

## **Differences in Young Women's First Sexual Experience by Disability Status**

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First intercourse is an important experience in the young adult life course. While previous research has examined racial, sex, and socioeconomic differences in the characteristics of first sex, less is known about differences by disability status. Using a sample of women from the NLSY97, this paper examines the association between disability and type of first sexual relationship, degree of discussion about birth control, use of birth control, and--among those who do not contracept--pregnancy wantedness. Regression analyses indicate that women with disabilities experience first intercourse in different types of relationships than women without disabilities. While we find no differences in discussion about or use of birth control by disability status, women with disabilities who do not contracept are more likely to want a pregnancy than women without disabilities. Results suggest family planning assistance might be most beneficial for young women with disabilities if provided before they become sexually active.

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## **Differences in Young Women's First Sexual Experience by Disability Status**

First intercourse is an important life event that many adolescents consider to be a turning point in their personal development (Beausang 2000). Engaging in consensual sexual activity enables young people to negotiate physical partnerships and explore their sexual identity. For heterosexual youth, initiation of first sex is associated with other life course transitions such as marriage and childbirth (Miller and Heaton 1991). The initiation of sexual activity, however, is not the only salient factor in a young person's life. The context in which first sexual activity takes place – such as the committedness of a young person's relationship with their partner and their contraceptive behavior – is crucial for determining how young people are ultimately affected by their experience (Faulkner and Lannutti forthcoming; Grello, Welsh, and Harper 2006; Sprecher, Barbee, and Schwartz 1995).

However, previous research suggests that adolescents with disabilities may experience first intercourse differently than adolescents without disabilities. First, adolescents with disabilities participate in fewer social activities and are less likely to date than adolescents without disabilities (Anderson, Clarke, and Spain 1982; Cheng and Udry 2002; Cromer et al. 1990; Stevens et al. 1996). This social isolation may result in fewer opportunities to learn about sex from peers, to engage in sexual experimentation, and to develop the social skills necessary to build sexual relationships. Blum (1997) argues that social isolation – and not an adolescent's impairment – is the primary contributor to sexual issues among young people with chronic conditions. Next, parents of adolescents with disabilities may also be reluctant to discuss sexuality with their children (Blum 1997; Tissot 2009) – possibly out of fear they may spark a premature interest in sexual behavior (Nelson 1995). Parental attempts to shield adolescents from sexual knowledge may not only decrease a young person's understanding of sexual activity,

it may also leave them less prepared to reflect upon and take responsibility for their behaviors. Finally, social stereotypes about individuals with disabilities may lead others to believe that they are asexual – or that they have different sexual aspirations than their peers (Blum 1997; Nosek et al. 1994). An adolescent with a disability or their partner may internalize these stereotypes and feel less comfortable exploring their sexuality – or engage in less positive sexual interactions.

While previous research has explored differences in age at first sex (Alderman, Lauby, and Coupey 1995; Surís et al. 1996) and contraceptive use at first sex (Cheng and Udry 2005), less is known about the relationship between a young person’s disability status and the context in which first sex occurs. This paper contributes to the literature on disability and adolescents’ sexual behavior by examining data from the National Longitudinal Survey of Youth 1997 to address the following questions: Are young women with disabilities likely to be in different types of relationships with their first sexual partner than young women without disabilities? Are they less likely to discuss birth control with their first sexual partners? And – among those who do not use birth control – are they more likely to want a pregnancy at first sex?

### **Relationship at First Sex**

Previous research (Elo, King, and Furstenberg 1999; Manning, Longmore, and Giordano 2000) suggests that young women’s first intercourse experiences occur in a variety of relationship contexts. While the majority of adolescent females report first sex in a committed relationship, a sizeable proportion are friends or occasional dating partners. This variation in relationship type is important for several reasons. First, those who are in less committed relationships at first sex are less likely to practice contraception than those who are “going steady”, and those who are friends at first sex are less likely to use the condom than other methods (Manning, Longmore, and Giordano 2000). Next, a young women’s evaluation of sex

also differs by relationship type. Those who experience first intercourse in a close relationship – rather than a casual one – report more pleasure and less guilt (Sprecher, Barbee, and Schwartz 1995). Third, relationship type is also associated with young peoples’ emotional functioning. Grello, Welsh and Harper (2006:261) suggest that “females whose first sexual intercourse partner was someone whom they did not know well reported the most symptoms of depression”. Finally, the type of relationship a young woman is in at first intercourse is associated with later sexual behaviors. A study of college students (Grello, Welsh, and Harper 2006) indicates that individuals whose first sexual partner was not a romantic partner were more likely to engage in subsequent casual sex unions.

However, establishing and maintaining romantic relationships may be more difficult for young women with disabilities. For example, social stereotypes may make young women more hesitant to pursue a relationship. Many authors (e.g. Anderson, Clarke, and Spain 1982; (Milligan and Neufeldt 2001)(O'Toole and Bregante 1992) contend that people with disabilities are sexually disenfranchised due to the belief that they are asexual and unsuitable as romantic partners. Empirical studies similarly reveal that people without disabilities consider many sexual behaviors less acceptable or inappropriate when performed by a person with a disability (Oliver et al. 2002); Scotti et al. 1996; Wolfe 1997; Yool, Langdon, and Garner 2003). Furthermore, Deloach (1994) and Phillips (1990) suggest that women with disabilities are likely to internalize these stereotypes. Individuals with physical disabilities have been found to have lower levels of sexual esteem than individuals without disabilities (McCabe and Taleporos 2003) – and many consider their disability an obstacle to sexual expression (Taleporos and McCabe 2003) and romantic relationships (Skar 2003) – which may leave them less confident to pursue a committed partnership than people without disabilities.

Aside from these emotional and attitudinal barriers, romantic relationships may also be more logistically difficult for young people with disabilities. A lack of specialized sexual education may leave young people with disabilities uninformed about the implications of their disability on sexual functioning (Blum et al. 1991); Erickson and Erickson 1992). Parents of children with disabilities are often apprehensive about their child's sexuality (Pendler and Hingsburger 1991); Guest 2000; Thorin and Irvin 1992) and may place limits on sexual behavior (Lesseliers and Van Hove 2002) which decrease a young person's opportunity to develop sexual relationships. Finally, individuals with physical disabilities may require accommodations which increase their dependence on others and lead to a lack of privacy (Foley 2006; Taleporos and Mccabe 2001). (Taleporos and Mccabe 2001) focus groups with adults with physical disabilities suggests, "practical barriers such as inaccessible homes and meeting places, a lack of transport and a reliance on others, as major hindrances for them in establishing sexual partnerships".

### **Discussion about and use of birth control at first sex**

Use of birth control inherently involves both partners in a sexual relationship (Manning, Longmore, and Giordano 2000), therefore couples who fail to discuss birth control before first sex may engage in behaviors that are not congruent with their pregnancy intentions. Manlove and colleagues' (Manlove, Ryan, and Franzetta 2003); Ryan et al. 2007) analyses of the National Longitudinal Study of Adolescent Health (Add Health) indicate that young people who discussed contraception or STDs with their partner before first sex were more likely to use contraception, reported greater perceived condom knowledge, and perceived a lower risk of contracting HIV, AIDS, or another sexually transmitted disease. Level of communication is also important. One qualitative analysis (Faulkner and Lannutti forthcoming:8) of university students' conversational descriptions about sex suggest that, "Satisfying conversations about sexual decision making

before the first sexual activity in a relationship often led participants to describe relational rewards such as comfort with a partner, self-expression, and self-disclosing more about their sexual feelings”. Furthermore, these conversations seem to have ongoing effects. Results from Noar, Carlyle, and Cole's (2006) meta-analysis of the literature on safer sex communication suggest that the act of communicating about safer sex may promote safer sexual behaviors.

Previous research suggests that this type of communication could be more complicated for young women with disabilities. One challenge may be lack of knowledge. Cheng and Udry's (2002) analysis of AddHealth data finds no difference in sexual knowledge between girls with and without physical disabilities. However, other research suggests that these adolescents are uninformed (Berman et al. 1999) or have a low level (Valencia and Cromer 2000) of knowledge about sexuality – perhaps because sex education is often included in physical education curricula in which adolescents with physical disabilities do not participate. Another more general challenge can arise from greater communication needs. Howland and Rintala's (2001) interviews with women with physical disabilities suggest that poor communication can be a stronger source of dissatisfaction with relationships for women with disabilities because they may also have to discuss disability-related needs in addition to sexual needs. Finally, an adolescent may need to coordinate alternate contraceptive plans if their disability necessitates an additional or substitute method of birth control. For example, the use of certain medications may decrease the effectiveness of oral and implanted contraceptives (Owens and Honebrink 1999). Latex sensitivities may preclude the use of certain barrier devices in lieu of less reliable polyurethane products (Murphy and Young 2005).

**Wanted a pregnancy at first sex**

Previous research suggests that contraceptive behavior is associated with pregnancy intentions. Bartz and colleagues' (2007) analysis of 14-17 year olds' daily coital and contraceptive dairies suggests that teenage women generally use contraceptives in a manner consistent with their pregnancy intentions. Rosengard et al. (2004) similarly find that sexually active teenage women who indicated plans to become pregnant in the near future also reported lesser past contraceptive use and lower future contraceptive intentions. These studies suggest that those who do not use contraception at first sex may be more likely than those who do use contraception to want a pregnancy. However, they also indicate that many adolescent women are ambivalent about becoming pregnant – or, even if they plan against it – engage in contraceptive behavior inconsistent with these plans.

Despite these inconsistencies, pregnancy wantedness does appear to correspond with adolescents' other aspirations. Stevens-Simon et al. (2005) find that, among sexually active but never-pregnant adolescents, “The single best predictor of the strength of the desire to remain nonpregnant was feeling that avoiding pregnancy is important to achieving future goals and maintaining positive self-esteem.” Among teenagers who were pregnant, those who intended a pregnancy were less likely than those who did not to believe that teen motherhood would interfere with education or career plans (Frost and Oslak 1999). This research suggests that wantedness should be situated among broader life course objectives. For example, educational expectations earlier in adolescence are associated with pregnancy outcomes later in adolescence, with girls with higher goals less likely to become pregnant (Manlove 1998); Hockaday et al. (2000). Additionally, Vernon et al. also observed significant differences in pregnancy among young women who expected to work in skilled or professional jobs – versus those who expected to work unskilled jobs (but see Hogan and Kitagawa 1985).

There may be several reasons why young women with disabilities may be more likely than those without disabilities to want a pregnancy at first sex. First, prior research suggests that women with disabilities are more likely than women without disabilities to follow a “family track” of marriage and full-time parenthood after high school (Wells, Sandefur, and Hogan 2003) – possibly because they anticipate fewer educational and labor market opportunities. Previous research suggests that a substantial number of teenagers with disabilities leave high school and neither work nor continue their education (Blackorby and Wagner 1996; Wells, Sandefur, and Hogan 2003), despite the majority having transition goals to the contrary (Cameto, Levine, and Wagner 2004). Furthermore, data from the Bureau of Labor Statistics (2010) indicates that adult women with disabilities have a lower employment-to-population ratio than both women without disabilities and men with disabilities. Second, and relatedly, young women with disabilities may evaluate pregnancy differently than young women without disabilities. Cheng and Udry's (2002) analyses of the AddHealth indicates that girls with a severe physical disability hold more positive attitudes toward pregnancy than girls without physical disabilities.

## **Data**

The National Longitudinal Survey of Youth 1997 (NLSY97) is a nationally representative household-based sample of the non-institutional population of young persons in the United States (Bureau of Labor Statistics 2009). This is a longitudinal survey which annually collects data on an age cohort of children who were ages 12 to 16 as of December 31, 1996. Information is utilized from all eleven currently released waves of data, at which time adolescents have reached the ages of 22 through 27 at last interview. The data file is created such that each respondent has one set of observations corresponding to their first sexual experience. NLSY97 is particularly advantageous



for this study in that it includes information on disability, family background, and multiple facets of first sexual experience.<sup>1</sup>

The total sample for this analysis includes female adolescents with a valid parent interview who have reported having first intercourse at age 12 or later (N = 3198). Eight percent of this sample was excluded due to missingness on any dependent variable (N = 2931). Seven percent of this sample was excluded due to missingness on any independent variable (N = 2714). Finally, three percent of these cases were excluded because they reported an undefined relationship at first sex. Therefore, the total sample for this analysis includes 2,634 adolescents with a subsample of 766 young persons who reported not using birth control at first sex.<sup>2</sup>

### *Disability*

The conceptual model of disability used in this paper is drawn from the World Health Organization's (2001) International Classification of Functioning, Disability, and Health (ICF) model, which has been adopted internationally by the 191 Member States of the World Health Organization “as the basis for the scientific standardization of data on health and disability world-wide” (World Health Organization 2002:5). The ICF model describes a child’s health and well-being in terms of four components: (1) body structures, (2) body functions, (3) activities, and (4) participation. Body structures are anatomical parts of the body, such as organs and limbs, as well as structures of the nervous, sensory, and musculoskeletal systems. Body functions are the physiological functions of body systems, including motor and sensory abilities and

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<sup>1</sup> We use data from all available survey waves to maximize the number of valid responses. However, this approach also gives adolescents who were older at first survey wave more years of “exposure” to the risk of losing their virginity than those who were younger. We explore whether or not this exposure difference affects our substantive conclusions by restricting the sample to respondents who report first sex at age 22 or under (which corresponds to the youngest respondents from the original sample). We lose 14 cases from our original sample; however, results are nearly identical to those presented here.

<sup>2</sup> We exclude respondents who report first sex before age 12 (defined by Blum, Kelly, and Ireland (2001) as a proxy for sexual abuse) and who report having first sex in an undefined relationship in an attempt to remove adolescents from the sample who may have experienced first intercourse in a predatory relationship.

psychological functions, such as attending, remembering, and thinking. Activities are tasks, including learning, communicating, walking, carrying, feeding, dressing, toileting, bathing, reading, preparing meals, shopping, washing clothes. Participation means involvement in family and community life, such as relationships, education, work, and recreational, religious, civic, and social activities. The ICF model also accounts for contextual factors in a child's life, including environmental and personal factors.

Child disability status in these analyses was constructed from four domains for which parents reported youth activity limitations in the NLSY97 in 1997 -- learning or emotional disabilities, sensory limitations, physical disabilities, or chronic illness that limits activities. The small number of children with limitations precludes analyses for each aspect of disability. Therefore, the child disability measure used here abstracted across these variables to determine if a child had one or more functional limitations in 1997. Remaining children were classified as not having a disability if their parents reported a past limitation that was not limiting in 1997 *or* if they never experienced a limitation. The validity of the disability measure was then examined against other indicators associated with special health care needs, including overall health reports, school attendance records, and histories of remedial learning (tabulations not shown). The constructed measure of youth disability was linked to these related variables.

The NLSY97 also includes a question which asks parents, "How old was [this youth] when the [limiting condition] was first noticed?" which can help determine the temporal ordering of age at disability onset versus age at first sex. This is particularly important for respondents who report having first sex before the first interview. To address this sequencing issue, we only code a respondent as having a disability if the age the disability was first noticed was before or

equal to their age at first sex. Based on this operationalization, nearly 11% of the sample has a disability (Table 1).

[ TABLE 1 ABOUT HERE ]

#### *Relationship at First Sex*

Relationship with first sexual partner was a self-administered question asked annually beginning in Round 4. Youth were asked, “At the time you first had sexual intercourse, how would you describe your relationship with your first sexual partner?”. Options included, 1= “Had just met”, 2=“Were just friends”, 3=“Went out once in a while”, 4=“Were going together or going steady, but not living together”, 5=“Were engaged, but not living together”, 6=“Were living together in a marriage-like relationship”, 7=“Were married”, or 8=“Had some other relationship” (due to the ambiguity of the latter category, these respondents were excluded from the analysis).

A cross-tabulation using the original categories of the relationship with first sexual partner variable and the disability measure revealed empty cells and cells with very small expected frequencies in the “living together” and “married” categories. Therefore, these categories were combined with the “engaged, but not living together” category. The final variable includes five categories: the original “Had just met”, “Were just friends”, “Went out once in a while”, “Were going together or going steady, but not living together” with the combined measure of “engaged, cohabiting, or married”. “Going together or going study” is the median category for all respondents.

#### *Talked about Birth Control at First Sex*

Discussion with first sexual partner about birth control was a self-administered question asked annually between Round 4 and Round 9. Youth were asked, “Before the first time you had sexual intercourse, did you ever talk with your first sexual partner about using birth control?”. Options included, “No, didn’t ever talk about birth control together”, “Yes, talked but only a little”, “Yes, talked some”, and “Yes, talked a lot”. In addition to this four-category measure, we explored possible differences between categories by developing a two-category measure comparing those who did not talk about birth control with those who talked about birth control and a three-category measure comparing those who did not talk about birth control with those who talked some/only a little with those who talked a lot. Analyses of these various categories revealed results remained robust across specifications – and that the middle two categories are indistinguishable in the multivariate context<sup>3</sup> – therefore, we present the more efficient three-category measure. The median category is “Yes, talked but only a little/Yes talked some”.

#### *Used Birth Control at First Sex and Wanted a Pregnancy at First Sex*

Use of birth control at first sex was a self-administered question asked annually. Youth answered yes or no to the question, “Did you or your sexual partner use any birth control method, or do anything to avoid pregnancy such as natural family planning, the first time you had intercourse?”<sup>4</sup> Those who reported that they did not use birth control at first sex were also

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<sup>3</sup> The appropriateness of combining these categories can be further explored by examining tests for combining alternatives. Long and Freese (2006) note that if alternative combinations of categories in the dependent variables are indistinguishable with respect to their relationship with the independent variables, then more efficient estimates are obtained by combining the indistinguishable categories. Wald and likelihood ratio tests were examined to test if the “Yes, talked by only a little” and “Yes, talked some” categories were indistinguishable in the multinomial logistic regression models. Both tests indicate we cannot reject the hypothesis that these categories are indistinguishable.

<sup>4</sup> Two other options are available to respondents in addition to “Yes” and “No” but are excluded from the final analysis. First, respondents also had the option of choosing, “Didn’t need to, one of us was unable to have children”. Only 13 respondents with other valid data choose this option; however, they were excluded from the

asked if they wanted a pregnancy. Wanting a pregnancy at first sex was a self-administered question asked annually beginning in Round 1. Youth were asked, “At that time, did you want a pregnancy?”. Available options included “Yes”, “No”, “Didn’t think about it”, and “Didn’t care”. Due to the substantive and statistical similarities between the latter two categories, they were combined to produce a three-category measure which enabled a comparison between respondents who “Wanted a pregnancy” or “Didn’t plan” with those who “Did not want a pregnancy”. The modal category is “No”.

### *Youth Characteristics*

Aside from a child’s disability status, models also control for 1997 dichotomous reports of race/ethnicity (as reported by the household informant in the original screening interview) as non-Hispanic Black or Hispanic. Roughly 26% of the full sample are non-Hispanic Black and 20% are Hispanic.

Previous research (Kahn, Rindfuss, and Guilkey 1990; Cooksey, Rindfuss, and Guilkey 1996) suggests there is geographic variation in contraceptive use. Therefore, all models include dichotomous controls for region of the country the youth lived in at age 12 (“Northeast”, “West”, “South” versus the reference category of “North Central”) as well as whether or not the youth lived in an urban area (versus the combined reference category of “Rural” or “Don’t know”).<sup>5</sup> About 74% of total respondents live in urban areas, 17% live in the Northeast, 21% live in the West, and 38% live in the South.

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analysis because they were not asked if they wanted a pregnancy. Combining these adolescents with those who chose the “No” birth control option revealed nearly identical regression results. Second, in 2004, a fourth option was introduced: “Didn’t need to, one of us was already pregnant”. As this question referred to first intercourse, none of the women in the survey choose this option.

<sup>5</sup> This variable is constructed from created variables in the NLSY97 that invalidly skipped 16% of respondents for region and 24% of respondents for urban residence. Missing values were thus imputed first from the youth’s retrospective report of residence at age 12 and second – if the retrospective measure was missing – residence as of the original survey date.

We also control for an adolescent's self-reported age at first sex, which has been associated with relationship type (Elo, King, and Furstenberg 1999), discussion about birth control (Ryan et al. 2007), and use of birth control (Manning, Longmore, and Giordano 2000). Youth were asked the self-administered question, "Thinking about the very first time in your life that you had sexual intercourse with a person of the opposite sex, how old were you?" The mean age at first sex is roughly 16.3 years for the total sample.

### *Family Characteristics*

Family characteristics have also been established as important predictors of adolescent sexual activity (Manning, Longmore, and Giordano 2000; Manlove, Ryan, and Franzetta 2003; McNeely et al. 2002; Upchurch et al. 1999). Family status at age 12 is a dichotomous measure that contrasts "Two biological parents" to all other family arrangements. Forty-three percent of the total sample report living with both biological parents at age 12. Next, parental education is a continuous measure that indicates a youth's biological parents' highest year of education. The mean parental highest years of education is 13.2.

Two dichotomous variables – "Income-to-poverty ratio: 0-100" and "Income-to-poverty ratio: 101-200" were constructed from NLSY97's created measure of a youth's household poverty in 1997. NLSY97 created an annual poverty status ratio which compared total household income for the year to the United States federal poverty level. These two dichotomous measures can be interpreted as indicating whether a youth is from a household *at or below* the federal poverty line ("Income-to-poverty ratio: 0-100") or *slightly above* the federal poverty line ("Income-to-poverty ratio: 101-200"), as compared to the reference category of

*economically secure*.<sup>6</sup> Roughly 24% of youth live in households in the 0-100% category and 22% live in households in the 101-200% category.

Parental frequency of religious attendance is an eight-category ordinal measure asked of the youth's responding parent in 1997, "In the past 12 months, how often have you attended a worship service (like church or synagogue service or mass)?" Choices included, 1 = "Never", 2 = "Once or twice", 3 = "Less than once a month/3-12 times", 4 = "About once a month/12 times", 5 = "About twice a month/24 times", 6 = "About once a week", 7 = "Several times a week", 8 = "Everyday". The median is "About once a month/12 times". Finally, biological mother's age at the youth's birth is a continuous measure created by NLSY97 which reflects the age of the respondent's biological mother when the respondent was born.<sup>7</sup> The mean age is 25.3 for the total group of respondents.

## **Methods**

Both the relationship at first sex variable and the discussion about birth control measure are ordinal-level variables with categories that can be ranked from lowest to highest: the relationship at first sex contains a set of categories that are ordered from the least commitment ("had just met") to the most commitment ("engaged, cohabiting, or married") where the discussion about birth control measure is ordered from the least discussion ("No, didn't ever talk about birth control together") to the most discussion ("Yes, talked a lot"). As our objective is to model these ordinal variables as a function of youth and family characteristics, we first analyzed them using an ordered logistic estimation technique (Baum 2006; Long and Freese 2006).

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<sup>6</sup> Missing cases are imputed as follows: Family status at age 12 variable is imputed with information about family status as of the first interview. Biological parental education is imputed with information about residential parental education. The household income-to-poverty ratio in 1997 is imputed with the household income-to-poverty ratio in subsequent years.

<sup>7</sup> One extreme case (biological mother's age at the youth's birth greater than 101) was dropped from the analysis.

However, this approach only produces one set of coefficient estimates for all categories of the dependent variable. As a result, it assumes that the probability curves for each category of the outcome variable are parallel to each other. Both an approximate likelihood-ratio test (Wolfe and Goulde 1998) and a Wald test (Brant 1990) were employed to determine if the coefficients for all variables met this assumption by being simultaneously equal. These tests revealed that the proportional odds assumption was not met for either of our ordinal-level outcome variables.

When this assumption is not met, alternative models should be chosen that do not impose the constraint of proportional odds (Long and Freese 2006) such as the multinomial logistic approach. This technique is less restrictive because it estimates equations for every value of the dependent variable, using one value as the reference category. The reference category for relationship at first sex is the modal category of “Were going together or going steady but not living together”. The reference category for discussion about birth control is a combined measure of the “Yes, talked some” and “Yes, talked only a little” categories. The coefficients for each equation (expressed as odds ratios) can thus be interpreted as follows: given a one unit increase in our independent variable, the relative risk of being in the outcome of interest is [log odds] more likely than being in the referent group, net of all other variables in the model.

Multinomial logistic regression was also used to analyze the pregnancy wantedness outcome with the reference category of “No, didn’t want a pregnancy”. Lastly, binary logistic regression was used to examine the dichotomous measure of birth control use at first sex. See Allison (1999) for additional explanation of this technique.

## **Results**

Table 1 indicates that young women with and without disabilities are very similar in the descriptive context when examining the four dependent outcomes. Both groups are equally



likely to have used birth control at first sex, have the same median value for relationship at first sex and discussion about birth control before first sex, and have the same modal category for wanting a pregnancy at first sex.

Several demographic differences emerge between the two samples, as a smaller percentage of the disability sample is non-Hispanic Black or Hispanic (23% and 11% versus 27% and 21%, respectively). The geographic distribution of the two samples is comparable, and young women with disabilities are marginally younger at first sex than those without disabilities (16.1 years versus 16.3 years).

Family characteristics do vary between the two groups. Women with disabilities are much less likely to live with two biological parents at age 12 than women without disabilities (27% versus 45%) and have parents who are slightly less well-educated (13 years of education versus 13.2 years of education). They are also less financially secure, as 34% of those with disabilities live in households with an income-to-poverty ratio of 0-100 and 26% live in households with an income-to-poverty ratio of 101-200 – versus 22% and 21% of those without disabilities. Finally, women with disabilities also have younger mothers than those without. Average age at birth is 24.6 for those with disabilities and 25.4 for those without disabilities.

[ TABLE 2 ABOUT HERE ]

Despite the similarities between those with and without disabilities in the descriptive examination of first sexual experience, several differences emerge in the multivariate results. Table 2 presents odds ratios comparing the likelihood of having first intercourse with someone a young person just met, were friends with, went out with once in a while, or were seriously committed to – versus the likelihood of having first intercourse with someone with whom they were going steady. Having a disability is positively and significantly related to having sex with

someone a young person just met *or* someone with whom they were engaged, cohabiting, or married. These results suggest that the odds of having first sex with a stranger rather than with a steady partner are increased by a factor of 1.9 by having a disability rather than not having a disability, net of all other variables in the model. Similarly, the odds of having first sex in a highly committed relationship rather than with a steady partner are increased by a factor of 2.2 by having a disability

Table 3 presents multivariate results of the analyses for discussion about birth control at first sex, using birth control at first sex, and wanting a pregnancy at first sex. No differences emerge between young women with and without disabilities for the first two outcomes. However, having a disability is positively and significantly related to wanting a pregnancy at first sex. Results suggest that the odds of wanting a pregnancy – rather than not wanting a pregnancy – are increased by a factor of 3.2 by having a disability rather than not having a disability, net of other youth and family characteristics in the model.

[ TABLE 3 ABOUT HERE ]

Several other interesting results emerge from the model. Youth who are older at first sex are less likely to have first sex with a stranger, more likely to have first sex in a committed relationship, and more likely to use birth control. Those who have parents with more frequent religious attendance are more likely to have first sex in a committed relationship and less likely to “not think or care” about a pregnancy. Finally, those in the lowest socioeconomic category are less likely to use birth control and more likely to “not think” or want a pregnancy at first sex than those who are financially secure.

## **Conclusions**

These results suggest that – while some characteristics of the first sexual experience are different for young women with disabilities – many aspects are similar to those for young women without disabilities. Young women with disabilities experience first intercourse in different types of relationships; however, we find no differences in discussion about or use of birth control by disability status. Women with disabilities who do not contracept are more likely to want a pregnancy than women without disabilities.

These results have several implications. First, it is crucial to provide sex education that focuses not only on any physical limitations that may arise due to a young person's disability – but also on developing positive sexual relationships. The odds of having first sex in a highly committed (engaged, cohabiting, or married) relationship versus a steady dating relationship were higher for young women with disabilities than those without disabilities. However, so were the odds for having first sex with a stranger. These more committed unions at first sex are associated with more pleasure, less guilt (Sprechter et al 1995), and lower levels of depression (Grello, Welsh and Harper 2006) – which may be doubly deleterious if women already consider their disability an obstacle to positive sexual expression (Taleporos and McCabe 2001).

Next, the odds of wanting a pregnancy at first sex versus not wanting a pregnancy were also higher for young women with disabilities than for those without. While it is important that all women are able to plan for and pursue their goals as they transition into adulthood, young people with disabilities often face additional challenges that may complicate their ability to achieve those goals. The results presented here suggest that family planning assistance might be most beneficial for young women with disabilities if provided before they become sexually active. As a result, when they do have first intercourse, they will be prepared to pursue whatever parenthood aspirations they may hold.

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**Table 1 Descriptive statistics for all variables, by disability status**

	Full Sample	No Disability	Disability
	Descriptive Statistic <sup>1</sup>	Descriptive Statistic <sup>1</sup>	Descriptive Statistic <sup>1</sup>
<i>Dependent measures</i>			
Relationship at first sex <sup>2</sup>	4	4	4
Talked about birth control at first sex <sup>2</sup>	2	2	2
Used birth control at first sex	0.805 (0.396)	0.805 (0.397)	0.807 (0.395)
Wanted a pregnancy at first sex <sup>3</sup>	3	3	3
<i>Youth characteristics</i>			
Disability	0.106 (0.308)	---	---
Black	0.264 (0.441)	0.268 (0.443)	0.229 (0.421)
Hispanic	0.197 (0.398)	0.207 (0.406)	0.111 (0.314)
Northeast region	0.174 (0.379)	0.168 (0.374)	0.218 (0.414)
West region	0.212 (0.408)	0.214 (0.410)	0.193 (0.395)
South region	0.382 (0.486)	0.384 (0.487)	0.368 (0.483)
Urban residence	0.739 (0.439)	0.738 (0.440)	0.750 (0.434)
Age at first sex	16.254 (2.007)	16.270 (2.005)	16.125 (2.022)
<i>Family characteristics</i>			
Two biological parents	0.426 (0.495)	0.445 (0.497)	0.268 (0.444)
Parents' highest year of education	13.193 (2.906)	13.212 (2.935)	13.039 (2.646)
Income-to poverty ratio: 0-100	0.237 (0.425)	0.224 (0.417)	0.343 (0.476)
Income-to poverty ratio: 101-200	0.217 (0.412)	0.212 (0.409)	0.261 (0.440)
Parental frequency of religious attendance <sup>2</sup>	4	4	4
Biological mother's age at youth's birth	25.284 (5.340)	25.358 (5.347)	24.661 (5.249)

Source: National Longitudinal Survey of Youth, Waves 1-11

<sup>1</sup> Data shown are means (for continuous variables) or proportions (for dichotomous variables) with standard deviations in parentheses unless otherwise noted<sup>2</sup> Data shown are medians<sup>3</sup> Data shown are modes

**Table 2 Multinomial logistic regression of relationship at first sex**

	Had just met	Were just friends	Went out once in a while	Engaged, cohabiting, married
	Model 1	Model 2	Model 3	Model 4
<i>Youth characteristics</i>				
Disability	1.891* (0.298)	1.144 (0.191)	1.130 (0.233)	2.226** (0.256)
Black	1.172 (0.296)	0.897 (0.162)	0.479*** (0.220)	0.517* (0.283)
Hispanic	0.742 (0.359)	0.643* (0.198)	0.859 (0.216)	1.072 (0.266)
Northeast region	1.124 (0.338)	0.730 (0.192)	1.174 (0.237)	0.377* (0.398)
West region	1.754 (0.329)	1.068 (0.184)	1.414 (0.231)	1.369 (0.278)
South region	0.993 (0.301)	0.864 (0.155)	1.259 (0.206)	1.338 (0.249)
Urban residence	0.791 (0.258)	1.114 (0.146)	1.117 (0.178)	1.236 (0.227)
Age at first sex	0.838*** (0.061)	0.982 (0.032)	0.969 (0.039)	1.280*** (0.043)
<i>Family characteristics</i>				
Two biological parents	0.815 (0.253)	0.882 (0.140)	0.791 (0.167)	1.586* (0.204)
Parents' highest year of education	1.135*** (0.046)	0.997 (0.025)	1.016 (0.029)	0.901*** (0.033)
Income-to poverty ratio: 0-100	1.261 (0.302)	1.257 (0.168)	1.408 (0.209)	1.675* (0.255)
Income-to poverty ratio: 101-200	0.737 (0.324)	1.137 (0.160)	1.271 (0.195)	1.428 (0.239)
Parental frequency of religious attendance	0.936 (0.056)	0.962 (0.031)	1.013 (0.038)	1.147** (0.048)
Biological mother's age at youth's birth	1.028 (0.021)	0.982 (0.012)	1.020 (0.014)	0.975 (0.018)
Intercept	0.099 (1.186)	0.533 (0.642)	0.079*** (0.781)	0.003*** (0.941)
Log Likelihood	-2511.950			

Source: National Longitudinal Survey of Youth, Waves 1-11

<sup>1</sup> Data shown are odds ratios from multinomial logistic regression equations with standard errors in parentheses. The reference category for all comparisons is "Were going together or going steady, but not living together".

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; two-tailed tests

**Table 3 Logistic regression of first sexual experiences**

	Talked about birth control at first sex <sup>1</sup>		Used birth control at first sex <sup>2</sup>	Wanted a pregnancy at first sex <sup>3</sup>	
	<i>Talked a lot</i>	<i>Didn't talk at all</i>	Model 3	<i>Didn't think or care</i>	<i>Yes</i>
	Model 1	Model 2		Model 4	Model 5
<i>Youth characteristics</i>					
Disability	1.144 (0.156)	0.847 (0.164)	1.083 (0.180)	1.251 (0.324)	3.145* (0.500)
Black	1.266 (0.135)	1.145 (0.135)	1.478** (0.214)	1.161 (0.305)	0.912 (0.605)
Hispanic	0.719* (0.150)	0.683* (0.148)	0.719* (0.106)	0.921 (0.337)	1.955 (0.581)
Northeast region	1.065 (0.154)	1.057 (0.154)	1.106 (0.185)	1.975 (0.357)	2.250 (0.896)
West region	1.061 (0.156)	1.288 (0.152)	0.811 (0.128)	1.324 (0.372)	4.331 (0.817)
South region	0.957 -0.13	0.998 (0.129)	0.937 (0.130)	1.353 (0.335)	3.411 (0.789)
Urban residence	1.008 (0.117)	1.089 (0.117)	0.940 (0.117)	1.070 (0.284)	0.703 (0.489)
Age at first sex	1.150*** (0.026)	1.116*** (0.026)	1.085** (0.029)	0.985 (0.060)	0.881 (0.106)
<i>Family characteristics</i>					
Two biological parents	1.316* (0.112)	1.1158 (0.111)	1.079 (0.125)	0.757 (0.272)	1.610 (0.430)
Parents' highest year of education	0.960* (0.020)	0.997 (0.019)	1.049* (0.021)	0.923 (0.045)	0.933 (0.067)
Income-to poverty ratio: 0-100	1.033 (0.128)	0.886 (0.138)	0.602*** (0.084)	1.820* (0.293)	5.321** (0.600)
Income-to poverty ratio: 101-200	1.036 (0.130)	0.819 (0.131)	0.795 (0.108)	1.181 (0.315)	2.470 (0.617)
Parental frequency of religious attendance	1.018 (0.025)	1.018 (0.019)	0.987 (0.026)	0.862** (0.055)	1.087 (0.095)
Biological mother's age at youth's birth	0.981* (0.010)	0.988 (0.010)	1.002 (0.010)	1.023 (0.021)	1.020 (0.034)
Intercept	0.229** (0.519)	0.214** (0.517)	0.749 (0.542)	0.298 (1.214)	0.032 (2.253)
Log Likelihood	-2853.759		-1254.835	-389.016	

Source: National Longitudinal Survey of Youth, Waves 1-11

<sup>1</sup>Data shown are odds ratios from multinomial logistic regression equations with standard errors in parentheses. The reference category is a combined measure of "Yes, talked some" and "Yes, talked only a little"

<sup>2</sup>Data shown are odds ratios from binomial logistic regression equations with standard errors in parentheses. The reference category is "Did not use birth control at first sex"

<sup>3</sup>Data shown are odds ratios from multinomial logistic regression equations with standard errors in parentheses. The reference category is "No, didn't want a pregnancy"

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; two-tailed tests