



Published in final edited form as:

*Matern Child Health J.* 2017 August ; 21(8): 1606–1615. doi:10.1007/s10995-016-2250-3.

## Fertility Desires and Intentions Among U.S. Women by Disability Status: Findings from the 2011–2013 National Survey of Family Growth

Tina L. Bloom<sup>1</sup>, William Mosher<sup>2</sup>, Jeanne Alhusen<sup>3</sup>, Hannah Lantos<sup>4</sup>, and Rosemary B. Hughes<sup>5</sup>

<sup>1</sup>Sinclair School of Nursing, University of Missouri, Columbia, MO 65211, USA

<sup>2</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

<sup>3</sup>University of Virginia School of Nursing, Charlottesville, VA, USA

<sup>4</sup>Child Trends, Inc, Washington, DC, USA

<sup>5</sup>University of Montana Rural Institute for Inclusive Communities, Missoula, MT, USA

### Abstract

**Objectives**—We compared fertility desires and intentions among women with disabilities and women without disabilities in the United States, using a new evidence-based measure of disability.

**Methods**—We analyzed data from a sample of 5601 US women 15–44 years of age in the 2011–2013 National Survey of Family Growth. The data were analyzed via cross-tabulation and logistic regression. We classified women into those with a disability and those without a disability.

**Results**—Women with disabilities were about as likely to want a baby (61%) as women without disabilities (60%). But only 43% of women with disabilities intended to have a baby in the future, compared with 50% of women without disabilities. Thus, the difference between the percent who want a baby and the percent who intend to have one was larger for disabled women. Women with disabilities were also less certain of their fertility intentions. Multivariate analysis shows that having a disability lowers the odds of intending another birth, after controlling for several other determinants of fertility intentions.

**Conclusions for Practice**—All women, regardless of disability status, desired more children than they actually planned to have, but the gap was larger for most groups of women with disabilities than for non-disabled women. Given the sample sizes available in this analysis, future research should use more detailed classifications of disability, however, we have shown that women living with disabilities constitute large populations with unexplored family planning needs.

### Keywords

Disabled persons; Female; Fertility; Intention; Health knowledge; Attitudes; Practice

## Introduction

Disability is prevalent across the lifespan including during childbearing years; 15.7% of non-institutionalized U.S. women ages 18–44 report serious functional limitations related to vision, cognition, mobility, self-care, and/or independent living (Courtney-Long et al. 2015). As the Institute of Medicine (IOM, 2007) has noted, disability is likely to increase in the future, due in part to medical advances and increasing obesity. Thus, it is critical to understand how reproductive health and disability status interact in reproductive-age women.

A fairly robust body of literature documents disparate health outcomes and access to healthcare among women with disabilities (IOM, 2007; Kim et al. 2013; Krahn et al. 2015). Compared to women without disabilities, women with disabilities are more likely to be of low socioeconomic status and lack health insurance, both factors limiting healthcare access (IOM, 2007; Parish et al. 2009). They may also encounter inaccessible medical facilities and equipment; inadequate training and stigmatizing attitudes of clinical providers; transportation problems; and communication barriers, e.g., the lack of American Sign Language interpreters for Deaf women (IOM, 2007; Peacock et al. 2015; Mitra et al. 2015). Women with disabilities are also less likely than those without them to receive recommended reproductive health services such as mammograms, pelvic health exams, and family planning (Gibson and Mykitiuk 2012; Greenwood and Wilkinson 2013; Iezzoni et al. 2014; Pharr and Bungum 2012). However, the body of research literature regarding the intersection of reproductive health with disability status is relatively small.

This particular research gap may be exacerbated by societal perceptions that women with disabilities are not reproductive or sexual beings. For example, in qualitative interviews with people with disabilities, service providers, and community members, Esmail et al. (2010) found that people with disabilities are commonly viewed as asexual, or their sexuality may be stigmatized or perceived as unnatural. Similarly, women with disabilities are often discouraged from having children, due to health concerns and/or beliefs that motherhood and disability are incompatible (Pebdani et al. 2013); pregnant women with visible disabilities report experiencing questions, skepticism, and harassment from friends, family, and strangers (Prilleltensky 2003). Yet many women with disabilities are sexually active (Esmail et al. 2010; Jahoda and Pownall 2013), wish to become mothers (Shandra et al. 2014), and do so (Iezzoni et al. 2014), underscoring the need to better understand the reproductive health and needs of women with disability.

The scientific gap is especially evident regarding fertility desires and fertility intentions (i.e., how many children a woman wants and how many she plans to have). These two interrelated but distinct outcomes (Miller et al. 2004) are predictors of reproductive decision-making long-used in research to examine reproductive health behaviors and outcomes and understand the influence of practice and policy on such outcomes (Philipov et al. 2009). To our knowledge, the few studies addressing fertility desires and intentions among women with disabilities are primarily qualitative and/or exploratory descriptive studies (e.g., Mayes et al. 2011; Pebdani et al. 2013) often using varied disability measures.

A rare exception is one population-based study of fertility attitudes, desire and behavior among women with disabilities compared to those without (Shandra et al. 2014). Analyses of these data ( $N = 10,782$ ), drawn from the 2006–2010 National Survey of Family Growth (NSFG), found both groups held similar attitudes, desires, and intentions towards motherhood. However, disability was associated with greater uncertainty about fertility intentions among childless women, and a greater gap between fertility desires and intentions among women with at least one child.

Unfortunately, a significant limitation of 2006–2010 NSFG data relates to measurement of disability, with respondents asked only one broadly-worded item with dichotomous response options: “Are you limited in any way in any activities because of physical, mental, or emotional problems?” Other national surveys have used similarly limited disability measures and/or widely-varying operational definitions, substantially complicating comparison of research findings and longitudinal tracking of disability prevalence rates and associated health disparities (Krahn et al. 2015; Office of the Assistant Secretary for Planning and Evaluation [ASPE] 2011).

A requirement of the 2010 Affordable Care Act is for all population-based, public health U.S. surveys to measure disability status comprehensively and consistently. To this end, the U.S. DHSS established standardized disability-related measurement items (ASPE, 2011). These six items (described later) define disability from a comprehensive, evidence-based functional perspective, i.e., current limitations in hearing, vision, cognition, mobility, self-care, and independent living. These were included for the first time in the 2011–2013 NSFG (released December 2014). We conducted this study to (1) identify correlates of fertility desire and intention in this dataset, and (2) examine if fertility desire and intention varies by disability status with the new disability measures in the NSFG.

## Methods

### Study Design and Sample

The NSFG is a multi-stage, stratified nationally representative area probability sample of men and women aged 15–44 in the U.S. household population, providing national estimates of factors related to birth and pregnancy rates (fertility expectations, marital status, sexual activity, contraceptive use, pregnancy and birth, family planning use, related medical services; Groves et al. 2009). It is the preeminent source of national data regarding reproductive intentions and behaviors (Chandra et al. 2005).

The IRBs for the National Center for Health Statistics and University of Michigan supervise NSFG human subjects procedures. Interviews are voluntary, requiring written consent, with written parental consent for respondents age 15–17 (Groves et al. 2009). We analyzed data from public use data files for female respondents ( $N = 5601$ ) of the 2011–2013 NSFG, rendering further human subjects approval unnecessary. Data were collected in-person by trained female interviewers. The response rate for women was 73.4% (Centers for Disease Control and Prevention 2015).

## Measures

For all respondents, the dataset included age, marital status, parity (live births), race and Hispanic origin, education, income, employment (working full time, working part time, in school, keeping house, or other), and general health. Education was the highest grade/degree attained (high school [HS] diploma or GED, HS graduate, some college, or bachelor's degree [BA] or higher). The income measure is the ratio of household income to the federal poverty level; 0–99 percent indicates a household income below federal poverty level. General health was assessed with one question, “In general, how is your health?” (response options excellent, very good, good, fair, or poor).

Disability status was measured via the following six items, with yes/no responses:

HD-11: Do you have serious difficulty hearing?

HD-12: Do you have serious difficulty seeing, even when wearing glasses or contact lenses?

HD-13: Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering or making decisions?

HD-14: Do you have serious difficulty walking or climbing stairs?

HD-15: Do you have difficulty dressing or bathing?

HD-16: Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?

The sample size in this dataset was not large enough to allow collapsing these responses into disability subtypes. Therefore, we analyzed two categories:

- Any (“yes” to any disability questions; n = 1101);
- No disability (“No” to all six questions; n = 4500).

Regarding fertility desires, all respondents were asked: “Looking to the future, do you, yourself, want to have a (or: another) baby at some time in the future?” (Response options yes, no, don't know). If she had been sterilized, she was asked: “If it were possible, would you yourself want to have another baby....?” Women who are married to, or living with, a man with a vasectomy are counted as sterilized.

Regarding fertility intentions, all respondents (except sterilized women) were asked: “Looking to the future, do you intend to have (a/nother) baby at some time?” (response options yes, no, don't know). All respondents who answered intent questions (n = 3785) were also asked, “In your case, how sure are you that you will (or will not) have (a/nother) baby?” with a short caveat acknowledging that things can and do change (response options “very sure,” “somewhat sure,” “not at all sure.” If she was currently pregnant, both questions included the phrase: “when this pregnancy is over.”

## Analysis

Analyses were conducted in Stata version 13.1, with percentages and logistic regression results weighted to adjust for the complex survey design, using svy commands to compute

significance of chi-Square and logistic regression results. We used the full 5601 interviews for most analyses. Missing data was not an issue, as nearly all variables used here are “recodes” for which the already-low levels of missing data were imputed by NSFG staff.

## Results

Using the disability definitions described above, we generated weighted population estimates of US women ages 15–44:

- Disability (sample  $n = 1101$ ; population estimate = 10.3 million)
- Non-disabled (sample  $n = 4500$ ; population estimate = 51 million).

Table 1 presents demographics and unweighted sample sizes and weighted national estimates. To our knowledge, many of these represent the first national estimates of these characteristics for women of childbearing age with disabilities. Marital and cohabitating status significantly differed by group; 40.5% of non-disabled women were currently married or cohabitating, compared with about 27% of women with disabilities ( $p < .001$ ). Differences by disability status for parity, race and origin were small ( $p < .10$ ).

We excluded adolescents age 15–19 from socioeconomic status analyses, assuming most are in school and financially dependent. Among non-disabled women 20–44 years of age, 33.5% reported a college degree or more, compared to approximately 13% with a disability ( $p < .001$ ). Among non-disabled women, 23% reported income below federal poverty level, compared with 43.5% with a disability ( $p < .001$ ). Approximately half (49%) of non-disabled women were working full-time, compared with 34% with a disability ( $p < .001$ ). Among women without a disability, 73.8% reported their health as “excellent” or “very good,” compared with 45.7% of women with a disability ( $p < .001$ ). About one-fifth (19%) of women with a disability reported their health as “fair” or “poor,” compared with 4.7% of women without a disability.

In short, compared with non-disabled women, women with disabilities are less likely to be married, older, have lower income and education levels, report poorer health, and are less likely to work.

### Fertility Desires and Intentions by Age and Parity

Overall, a majority of respondents wanted a baby in the future with no significant differences by disability status (Table 2). Specifically, 60% of non-disabled women and 61% of women with disability wanted a baby in the future. Additionally, a similar pattern of fertility desire was evident across the three groups by parity (no births, one, and two or more). The highest proportions of respondents who wanted a baby in the future were childless and under age 25, and decreasing proportions of respondents reported they wanted a baby in the future as parity and age increased.

Interestingly, 50% of non-disabled women intended more children, compared with 43% of women with disabilities (Chi square  $p < .001$ ; Table 2). Similarly, childless women without disabilities (78%) were more likely than women with disabilities to intend to have children at all (71.6%,  $p < .05$ ), a pattern that held true among women with one child ( $p < .001$ ).

Similar findings occur by marital/cohabitating status: unmarried women without disabilities are much more likely (63.8%) to intend to have a baby than unmarried women with physical disabilities (44.4%,  $p < .001$ ). Thus, while women living with disabilities have similar fertility desires as non-disabled women, they are less likely to intend to have children in the future.

Table 3 shows similar data by fecundity status to see if these differences hold when the comparisons are limited to women who are fecund at the date of interview. Fecund women tend to be younger and have fewer children, and consistent with the data for young and childless women in Table 2, the difference between the proportion wanting a baby is similar for both groups of fecund women (5.0% for women without disabilities and 7.9% for women with disabilities.) Labor force participation is a current measure of participation in the economy. For women without disabilities, the gap in the percent who want versus intend a baby is 10.6% for women without disabilities in the labor force, versus 9.6% for those out of the labor force, not significantly different. There is also no significant difference for women with disabilities. Multivariate analysis (not shown) confirmed that labor force status had no effect on fertility intentions after controls for other predictors (discussed below).

Women who were asked whether they intended to have children ( $n = 3785$ ) were asked how sure they were of their intent to have (or not have) children (Table 4). Overall, 58% of non-disabled women were “very sure,” compared with 50.3% of women with a disability, but only 8.2% of non-disabled women and 13.6% of women living with disabilities were “not sure at all” ( $p < .001$ ) about their fertility intentions. Thus, women with disabilities were significantly, but not markedly, less sure of their fertility intentions than women without disabilities. Limiting the comparisons to fecund women does not change this picture significantly (Table 4).

### Multivariate Analysis

Table 5 presents five logistic regression analyses. The outcome variable is whether the woman intends to have another child at the date of interview (Yes = 1, No = 0). Control variables include age, marital status, parity, race/ethnicity, education, and fecundity status (fecund or not). The variable of interest is whether or not the woman reports a disability. Preliminary analyses included the labor force status variable used in Table 3; neither labor force status nor marital status had an effect in any of these regressions and both were dropped.

Column 1 shows the basic model. The effects of age and parity were significant in the expected direction: increasing age ( $AOR = 0.27$ ,  $p < .001$  and  $AOR = .03$ ,  $p < .001$ ) and increasing parity ( $AOR = 0.28$ ,  $p = .001$ ) reduced the odds of intending to have a child. Race was not significant. Higher education doubled the odds of intending more children ( $AOR = 2.00$ ,  $p < .001$ ). Interestingly, however, women with disabilities were substantially less likely ( $AOR = 0.67$ ,  $p < .001$ ) to intend to have more children than non-disabled women. (Controlling for income instead of education has similar effects; only the highest category of income increases birth intentions.)

To check for model robustness, we show four additional regressions in Table 5. In column 2 of Table 5, we limit the model to the 3890 fecund women in the sample. The coefficients and significance of variables are very similar; the coefficient for disability changes only from 0.67 to 0.64 and is still highly significant ( $p < .001$ ). In column 3 of Table 5, we enter a variable representing whether the woman reported two or more disabilities (1 = yes, 0 = no) or not. This variable is insignificant and the model results do not change. In column 4 of Table 5, we limit the model to fecund women, and include the measure of having two or more disabilities. The model again does not change. Finally, in column 5, we ran a model in which the “any disability” category is broken down into three parts: cognitive disability, hearing or vision disability, and any other disability. In this model, the variable for cognitive disability is significant at the 0.05 level, but the others, which are based on smaller sample sizes, are not significant. Other analyses have shown that combining the two types of physical disabilities yields a significant effect (not shown here).

Specification tests conducted in Stata’s link test routine indicated the logistic regression models shown in Table 5 provided adequate outcome prediction:  $p$  values for all estimated linear predictors were  $<0.001$ . Furthermore, addition of the squared linear predictors did not improve prediction:  $p$  values for the squared linear predictors were all  $>0.05$ , as shown in Table 5. Goodness-of-fit tests were deemed not useful for a sample of more than 5000 cases (Vittinghoff et al. 2012).

## Discussion

We found few significant differences in fertility desires among U.S. women age 15–44 by disability status. Most respondents wanted to have a baby in the future, regardless of disability status. However, while the overall proportion of women who desired a baby was higher than the proportion of women who intended one (regardless of disability), differences between groups were larger and more persistent when comparing fertility intentions. Multivariate analyses controlling for sociodemographic differences explained some of the difference in birth intention, however, women with disabilities remained significantly less likely to intend to have more children than other women. The women with disabilities were also significantly less certain about their fertility intentions than women without them.

To our knowledge, this study represents the first population-based analysis of fertility desires and intentions to employ the standard 6-question series now used in the NSFG and other federal surveys to measure disability. This question series has many strengths (Krahn et al. 2015; OASPE, 2011), and is promising step to standardizing research findings and tracking disability-related disparities across large datasets; it constitutes a vast improvement of the disability measure in previous NSFG versions.

Nevertheless, this measure has limitations. For example, it evaluates disability in terms of functional limitation and provides no direct measure of disability type (von Reichert, Greiman, Myers, & University of Montana Rural Institute, 2014). In the NSFG data, the item response options are dichotomized; a person who endorses any of the six items is considered to have a disability. There is no real measure of the severity of disability; the only possible proxy measure is to take into account whether respondents answered “yes” to more



than one disability question. In our analysis, we found that this proxy measure of “2 or more disabilities” had no effect on our dependent variable, but this is not an ideal measure of disability severity.

This study suggests several implications for future research. For example, our analysis was limited due to sample size in that we were unable to further categorize disability type (e.g., cognitive, hearing/vision, and other) to quantify the effects of disability type on outcomes, or to characterize fertility desires and intentions of sexual minority women with disability. Future releases of NSFG data will allow for critically-needed research with larger sample sizes with more detailed classifications of disability and independent variables, and the chance to monitor trends over time.

In addition, research is also needed that comprehensively addresses the complex factors left unmeasured in the NSFG. These may include micro-level determinants of fertility intentions among women with disability, such as attitudes, subjective norms/the influence of important others, and perceived control over the behavior (Philipov et al. 2009). Women with disabilities report concerns about the risks for pregnancy complications, pregnancy-related exacerbation of medical problems or restriction of their medications (Misra et al. 2000), the potential for their children to be removed (McConnell and Llewellyn 2000); ability to care for children (Rogers 2005), or the lack of access to an obstetric provider with accurate knowledge of their disability. It is also well-documented that women with disabilities often experience pressure not to have children (e.g., Esmail et al. 2010; Pebdani et al. 2013) and may believe their fertility decisions are not entirely under their control, particularly understandable in light of significant disparities in receipt of family planning services by disability (Anderson and Kitchin 2000; Gibson and Mykitiuk 2012; Greenwood and Wilkinson 2013). Such factors may contribute to differences in fertility intention and behaviors.

In response to pregnancy-related disparities, Mitra et al. (2015) recently proposed a comprehensive framework for perinatal health for women with physical disability accounting for individual health determinants (e.g., demographics, impairments, self-care capacity), mediating factors (e.g., access to information and resources, health care, psychosocial factors) and the environmental context (e.g., accessibility issues, legal/policy issues). Mixed-methods designs may help explicate such micro- and macro-level factors more comprehensively. Longitudinal research may also help better illuminate disability-related differences in the stability of fertility intention and the “fertility gap” (the differences between birth desires and intentions and actual birth outcomes, related to financial, physical, and practical barriers; Philipov et al. 2009). Finally, we recommend that women with disabilities be included in all phases of research, intervention, and policy development.

Given our findings that most U.S. women of childbearing age desire and intend children, regardless of disability status, and the increasing prevalence of disability (IOM, 2007), this is a critically needed area for future policy, research, and practice attention. It is important to address the wide gap in the evidence regarding how women with disabilities navigate fertility decisions, plan, delay, and avoid pregnancy, and overcome environmental and other barriers they face. Moreover, it is critical to identify which practices, policies, and



interventions are most effective at supporting their fertility desires and intentions, and how these translate to improved maternal-child health outcomes and equity in reproductive health care access for this ever-increasing population of marginalized women.

## Acknowledgments

We acknowledge the National Institute of Child Health & Development (“Risks and protective factors for unintended pregnancy in women with disabilities,” #R21HD086471) and Ramin Mojtabai, M.D., MPH, PhD, for his assistance.

## References

- Anderson P, Kitchin R. Disability, space and sexuality: Access to family planning services. *Social Science and Medicine*. 2000; 51(8):1163–1173. DOI: 10.1016/S0277-9536(00)00019-8 [PubMed: 11037207]
- Centers for Disease Control and Prevention. About the national survey of family growth. 2015. Retrieved December 17, 2015, from [http://www.cdc.gov/nchs/nsfg/about\\_nsfg.htm#NSFG11](http://www.cdc.gov/nchs/nsfg/about_nsfg.htm#NSFG11)
- Chandra A, Martinez GM, Mosher WD, Abma JC, Jones J. Fertility, family planning, and reproductive health of US women: Data from the 2002 National Survey of Family Growth. *Vital and Health Statistics*. 2005; 23(25):160.
- Courtney-Long EA, Carroll DD, Zhang QC, Stevens AC, Griffin-Blake S, Armour BS, Campbell VA. Prevalence of disability and disability type among adults — United States, 2013. *MMWR CDC Surveillance Summaries: Morbidity and Mortality Weekly Report*. CDC Surveillance Summaries/ Centers for Disease Control. 2015; 64(29):778–783.
- Esmail S, Darry K, Walter A, Knupp H. Attitudes and perceptions towards disability and sexuality. *Disability and Rehabilitation*. 2010; 32(14):1148–1155. DOI: 10.3109/09638280903419277 [PubMed: 20131952]
- Gibson BE, Mykitiuk R. Health care access and support for disabled women in Canada: Falling short of the UN convention on the rights of persons with disabilities: A qualitative study. *Women’s Health Issues*. 2012; 22(1):e111–e118. DOI: 10.1016/j.whi.2011.07.011 [PubMed: 21968028]
- Greenwood NW, Wilkinson J. Sexual and reproductive health care for women with intellectual disabilities: A primary care perspective. *International Journal of Family Medicine*. 2013; 2013:642472.doi: 10.1155/2013/642472 [PubMed: 24455249]
- Groves R, Mosher W, Lepkowski J, Kirgis N. Planning and development of the continuous national survey of family growth. *National Center for Health Statistics*. 2009; 1(48):1–64.
- Hayford SR. The evolution of fertility expectations over the life course. *Demography*. 2009; 46(4): 765–783. [PubMed: 20084828]
- Iezzoni LI, Yu J, Wint AJ, Smeltzer SC, Ecker JL. General health, health conditions, and current pregnancy among U.S. women with and without chronic physical disabilities. *Disability and Health Journal*. 2014; 7(2):181–188. DOI: 10.1016/j.dhjo.2013.12.002 [PubMed: 24680047]
- Field, MJ., Jette, AM., editors. *Institute of Medicine [IOM]. The future of disability in America*. Washington, DC: The National Academies Press; 2007. Institute of Medicine Committee on Disability in America, Board on Health Sciences Policy
- Jahoda A, Pownall J. Sexual understanding, sources of information and social networks: The reports of young people with intellectual disabilities and their non-disabled peers. *Journal of Intellectual Disability Research*. 2013; 58:430–441. DOI: 10.1111/jir.12040 [PubMed: 23600407]
- Kim M, Kim HJ, Hong S, Fredriksen-Goldsen KI. Health disparities among childrearing women with disabilities. *Maternal and Child Health Journal*. 2013; 17(7):1260–1268. DOI: 10.1007/s10995-012-1118-4 [PubMed: 22918712]
- Krahn GL, Walker DK, Correa-De-Araujo R. Persons With disabilities as an unrecognized health disparity population. *American Journal of Public Health*. 2015; 105:e1–e9. DOI: 10.2105/AJPH.2014.302182

- Mayes R, Llewellyn G, McConnell D. “That’s who I choose to be”: The mother identity for women with intellectual disabilities. *Women’s Studies International Forum*. 2011; 34(2):112–120. DOI: 10.1016/j.wsif.2010.11.001
- McConnell D, Llewellyn G. Disability and discrimination in statutory child protection proceedings. *Disability & Society*. 2000; 6:883–895. DOI: 10.1080/713662015
- Miller WB, Severy LJ, Pasta DJ. A framework for modelling fertility motivation in couples. *Population Studies*. 2004; 58(2):193–205. [PubMed: 15204253]
- Misra DP, Grason H, Weisman C. An intersection of women’s and perinatal health: The role of chronic conditions. *Women’s Health Issues*. 2000; 10:256–267. [PubMed: 10980443]
- Mitra M, Iezzoni L, Zhang J. Prevalence and risk factors for postpartum depression symptoms among women with disabilities. *Maternal and Child Health Journal*. 2014; doi: 10.1007/s10995-014-1518-8
- Mitra M, Long-Bellil LM, Smeltzer SC, Iezzoni LI. A perinatal health framework for women with physical disabilities. *Disability and Health Journal*. 2015; 8(4):499–506. DOI: 10.1016/j.dhjo.2015.05.007 [PubMed: 26189010]
- Morton C, Le JT, Shahbandar L, Hammond C, Murphy EA, Kirschner KL. Pregnancy outcomes of women with physical disabilities: A matched cohort study. *Pm&R*. 2013; 5(2):90–98. DOI: 10.1016/j.pmrj.2012.10.011 [PubMed: 23200116]
- Office of the Assistant Secretary for Planning and Evaluation [ASPE]. US HHS Implementation guidance on data collection standards for race, ethnicity, sex, primary language, and disability status. 2011. Retrieved from, November 22, 2014 <http://aspe.hhs.gov/datacncl/standards/ACA/4302/index.shtml>
- Parish SL, Roderick RA, Andrews ME. Income poverty and material hardship among U.S. women with disabilities. *Social Service Review*. 2009; 83(1):33–52. DOI: 10.1086/598755
- Peacock G, Iezzoni LI, Harkin TR. Health care for Americans with disabilities—25 years after the ADA. *New England Journal of Medicine*. 2015; 373:892–893. DOI: 10.1056/NEJMp1508854 [PubMed: 26225616]
- Pebdani RN, Johnson KL, Amtmann D. Personal experiences of pregnancy and fertility in individuals with spinal cord injury. *Sexuality and Disability*. 2013; 32:65–74. DOI: 10.1007/s11195-013-9319-3
- Pharr JR, Bungum T. Health disparities experienced by people with disabilities in the United States: A Behavioral Risk Factor Surveillance System study. *Global Journal of Health Science*. 2012; 4(6): 99–108. DOI: 10.5539/gjhs.v4n6p99 [PubMed: 23121746]
- Philipov, D., Thévenon, O., Klobas, J., Bernardi, L., Liefbroer, AC. Reproductive decision-making in a macro-micro perspective (REPRO): State-of-the-art review. Vienna: Vienna Institute of Demography; 2009.
- Prilleltensky O. A ramp to motherhood: The experiences of mothers with physical disabilities. *Sexuality and Disability*. 2003; 21(1):21–47. DOI: 10.1023/A:1023558808891
- Rogers, J. *The disabled woman’s guide to pregnancy and birth*. New York: Demos Publishing; 2005.
- Shah PS, Balkhair T, Ohlsson A, Beyene J, Scott F, Frick C. Intention to become pregnant and low birth weight and preterm birth: A systematic review. *Maternal and Child Health Journal*. 2011; 15(2):205–216. DOI: 10.1007/s10995-009-0546-2 [PubMed: 20012348]
- Shandra CL, Hogan DP, Short SE. Planning for motherhood: Fertility attitudes, desires and intentions among women with disabilities. *Perspectives on Sexual and Reproductive Health*. 2014; 46(4): 203–210. DOI: 10.1363/46e2514 [PubMed: 25209449]
- Signore C, Spong CY, Krotoski D, Shinowara NL, Black-well SC. Pregnancy in women with physical disabilities. *Obstetrics and Gynecology*. 2011; 117(4):935–947. DOI: 10.1097/AOG.0b013e3182118d59 [PubMed: 21422868]
- Smeltzer SC. Improving the health and wellness of persons with disabilities: A call to action too important for nursing to ignore. *Nursing Outlook*. 2007; 55(4)doi: 10.1016/j.outlook.2007.04.001
- U.S. Department of Health and Human Services [US DHSS]. Disability and health: Objectives. 2015. Retrieved December 19, 2015, from <http://www.healthypeople.gov/2020/topics-objectives/topic/disability-and-health/objectives>

Von Reichert, C., Greiman, L., Myers, A., University of Montana Rural Institute. The geography of disability in America: Rural-urban differences in impairment rates. Independent living and community participation. 2014. paper 7. [http://scholarworks.umt.edu/ruralinst\\_independent\\_living\\_community\\_participation/7](http://scholarworks.umt.edu/ruralinst_independent_living_community_participation/7)

Vittinghoff, E., Glidden, DV., Shioski, S., Mcculloch, CE. Regression methods in biostatistics: linear, logistic, survival, and repeated measures models. Berlin: Springer; 2012. Chap. 5

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### Significance

Most previous studies of the reproductive goals and behavior of women with disabilities have been based on small, non-representative samples, making it difficult to generalize their findings. This study uses a new, evidence-based measure of disability that has been added to federal surveys to explore the family size desires and intentions of women with disabilities of childbearing age. This study provides the first national estimates of these characteristics using the new measure of disability.

**Table 1**

Demographic characteristics of respondents (women age 15–44) by disability status: unweighted sample sizes and weighted percentages and means (national estimates)

	No disability N's	Weighted (%)	Disability N's	Weighted (%)
Age <sup>^</sup>				
15–17	455	8.8	136	11.5
18–24	1113	23.1	293	25.3
25–34	1694	34.9	352	30.2
35–44	1238	33.2	320	33
Total N	4500	100%	1101	100%
Marital status <sup>***</sup>				
Now married	1474	40.5%	237	26.6
Cohabiting	595	14.6	168	16.8
Never married	1998	36.6	535	43.9
Formerly married	433	8.4	161	12.7
Total N	4500	100%	1101	100%
Parity <sup>^</sup>				
No births	1988	44.2%	472	42.1
1 birth	840	16.2	203	21.0
2 births	904	20.5	196	17.4
3 or more births	768	19.1	230	19.6
Race and origin <sup>^</sup>				
Hispanic	1161	19.2%	297	22.3
Non-Hisp White	2107	59.4	477	54.1
Non-Hisp Black	947	14	280	17.8
Non-Hisp other	285	7.4	47	5.8
Education <sup>***</sup> Age 20–44 only				
<HS diploma	396	8.6	196	20.1
HS graduate	911	23.1	323	37.7
Some college	1305	34.8	268	29.0
BA or more	1075	33.5	90	13.2
Total N	3687	100%	877	100%
Income/poverty level <sup>***</sup> Age 20–44 only				
0–99	1075	23.3	439	42.5
100–199	836	21.0	213	23.9
200–299	616	17.1	78	8.9
300–399	435	14.0	69	9.8
400+	725	24.6	87	14.8
Total N	3687	100%	877	100%

	No disability N's	Weighted (%)	Disability N's	Weighted (%)
<b>Labor force status ***</b>				
Age 20–44 only				
Working full time	1702	49.2	268	34.0
Working part time	707	19.5	162	21.1
In school	195	5.1	46	5.2
Keeping house	652	16.4	219	21.0
Other	431	9.8	182	18.8
Total N	3687	100%	877	100%
<b>General health ***</b>				
Excellent or very good	3188	73.8	502	45.7
Good	1048	21.3	369	35.2
Fair or poor	252	4.7	226	19.0
<b>Labor force status ***</b>				
Age 20–44 only				
No answer	12	0.3	4	0.2
Total N	4500	100%	1101	100%
<b>Means</b>				
	Mean (SE)	Weighted mean		
Parity **	1.2 (0.02)	1.2	1.3 (0.05)	1.3
Additional expected *	1.1 (0.02)	1.1	1.0 (0.04)	0.98
Total births expected	2.3 (0.02)	2.3	2.3 (0.04)	2.3
Age	28.6 (0.12)	29.7	28.5 (0.27)	29.2
Income/poverty (age 20–44) ***	229.2 (2.7)	257.0	159.3 (4.8)	186.9

\* Significant at 5% level

\*\* Significant across disability at the 1% level with a chi square test

\*\*\* Significant at .1% level

^ Significant at 10% level



**Table 2**

Women 15–44 years of age by disability status, whether she wants a baby (or another baby), and whether she intends to have a baby (or another) at the date of interview: US, 2011–2013 (percentages are weighted national estimates)

	Wants a baby (%)	Intends to have a baby (%)	Difference (%)	Total sample size (N)
No disability				
All women	60.4	50.1	10.3	4500
15–24 years	89.1	85.7 <sup>^</sup>	3.4	1568
25–34 years	66.4	54.3 <sup>**</sup>	12.1	1694
35–44 years	26.6	11.7 <sup>**</sup>	14.9	1238
Parity 0	83.5	78.0 <sup>*</sup>	5.5	1988
Parity 1	70.9 <sup>**</sup>	59.2 <sup>***</sup>	11.7	840
Parity 2 or more	30.4 <sup>***</sup>	15.4	15.0	1672
Disability				
All women	61.4	43.3	18.1	1101
15–24 years	88.4	81.3	7.1	429
25–34 years	61.6	37.8	23.8	352
35–44 years	31.2	6.1	25.1	320
Parity 0	80.5	71.6	8.9	472
Parity 1	53.5	37.6	15.9	203
Parity 2 or more	44.1	14.4	29.7	426

\* Significant at 5% level

\*\* Significant across disability at the 1% level with a chi square test

\*\*\* Significant at .1% level

<sup>^</sup> Significant at 10% level

**Table 3**

Women 15–44 years of age by disability Status, whether she wants a baby (or another baby), and whether she intends to have a baby (or another) at the date of interview: US, 2011–2013 (percentages are weighted national estimates)

	Wants a baby (%)	Intends to have a baby (%)	Difference (%)	Total sample size (N)
No disability				
All women	60.4	50.1	10.3	4500
Fecundity status				
Contraceptively sterile	23.4 <sup>**</sup>	0	23.4	746
Impaired fecundity	60.8	41.8	19.0	508
Fecund	71.1	66.1	5.0	3246
Labor force status last week				
In the labor force	57.7	47.1 <sup>*</sup>	10.6	2678
Not in the labor force	65.0	55.4 <sup>*</sup>	9.6	1822
Disability				
All women	61.4	43.3	18.1	1101
Fecundity Status				
Contraceptively sterile	37.7	0	37.7	233
Impaired fecundity	64.2	39.6	24.6	224
Fecund	69.5	61.6	7.9	644
Labor force status last week				
In the labor force	58.7	39.6	19.1	492
Not in the labor force	64.2	47.1	17.1	609

\* Significant at 5% level

\*\* Significant across disability at the 1% level with a chi square test

\*\*\* Significant at .1% level

<sup>^</sup> Significant at 10% level

Women 15–44 by how sure they are about their intentions to have children, according to disability status: US, 2011–2013 (n = 3785)

**Table 4**

	Very sure	Somewhat sure	Not sure at all	Total	Total (n)
No disability					
All women	58.2	33.7	8.2	100%	3127
Fecundity status					
Contraceptively sterile					0
Impaired Fecundity	53.1	34.7	12.2	100%	351
Fecund**	58.8	33.5	7.6	99.9%	2776
Disability					
All women	50.3	36.1	13.6	100%	656
Fecundity status					
Contraceptively sterile					0
Impaired fecundity	46.5	38.9	14.6	100%	139
Fecund	51.5	35.3	13.2	100%	517

\* Significant at 5% level

\*\* Significant across disability at the 1% level with a chi square test

\*\*\* Significant at .1% level

<sup>†</sup> Significant at 10% level

**Table 5**  
Adjusted Odds Ratios (AOR) and 95% confidence intervals for regressions of those who intend to have more children

Variables	Whole population Adjusted Odds Ratio	Fecund Adjusted Odds Ratio	Whole Population Adjusted Odds Ratio	Fecund Adjusted Odds Ratio	Whole Population Adjusted Odds Ratio
Any disability (binary)	0.67 <sup>***</sup> (0.53–0.83)	0.64 <sup>***</sup> (0.50–0.82)	0.72 <sup>*</sup> (0.55–0.94)	0.70 <sup>*</sup> (0.51–0.95)	
Any two disabilities			0.77 (0.50–1.18)	0.76 (0.47–1.23)	
Cognitive Disability					0.75 <sup>*</sup> (0.56–0.98)
Blind or Deaf (binary)					0.72 (0.50–1.06)
Difficulty walking, dressing, or going out					0.86 (0.52–1.44)
Age 25–34 (rel to 15–24)	0.27 <sup>***</sup> (0.22–0.35)	0.34 <sup>***</sup> (0.27–0.44)	0.28 <sup>***</sup> (0.22–0.35)	0.34 <sup>***</sup> (0.27–0.44)	0.27 <sup>***</sup> (0.22–0.35)
Age 35–44 (rel to 15–24)	0.03 <sup>***</sup> (0.02–0.04)	0.03 <sup>***</sup> (0.03–0.06)	0.03 <sup>***</sup> (0.02–0.04)	0.05 <sup>***</sup> (0.03–0.06)	0.03 <sup>***</sup> (0.02–0.04)
Parity (1 or more relative to 0)	0.28 <sup>***</sup> (0.23–0.35)	0.41 <sup>***</sup> (0.32–0.51)	0.28 <sup>***</sup> (0.23–0.35)	0.40 <sup>***</sup> (0.32–0.51)	0.28 <sup>***</sup> (0.23–0.35)
Race: Latino (rel. white)	0.8 (0.62–1.03)	0.78 (0.60–1.02)	0.8 (0.62–1.03)	0.78 (0.60–1.02)	0.8 (0.62–1.03)
Race: Black (rel. white)	1.05 (0.74–1.48)	1.01 (0.69–1.47)	1.04 (0.74–1.47)	1.01 (0.69–1.46)	1.04 (0.74–1.47)
Race: Other (rel. white)	1.32 (0.88–1.97)	1.1 (0.78–1.56)	1.32 (0.88–1.98)	1.1 (0.78–1.56)	1.33 (0.88–1.99)
BA or higher education	2.03 <sup>***</sup> (1.62–2.55)	1.75 <sup>***</sup> (1.39–2.21)	2.02 <sup>***</sup> (1.61–2.52)	1.74 <sup>***</sup> (1.38–2.18)	2.04 <sup>***</sup> (1.64–2.54)
Constant	8.90 <sup>***</sup> (6.57–12.05)	8.72 <sup>***</sup> (6.39–11.90)	8.92 <sup>***</sup> (6.60–12.06)	8.73 <sup>***</sup> (6.41–11.90)	8.83 <sup>***</sup> (6.54–11.91)
Observations	5601	5601	5601	5601	5597
Specification tests					
_hat	t = 33.3 <sup>***</sup>	t = 30.0 <sup>***</sup>	t = 33.6 <sup>***</sup>	t = 29.9 <sup>***</sup>	T = 33.4 <sup>***</sup>
_hat <sup>2</sup>	T = -1.85 NS	t = -1.23 NS	t = -1.86 NS	t = -1.23 NS	T = -1.92 NS

\* p < .05  
\*\* p < .01

p < .001 FPL federal poverty level  
\*\*\*

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