003-0.248)*		0.120 (-0.008-0.248)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

Table 50: Adjusted coefficients (and 95% confidence intervals) from OLS regressions testing the association between number of pre-18 sexual partners and romantic relationship quality across disability/sexual orientation groups

<i>aβ (95% CI)</i>	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Physical Disability/Sexual Orientation (None/Heterosexual)				
None/Sexual Minority	-0.158 (-0.233--0.084)*	-0.109 (-0.177--0.040)*	-0.151 (-0.233--0.070)*	-0.109 (-0.185--0.034)*
Mild/Heterosexual	-0.024 (-0.131-0.082)	-0.016 (-0.124-0.093)	0.058 (-0.074-0.191)	0.049 (-0.087-0.185)
Mild/Sexual Minority	-0.247 (-0.520-0.027)	-0.173 (-0.416-0.069)	-0.058 (-0.360-0.245)	-0.008 (-0.266-0.251)
Moderate/Heterosexual	-0.037 (-0.254-0.179)	-0.027 (-0.232-0.177)	-0.060 (-0.292-0.173)	-0.036 (-0.258-0.186)
Moderate/Sexual Minority	0.037 (-0.266-0.341)	0.141 (-0.090-0.371)	0.146 (-0.221-0.512)	0.141 (-0.140-0.422)
Severe/Heterosexual	0.037 (-0.152-0.227)	0.054 (-0.114-0.221)	0.176 (-0.069-0.421)	0.184 (-0.023-0.392)
Severe/Sexual Minority	-0.217 (-0.695-0.261)	-0.217 (-0.553-0.119)	-0.355 (-0.877-0.167)	-0.323 (-0.684-0.039)
Pre-18 Sexual Partners	-0.010 (-0.014--0.005)*	-0.002 (-0.006-0.002)	-0.008 (-0.013--0.004)*	-0.001 (-0.006-0.003)
Physical Disability/Sexual Orientation * Pre-18 Sexual Partners (None/Heterosexual)				
None/Sexual Minority			-0.002 (-0.011-0.007)	0.000 (-0.008-0.008)
Mild/Heterosexual			-0.029 (-0.052--0.006)	-0.023 (-0.043--0.003)
Mild/Sexual Minority			-0.027 (-0.053--0.001)	-0.024 (-0.041--0.006)
Moderate/Heterosexual			0.006 (-0.018-0.029)	0.002 (-0.019-0.023)
Moderate/Sexual Minority			-0.016 (-0.031-0.000)	0.000 (-0.014-0.013)
Severe/Heterosexual			-0.053 (-0.113-0.008)	-0.050 (-0.094--0.005)
Severe/Sexual Minority			0.034 (0.018-0.049)*	0.026 (0.015-0.037)*
Years Sexually Active		-0.008 (-0.015--0.001)*		-0.008 (-0.014--0.001)*
Post-18 Sexual Partners		-0.004 (-0.005--0.002)*		-0.004 (-0.005--0.002)*
Biological Sex (Male)				
Female		0.003 (-0.035-0.042)		0.002 (-0.036-0.041)
Race/Ethnicity (NH White)				
Hispanic		-0.054 (-0.115-0.007)		-0.054 (-0.115-0.007)
NH Black		-0.136 (-0.191--0.081)*		-0.137 (-0.191--0.082)*
Parent Education (SES; College Grad)				
<HS		-0.045 (-0.115-0.026)		-0.046 (-0.116-0.024)
HS/GED		-0.081 (-0.128--0.033)*		-0.082 (-0.130--0.035)*
Some College		-0.090 (-0.139--0.042)*		-0.092 (-0.140--0.044)*

<i>aβ</i> (95% CI)	<u>Covariates</u>		<u>Interaction</u>	
	Model 1	Model 2	Model 3	Model 4
Cognitive Ability Score (100-114)				
<85		0.008 (-0.054-0.070)		0.009 (-0.053-0.071)
85-99		-0.027 (-0.074-0.020)		-0.026 (-0.072-0.021)
>114		0.023 (-0.025-0.072)		0.024 (-0.025-0.073)
Age at Wave IV		-0.010 (-0.022-0.003)		-0.010 (-0.023-0.002)
Coerced Sex (No)				
Yes		-0.136 (-0.208--0.064)*		-0.136 (-0.208--0.064)*
Forced Sex (No)				
Yes		-0.067 (-0.159-0.026)		-0.066 (-0.158-0.026)
Sexual Abuse (No)				
Yes		-0.132 (-0.224--0.041)*		-0.134 (-0.225--0.042)*
Current Relationship (No)				
Yes		0.693 (0.613-0.774)*		0.691 (0.610-0.772)*
Relationship Type (Married)				
Cohabiting		0.052 (-0.008-0.111)		0.052 (-0.007-0.112)
Pregnancy		-0.128 (-0.269-0.014)		-0.118 (-0.260-0.024)
Currently Dating		-0.143 (-0.209--0.077)*		-0.143 (-0.208--0.077)*
Recent		-0.136 (-0.243--0.029)*		-0.138 (-0.244--0.031)*
Relationship Duration (Months)		-0.001 (-0.001-0.000)*		-0.001 (-0.001-0.000)*
Partner Sex (Opposite)				
Same		0.116 (-0.015-0.248)		0.118 (-0.013-0.249)

Notes: Referent groups for categorical variables are in parentheses next to the variable names; CI = confidence interval; NH = Non-Hispanic; SES = socioeconomic status; HS = high school; GED = General Educational Development; * p<0.05 with Holm-Bonferroni correction for multiple comparisons

CHAPTER 8: CONCLUSIONS AND IMPLICATIONS FOR PUBLIC HEALTH

Overview of Findings

The results of this dissertation fill an important gap in the developmental and public health literatures by providing information regarding variations in sexual patterns and related health outcomes among populations with physical disabilities. Aim 1 (Chapters 3 and 4) identified the sexual patterns of people with physical disabilities from adolescence to adulthood, and Aim 2 (Chapters 5-7) determined how STI/STD diagnosis, unintended pregnancy, and romantic relationship quality were associated with these sexual patterns. Although results of Aim 1 indicated few significant differences in sexual behavior patterns across disability and demographic groups, results from Aim 2 suggest considerable variation in health outcomes, particularly among females and NH Blacks with mild disabilities. Taken together, these results provide a clear public health message: sexual health and education research, practice, and policies need to focus on these particularly vulnerable populations to prevent negative sexual health outcomes.^{20,113,119,120}

Results from Aim 1 showed that the sexual behavior patterns of populations with and without disabilities were more similar than they were different. Main analyses from Chapter 3 indicated that only the group with the most severe disabilities progressed more slowly to different types of sex. Further analyses by demographic characteristics showed that all females were slower to first oral sex, and females with moderate disabilities were slower to their first sexual experience. In addition, sexual minorities with severe disabilities progressed more slowly to first vaginal sex.

Regarding partnering, Chapter 4 showed that although respondents with severe disabilities reported fewer lifetime partners on average, adjusted models indicated no significant differences in pre-18 or lifetime partnering across disability groups. I again observed differences among females, who had fewer lifetime sexual partners than did males. Results also suggested moderation by sexual orientation, such that sexual minorities with mild disabilities had more lifetime partners than their non-disabled peers.

As discussed in past literature,^{5,6} populations with disabilities have been subjected to unfounded assumptions of asexuality and hypersexuality, which in turn has affected the ways in which they receive sexual health education. In contrast, my Aim 1 results suggest that the majority of the population with physical disabilities starts having sex at about the same age and has just as many sexual partners as their non-disabled peers. These results thus make an important contribution to the sexual health and disability literatures and support further inclusion of populations with disabilities in sexual health research and education.

Aim 2 considered associations between the aforementioned sexual behavior patterns and sexual health outcomes. As shown in previous research,^{44–49,62,64,129} timing of first sex, lifetime sexual partnering, and pre-18 sexual partnering were each associated with increased odds of lifetime STI/STD diagnoses and unintended pregnancies. More specifically, Chapters 5 and 6 showed that populations with mild disabilities, particularly females and NH Blacks, were disproportionately affected by STI/STDs and unintended pregnancies despite exhibiting relatively similar or even more conservative sexual behavior patterns in Aim 1. Chapter 6 also showed that NH Blacks with severe disabilities had greater odds of an unintended pregnancy overall. In addition, pre-18 partnering was associated with increased likelihood of an unintended pregnancy among sexual minorities with severe disabilities. While Aim 1 results suggested that

these two subgroups had similar timing and partnering patterns to their non-disabled peers, Aim 2 results showed that these groups may still be more disadvantaged with regards to unintended pregnancies. Therefore, future research should continue to focus on these intersections of disability and biological sex, race/ethnicity, and sexual orientation to better understand the unique sexual health risks faced by these marginalized groups.¹¹³

The relationship quality results shown in Chapter 7 were more varied. In adjusted models, earlier timing of first sex was associated with lower romantic relationship quality. Similarly, having more lifetime partners was associated with lower romantic relationship quality, though the impact of each additional sexual partner was not substantially meaningful. In contrast, while pre-18 partnering was not significant in the covariate models, the interaction model showed that each additional sexual partner during adolescence was associated with significant decreases in romantic relationship quality among NH Whites with mild disabilities and NH Blacks with severe disabilities compared to NH Whites and NH Blacks without disabilities. Given that Aim 1 results showed no differences in pre-18 partnering patterns between these groups, results from Aim 2 indicate the need for more targeted sexuality education focused on positive romantic relationships during adolescence for these disability/race subgroups.

Limitations

Available Measures

Since I elected to use secondary data for this dissertation, I was limited to the measures that are available in the Add Health dataset. Unfortunately, this means that individuals with other forms of disabilities or chronic conditions could not be targeted for inclusion in this dissertation. Furthermore, because Add Health does not target one particular domain in depth, I did not have

the best possible measures for some outcomes (e.g., STI/STD diagnosis, unintended pregnancy) nor was I able to establish temporality between sexual partnering variables and these outcomes. Similarly, it was impossible to identify whether every sexual encounter or partnership was consensual. This is especially important for populations with disabilities, who have been shown to experience more sexual violence and abuse.⁷ Despite these measurement disadvantages, I feel that the benefits of using a large, nationally representative dataset outweigh these limitations. Future sexual health research, especially studies that include populations with disabilities, should make a concerted effort to address these measurement limitations at every stage of the research process.

Measurement Error

Analyses may also be affected by measurement error regarding the truthfulness and accuracy of responses to sensitive questions regarding sexual behavior. First, given past research citing the strengths of using computer-based survey technology to generate truthful responses to questions regarding sexual behavior, I feel confident in the reliability of the data.^{130,131} Past research with Add Health has also shown strong consistency in reports of sexual behavior across waves;¹³² however, there are some respondents for whom the temporal sequence of sexual behaviors and outcomes (e.g., age of first vaginal intercourse and age at first unintended pregnancy) may reflect reporting errors. In this dissertation, I addressed these issues by exploring patterns of inconsistent reporting, and then recoded or dropped observations as necessary. The coding rules I used to address known measurement issues are provided in Table 52 of the Appendix.

Statistical Power and Sample Size

As mentioned in the discussion sections of the various chapters, I had insufficient

statistical power to detect differences between groups for some of my outcomes, particularly in the moderation analyses. While collapsing the physical disability groups in order to increase the sample size would have increased the statistical power to an appropriate level, this would have masked the variation of experiences across the physical disability severity groups that I observed, especially among those with mild disabilities. I therefore chose to proceed using the smaller groups in order to make sure that I was properly representing how the different levels of physical disability affected sexual patterns and later reproductive health outcomes.

While this choice significantly limited my findings, it still has important implications for future research in this field. Studies to date that have included respondents with physical disabilities in the United States have often used small convenience samples that are not representative at the population level. In contrast, Add Health uniquely oversampled respondents with physical disabilities at Wave I to ensure adequate representation in the sample. This thoughtful design provided me with the opportunity to explore relationships in this understudied population in a nationally representative sample followed from adolescence to early adulthood. The fact that I still lacked statistical power, even with oversampling, is an important consideration for future research. While I recognize that these statistical power issues affected the precision of many of my estimates, the results of my analyses do, at the very least, provide general trends about the sexual experiences and health outcomes of populations with physical disabilities. These results make an important contribution to the literature and provide justification for greater inclusion of populations with physical disabilities in future sexual health research.

Missing Data

Multiple types and causes of missing data can occur in Add Health, ranging from nonresponse for an entire wave of data collection to item nonresponse within a wave. Previous work in Add Health suggests nonresponse bias due to missing data at an entire wave is minimal, but item nonresponse might be present.^{133,134} After restricting each of the analytic samples to only those with complete data on all variables of interest, I lost between 9-15% of the Wave IV respondents with valid sampling weights for each analytic sample. To combat this, I used multiple imputation to decrease the amount of missing data.^{90,135} While I succeeded in imputing data for all Aim 1 outcomes and for analyses using the timing and lifetime partnering predictors for Aim 2, I was unable to achieve convergence in multiple imputation models for pre-18 partnering in Aim 2. I therefore chose to move forward with complete case analyses for these models. Although non-response in these models represents an important limitation that affects my ability to generalize my results to the U.S. population, these results still make an important contribution to the limited literature focused on sexual health and disability, and further justify more research in the future.

Implications for Public Health

The results of these analyses fill a gap in the developmental literature by providing important information regarding variations in sexual patterns and related health outcomes among populations with physical disabilities. The majority of the previous research has focused on specific illnesses or used convenience samples, which significantly limit their generalizability. Accordingly, my use of a large, representative dataset provided a unique opportunity to study physical disability and to consider the intersectionality of physical disability and other marginalized identities at a population level. Such research is critical for guiding future studies,

practice, and policies that support healthy sexual development and the provision of more focused sexual health education.

Not only does this dissertation help to build an evidence base supporting the inclusion of populations with disabilities in sexual health research and education,^{113,119} but it also reinforces the need for comprehensive, age- and developmentally appropriate sex education in the United States. Research has consistently shown that AOUM education policies are not effective in preventing premarital sex, and actually put young people at risk for STI/STDs, unintended pregnancies, and unhealthy relationships, among other outcomes.^{105,136} It is therefore crucial that we provide children and youth with the best possible information and strategies to prevent these negative health consequences.

For many years, adolescent health and education organizations in the United States have taken a firm stance against U.S. policies that have enforced sexuality education programming focused exclusively on AOUM. In particular, the Society for Adolescent Health and Medicine (SAHM), citing both scientific and human rights evidence, has stated that “Sexuality education should be comprehensive, medically accurate, and culturally competent; promote healthy sexuality; and prepare young people to make healthy sexual decisions.”¹⁰⁶ As expected, topics proposed as “essential” include STI/STD risk, unintended pregnancy, sexual and reproductive health care, and contraception. Appropriately, this list also includes sexual orientation, gender identity and power dynamics, healthy relationships, and social and structural determinants of health.^{20,106} My dissertation results provide evidence for all of these topics, but specifically people with disabilities, who are a critically underserved population deserving targeted education.

While I wholeheartedly support SAHM's position, my greatest criticism is that the terms "age-appropriate" and "developmentally appropriate" were not included in their paper. In order to be comprehensive and culturally competent, sexuality education programming should not only be provided early and often, but also must also be tailored to the needs of those it serves.¹³⁶ This is particularly important for populations with disabilities, who have been historically excluded from sexuality education, leading to disparities in their sexual knowledge.^{21,23} In contrast to the unfounded assumptions of the past,^{5,6} my dissertation research suggests that the sexual experiences of populations with disabilities are actually more similar to those of their non-disabled peers than they are different, supporting their needs for similar sex education. More specifically, since they start having sex at a similar age and have similar numbers of sexual partners, we can assume that what is age-appropriate for populations without disabilities is also age-appropriate for those with disabilities. However, their health outcomes tell us that what is developmentally appropriate might not be the same. For these reasons, populations with disabilities, particularly females and NH Blacks with mild disabilities and sexual minorities, may need more focused sexuality education to prevent negative sexual health outcomes.

Overall, the results of my dissertation contribute to a growing evidence base for age- and developmentally appropriate sex education, particularly for those with disabilities. This will help us ensure that all young people, including those with disabilities, are provided with the knowledge and skills they need to lead healthy sexual lives.

APPENDIX

Table 51: Distributions of skewed outcome variables

Percentile	Age at First Vaginal Sex	Age at First Oral Sex	Age at First Anal Sex	Number of Lifetime Partners	Number of Pre-18 Partners
1st	11	10	13	0	0
5th	13	13	16	1	0
10th	13	14	17	1	0
20th	14	15	18	3	0
25th	15	15	19	3	0
30th	15	16	19	4	0
40th	16	16	20	5	1
50th	16	17	21	7	1
60th	17	18	22	9	2
70th	18	18	24	12	3
75th	18	19	24	15	3
80th	19	20	25	19	4
90th	21	21	26	30	7
95th	22	23	28	45	11
99th	26	27	30	101	28
99.9th	29	30	31	300	100

Table 52: Coding rules to account for potential measurement error

Measure	Known Issue	n (%)	Coding Rule
Age at first vaginal sex	Very young ages reported; skews distribution	89 (<1)	Recode to floor of 10 years
Age at first oral sex	Very young ages reported; skews distribution	105 (<1)	Recode to floor of 10 years
Age at first anal sex	Very young ages reported; skews distribution	27 (<1)	Recode to floor of 10 years
Age at first sexual experience	Very young ages reported; skews distribution	176 (1.3)	Recode to floor of 10 years
Lifetime partner count	Very large partner counts reported; skews distribution	132 (1.0)	Recode to ceiling of 100 partners
Pre-18 partner count	Very large partner counts reported; skews distribution	24 (<1)	Recode to ceiling of 60 partners

Figure 2: Relationship between years sexually active and predicted probability of lifetime STI/STD diagnosis across physical disability groups

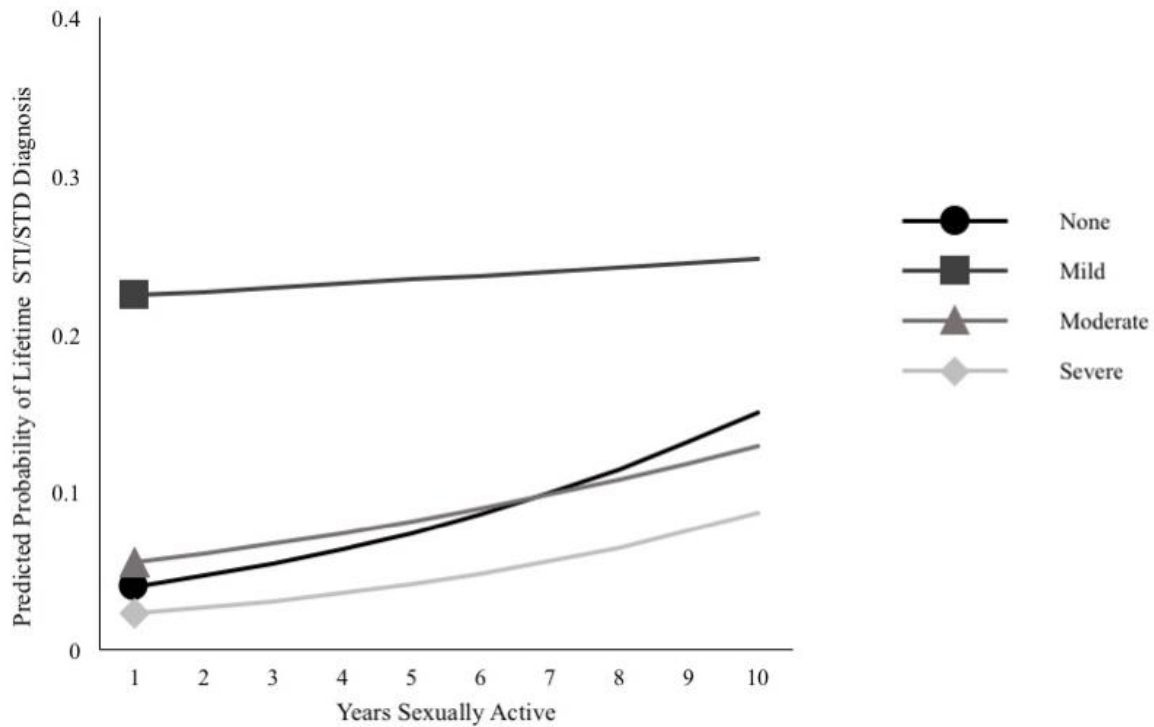


Figure 3: Relationship between lifetime sexual partners and predicted probability of lifetime STI/STD diagnosis across physical disability groups

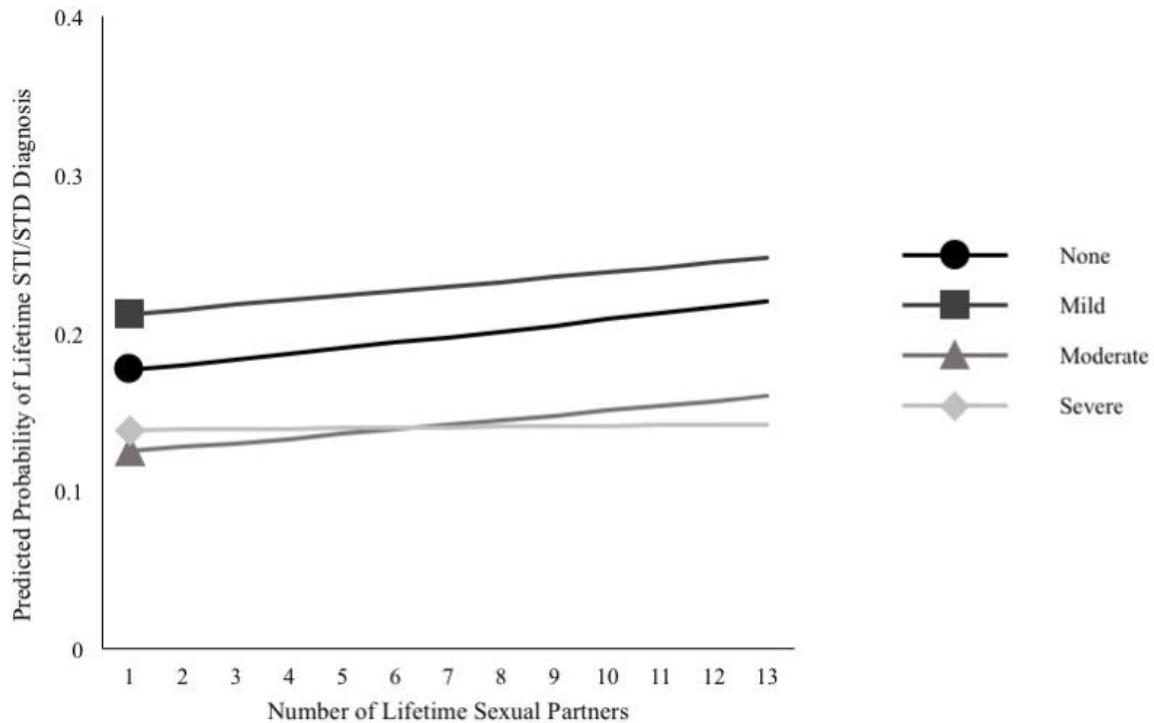


Figure 4: Relationship between pre-18 sexual partners and predicted probability of lifetime STI/STD diagnosis across physical disability groups

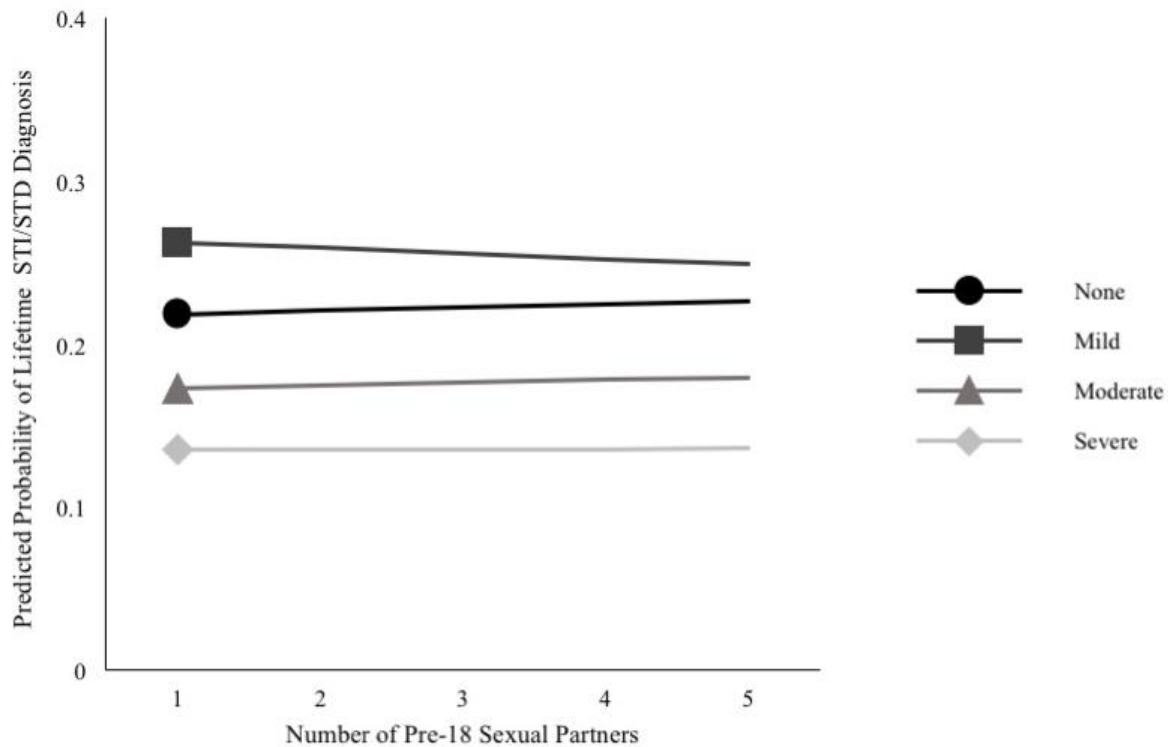


Figure 5: Relationship between lifetime sexual partners and predicted probability of lifetime STI/STD diagnosis across physical disability/biological sex groups

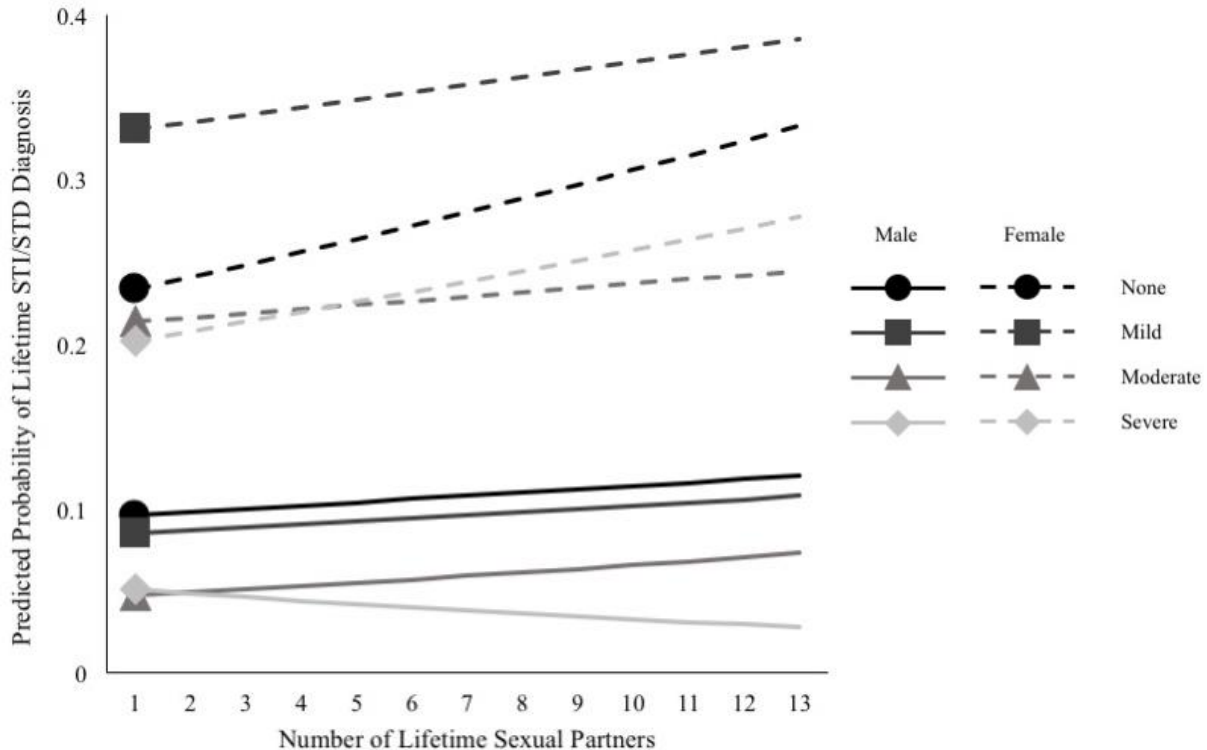


Figure 6: Relationship between years sexually active and predicted probability of lifetime STI/STD diagnosis across physical disability/race groups

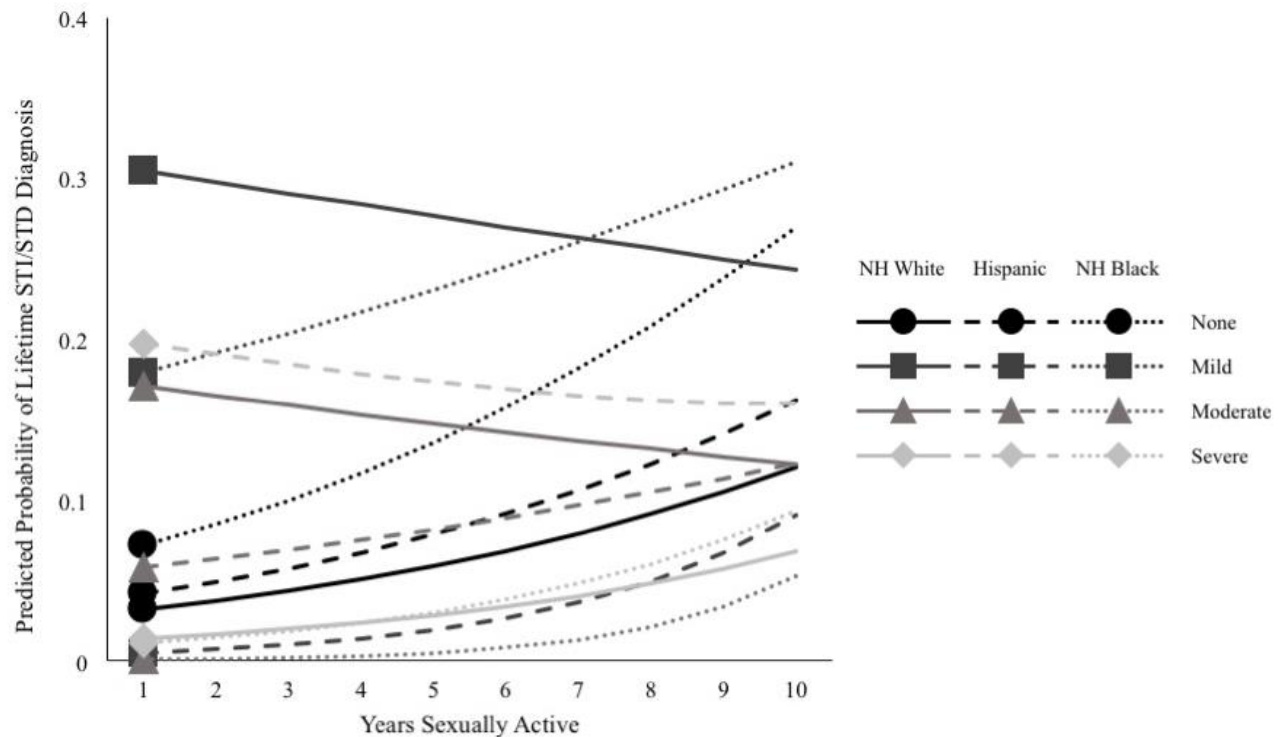


Figure 7: Relationship between years sexually active and predicted probability of lifetime STI/STD diagnosis across physical disability/sexual orientation groups

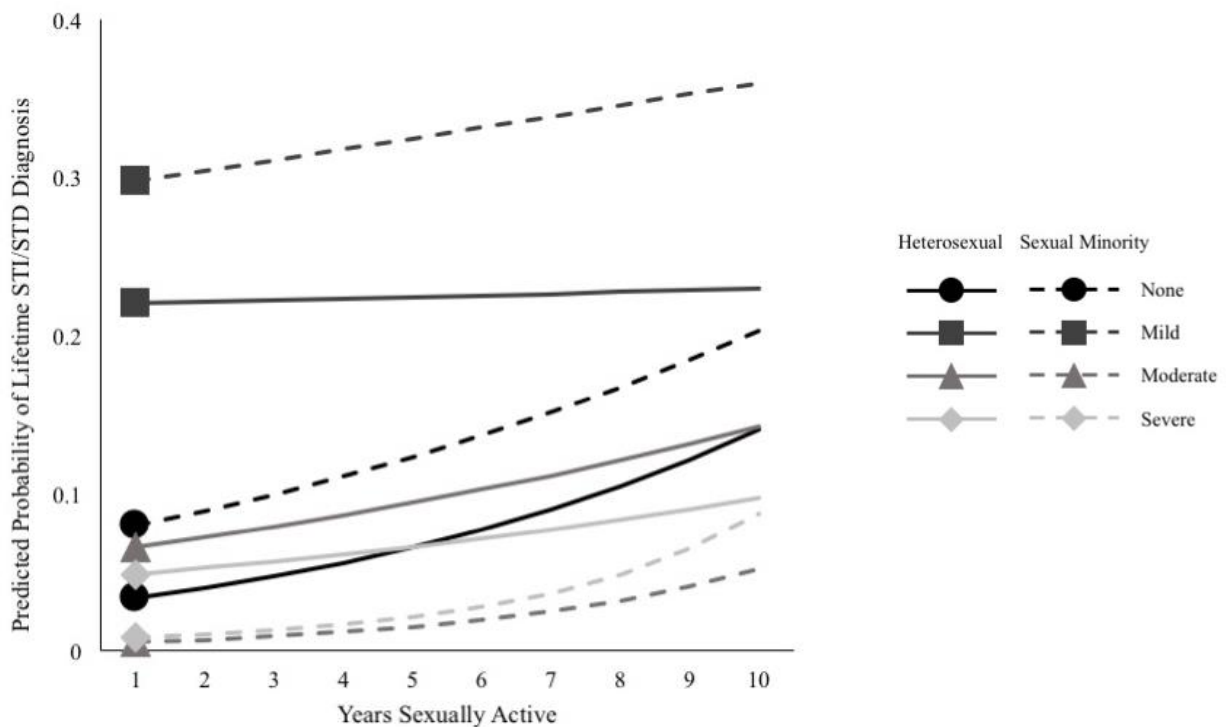


Figure 8: Relationship between years sexually active and predicted probability of an unintended pregnancy across physical disability groups

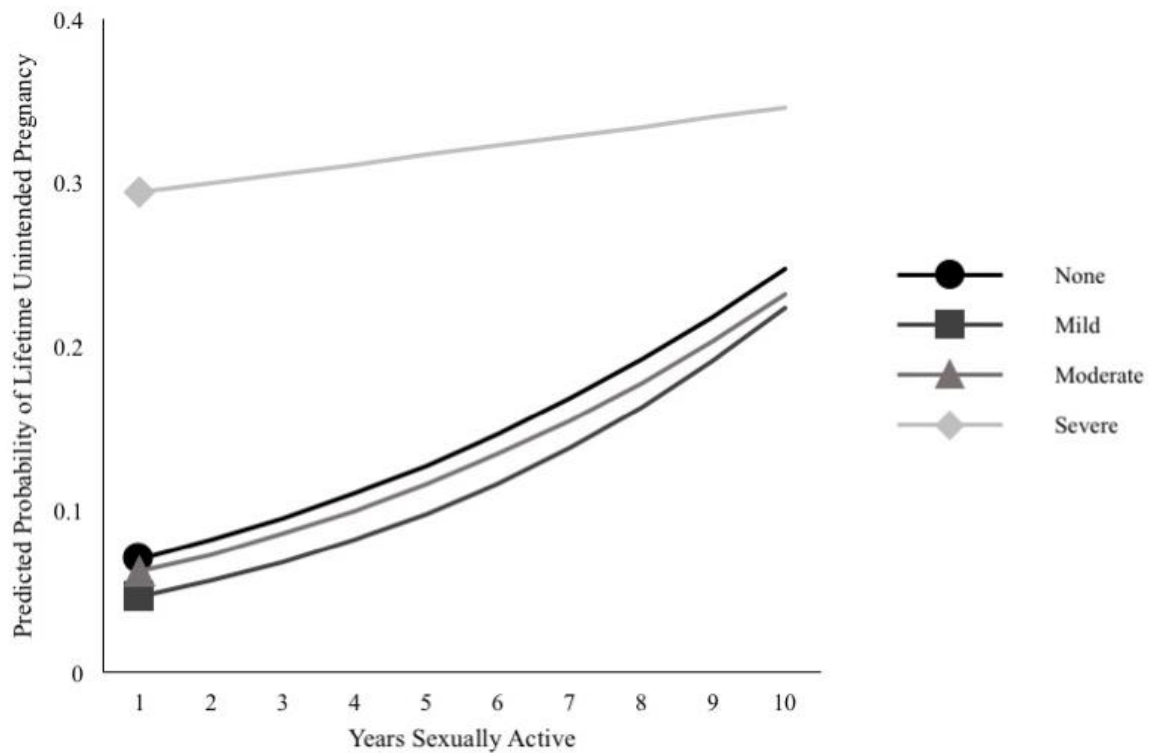


Figure 9: Relationship between lifetime sexual partners and predicted probability of an unintended pregnancy across physical disability groups

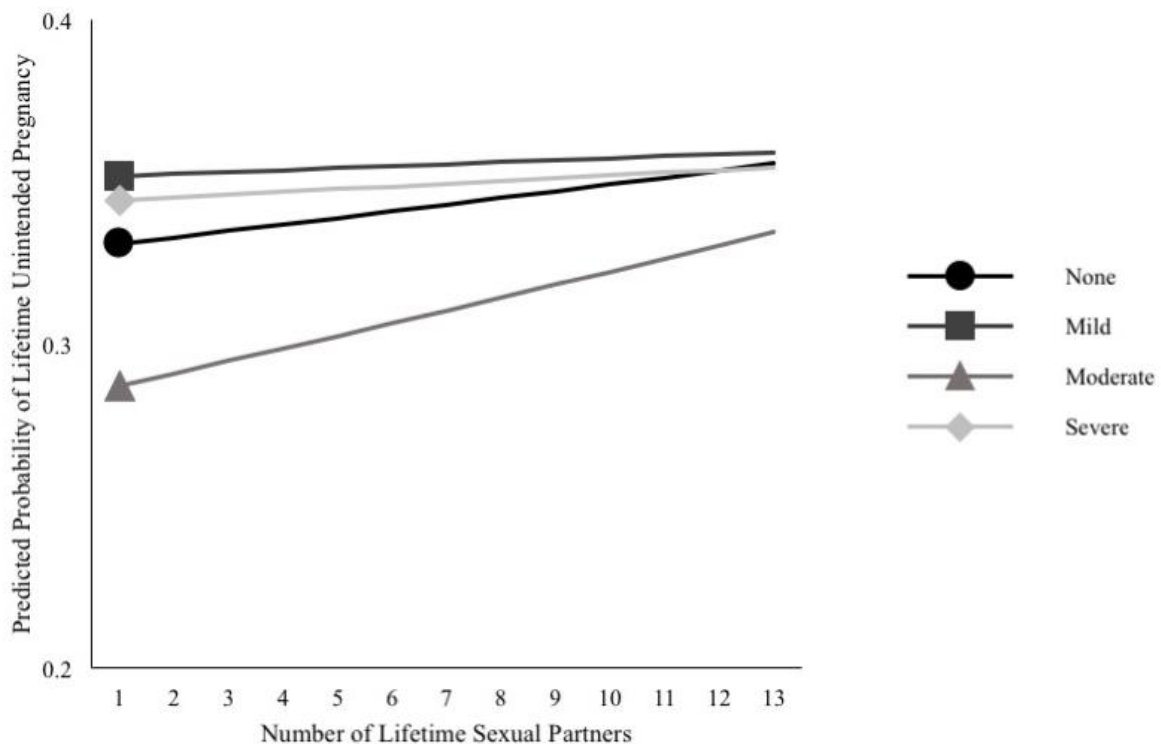


Figure 10: Relationship between pre-18 sexual partners and predicted probability of an unintended pregnancy across physical disability groups

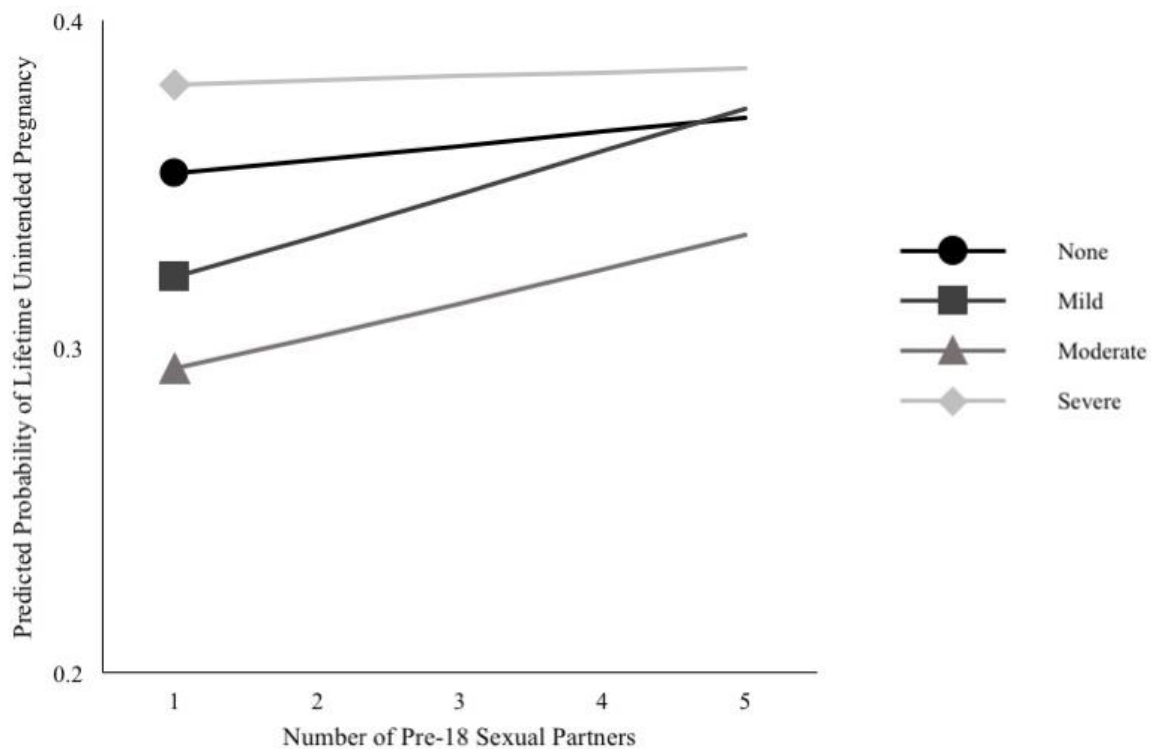


Figure 11: Relationship between years sexually active and predicted probability of an unintended pregnancy across physical disability/race groups

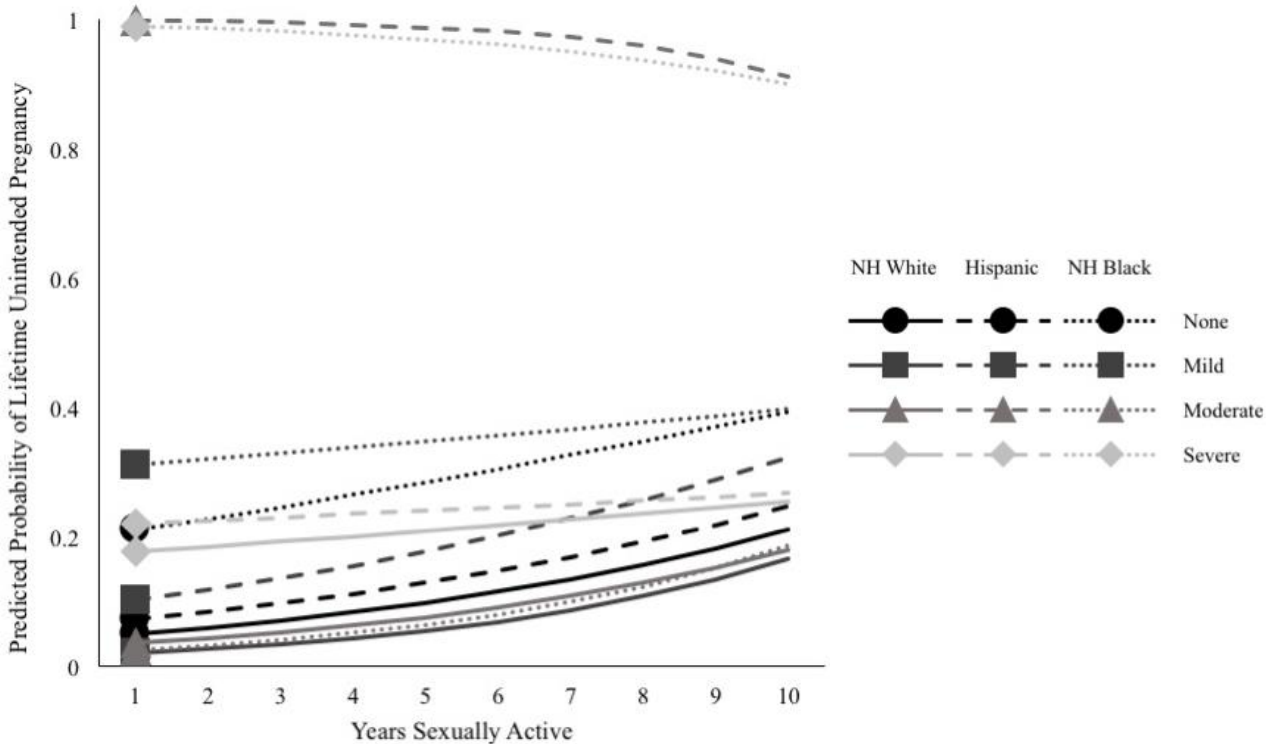


Figure 12: Relationship between pre-18 sexual partners and predicted probability of an unintended pregnancy across physical disability/race groups

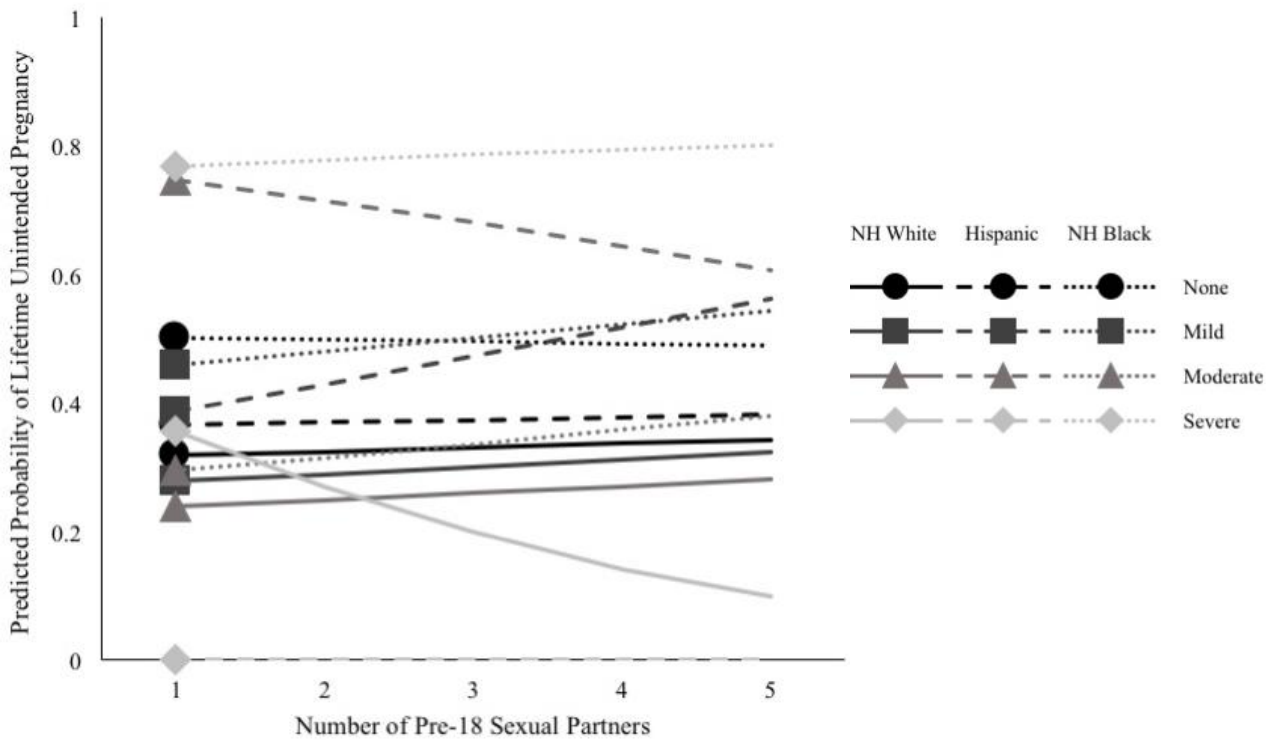


Figure 13: Relationship between pre-18 sexual partners and predicted probability of an unintended pregnancy across physical disability/sexual orientation groups

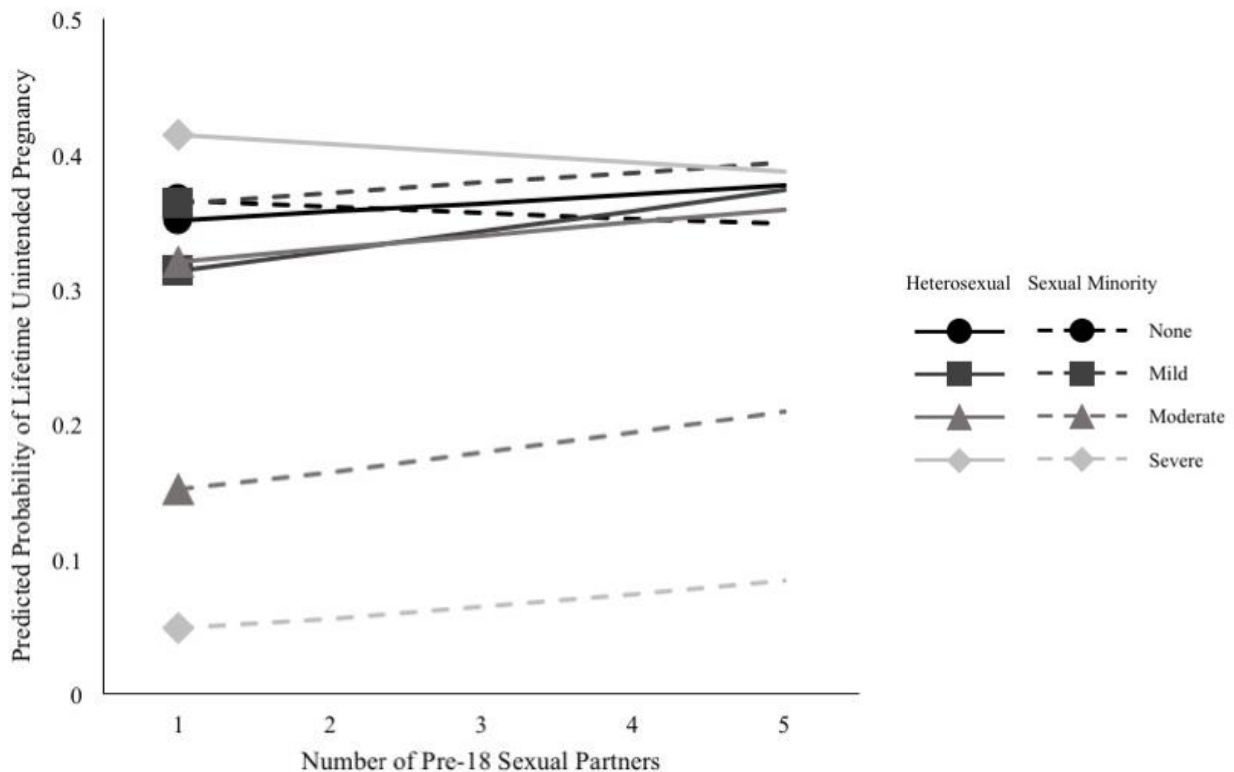


Figure 14: Relationship between years sexually active and predicted romantic relationship quality across physical disability groups

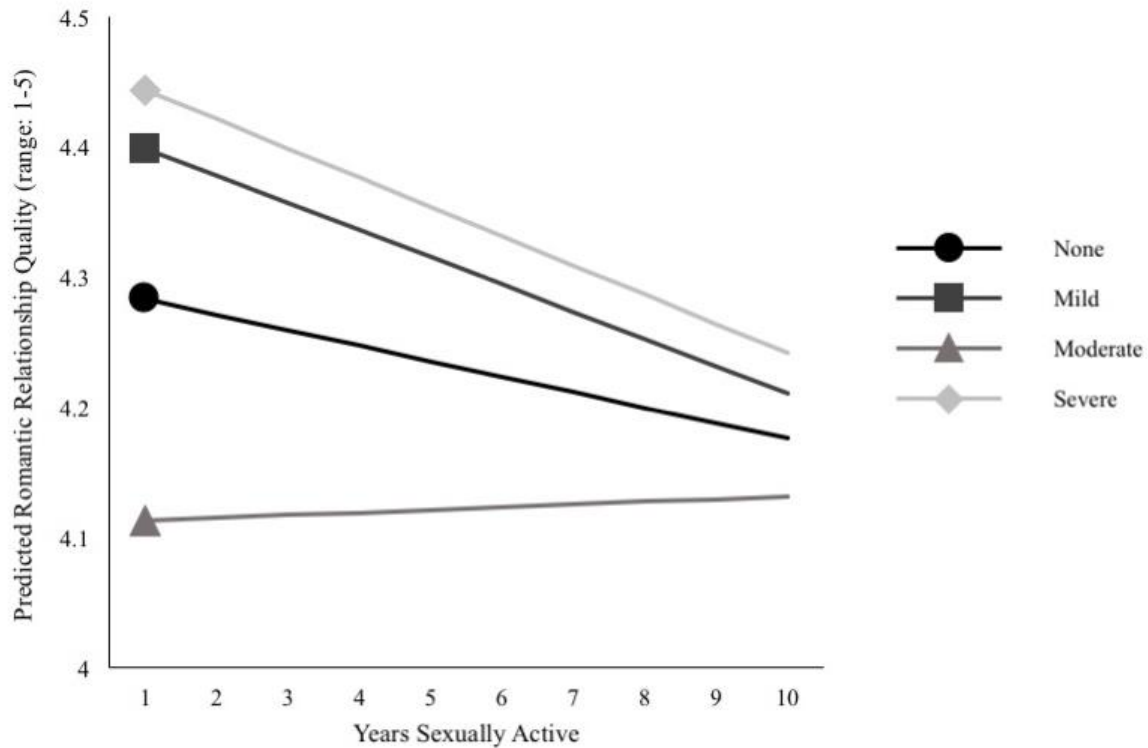


Figure 15: Relationship between lifetime sexual partners and predicted romantic relationship quality across physical disability groups

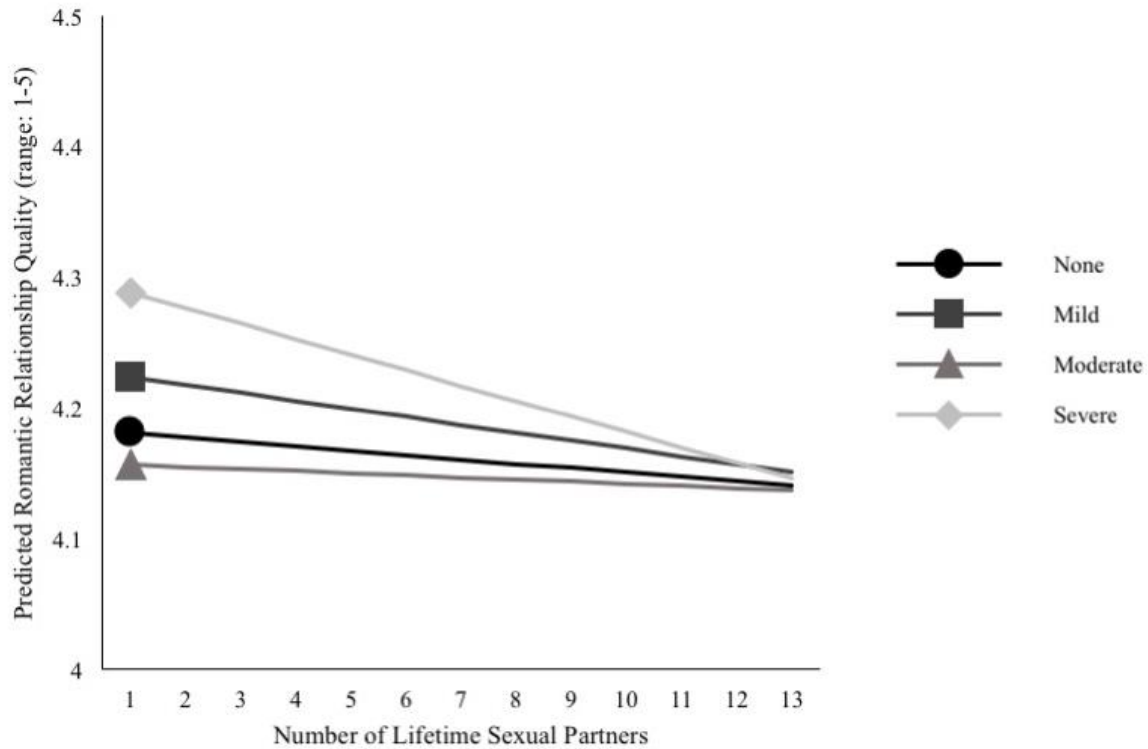


Figure 16: Relationship between pre-18 sexual partners and predicted romantic relationship quality across physical disability groups

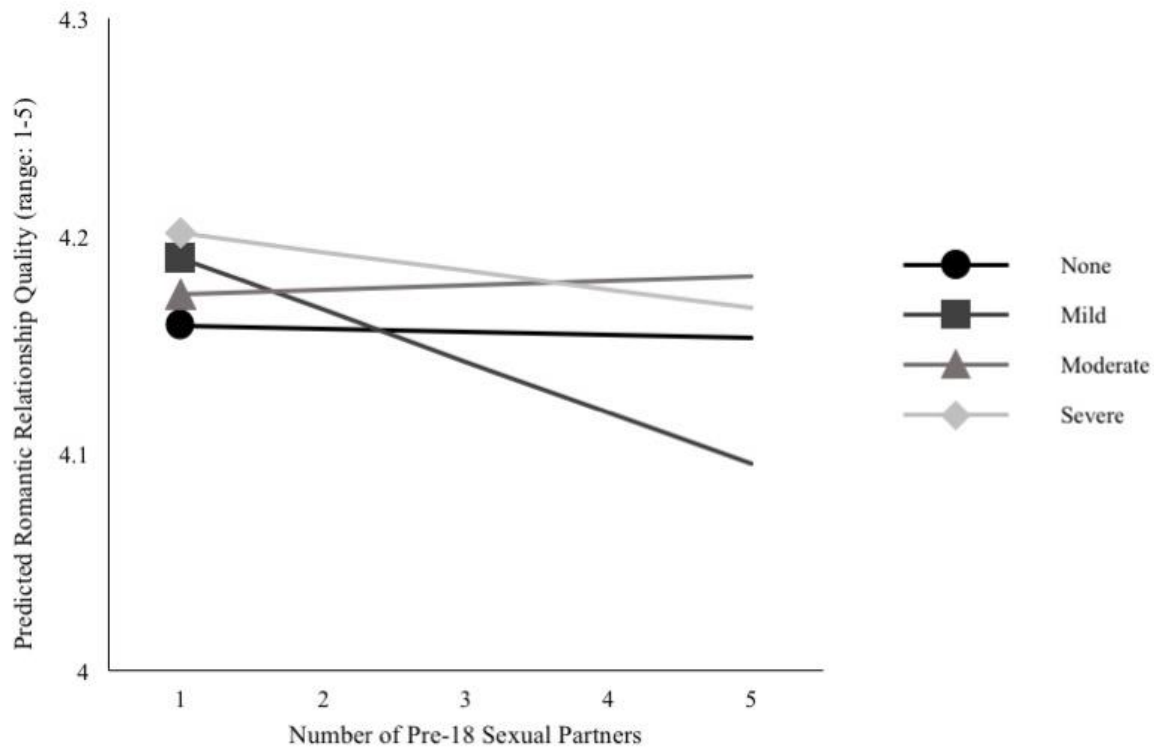


Figure 17: Relationship between pre-18 sexual partners and predicted romantic relationship quality across physical disability/biological sex groups

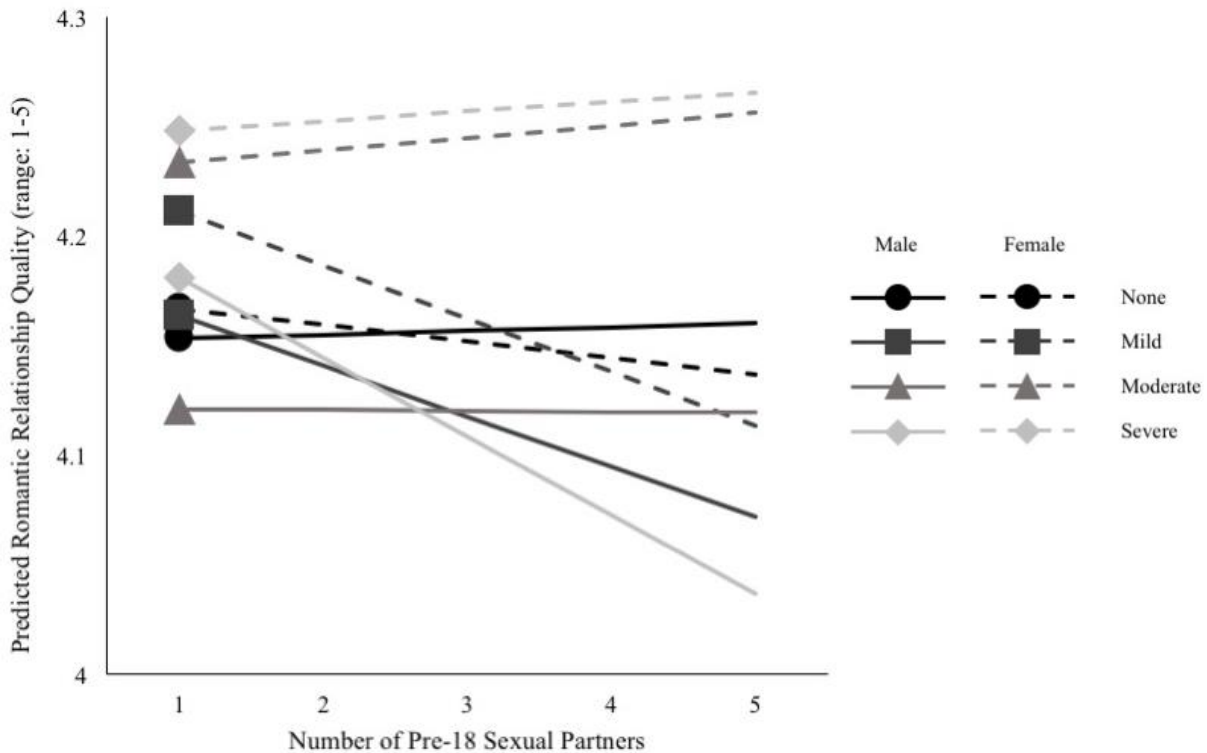


Figure 18: Relationship between lifetime sexual partners and predicted romantic relationship quality across physical disability/race groups

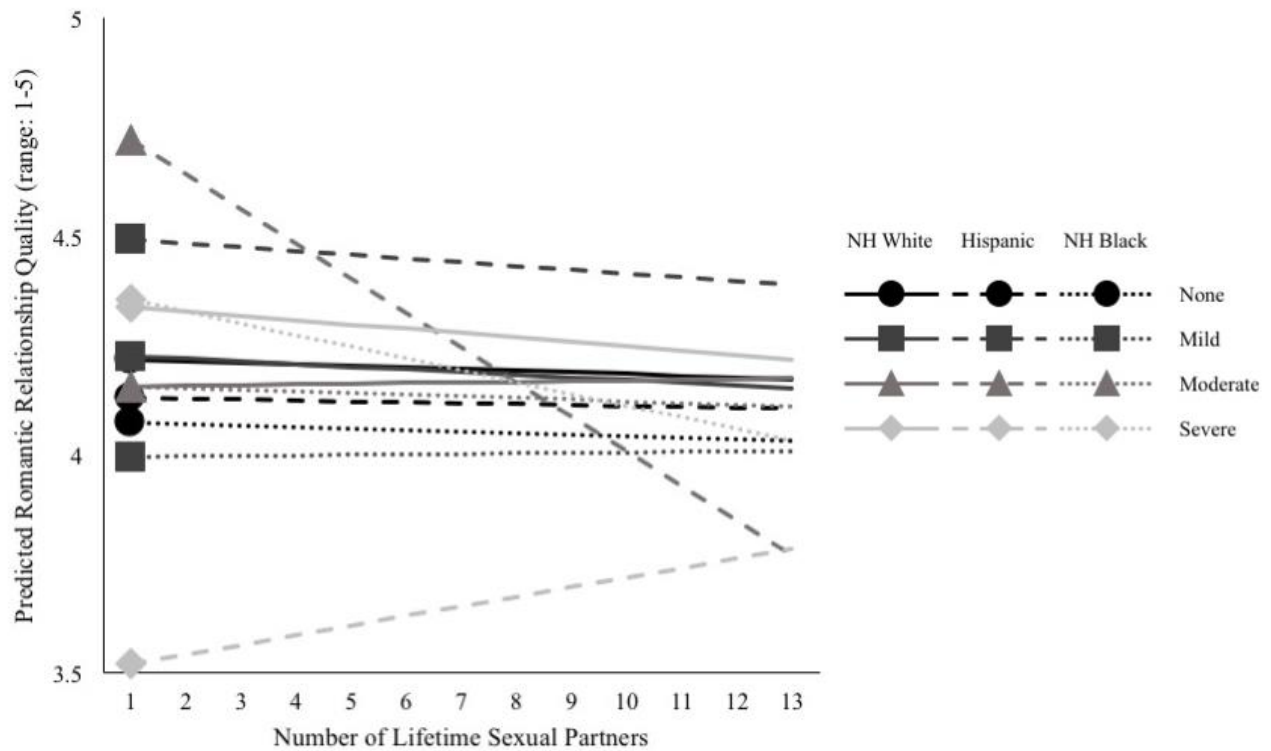


Figure 19: Relationship between pre-18 sexual partners and predicted romantic relationship quality across physical disability/race groups

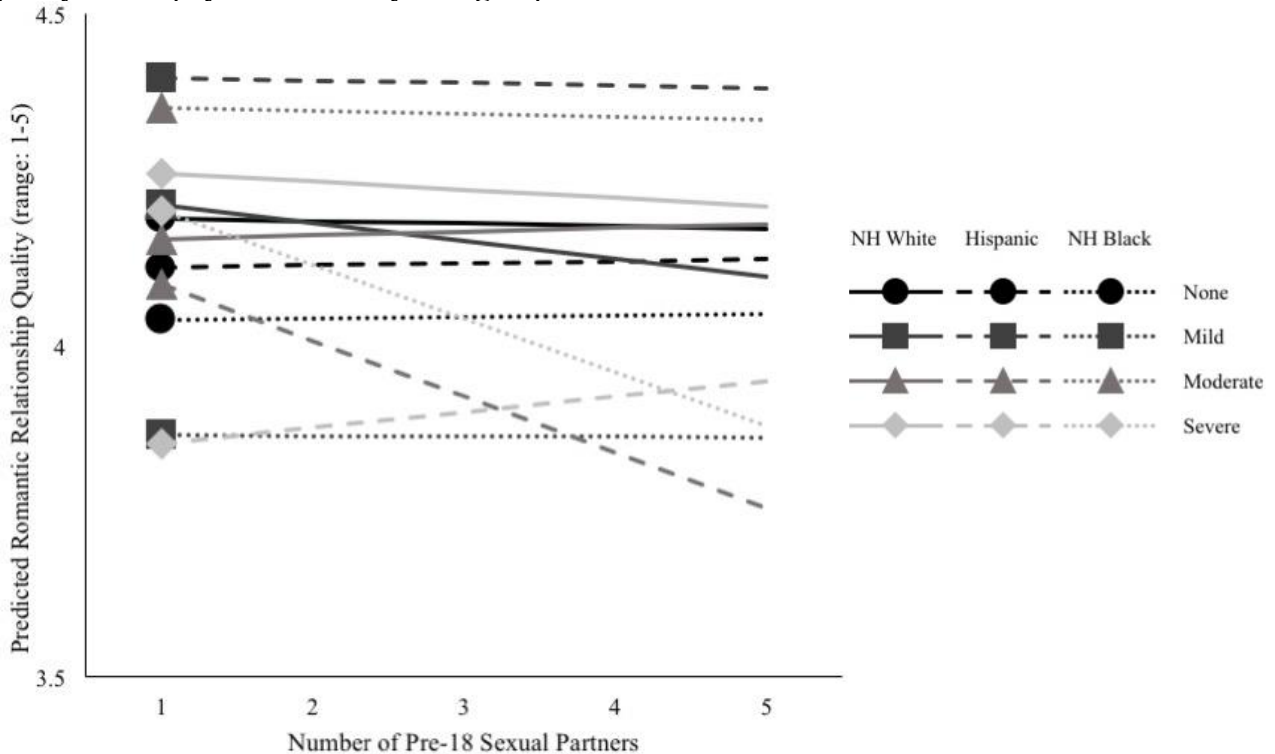
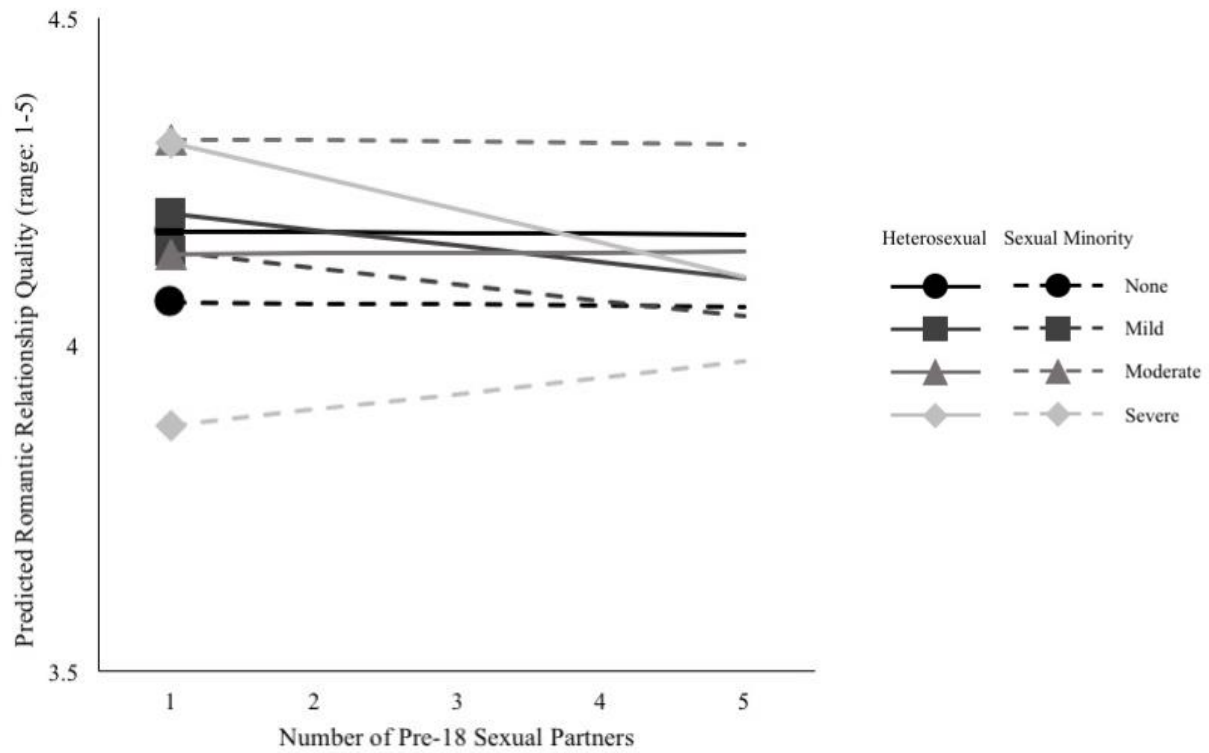


Figure 20: Relationship between pre-18 sexual partners and predicted romantic relationship quality across physical disability/sexual orientation groups



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