

Introduction to National Survey of Family Growth (NSFG)

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Aims of NSFG

- Address Sec 306 of the Public Health Service Act: “NCHS shall collect statistics on... family formation, growth, and dissolution.”
 - Provide reliable national data on marriage, divorce, sexual activity, contraception, pregnancy, sterilization, and infertility.
 - Describe attitudes of sex, marriage, cohabitation, and parenthood.
 - Monitor health risks, sexually transmitted diseases (including HIV), and the health of infants, women, and men.
 - Policies can be made to meet the needs of families
 - Service agencies can design health and service programs

NSFG Study Design

Table 1. Study Designs of NSFG

Name	Year	Target population: Non-institutionalized people in the U.S.			Survey Design (repeated cross-sectional)	N
		Gender	Age Range	marital or parental status		
Cycle 1	1973	women	15-44	1. ever married or 2. have offspring in the household	Interviews completed in a year	9,797
Cycle 2	1976	women	15-44	1. ever married or 2. have offspring in the household	Interviews completed in a year	8,611
Cycle 3	1982	women	15-44		Interviews completed in a year	7,969
Cycle 4	1988	women	15-44		Interviews completed in a year	8,450
Cycle 5	1995	women	15-44		Interviews completed in a year	10,847
Cycle 6	2002	women men	15-44		Interviews completed in a year	12,571 W=7,643 M=4,928
2006-2010 NSFG	2006-2010	women men	15-44		Interviews spread over several years	22,682 W=12,279 M=10,403
2011-2013 NSFG	2011-2013	women men	15-44		Interviews spread over several years	10,416 W=5,601 M=5,815
2015-2019 NSFG	2015-2019	women men	15-49		Interviews spread over several years	n/a

NSFG Study Design (Continued)

Table 1. Study Designs of NSFG (Continued)

Name	Year	Sampling Method	Over-Sampled groups	Data Collection Methods
Cycle 1	1973	multistage probability sampling	Black women	Personal interview
Cycle 2	1976	multistage probability sampling	Black women	face-to-face interview
Cycle 3	1982	multistage area probability sampling	Black women & Teens	face-to-face interview
Cycle 4	1988	Using Households used in National Health Interview Survey	Black women	face-to-face interview
Cycle 5	1995	Using Households used in National Health Interview Survey	Black and hispanic women	Computer-assisted personal interview (CAPI)
Cycle 6	2002	multistage area probability sampling	Blacks, Hispanics, & Teens	Interviewer administered CAPI self-administered ACAPI
2006-2010 NSFG	2006-2010	multistage area probability sampling	Blacks, Hispanics, & Teens	Interviewer administered CAPI self-administered ACAPI
2011-2013 NSFG	2011-2013	stratified multi-stage area probability sampling	Blacks, Hispanics, & Teens	Interviewer administered CAPI self-administered ACAPI
2015-2019 NSFG	2015-2019	n/a	n/a	n/a

NSFG Data Files

Each NSFG survey has at most five types of data files:

- Public-use data were collected through personal interviews or Computer Assisted Personal Interviewing (CAPI)
 - Respondent data were information about female or male respondents
 - Interval data were information about pregnancies of female respondents
 - ***This is the primary data that users work with***
- ACASI data were collected in the Audio Computer-Assisted Self Interviewing (ACASI) portion of the interview.
 - ACASI data collect information on sensitive topics, such as alcohol and drug use, sexual risk behaviors, non-voluntary sexual intercourse, and experiences of oral sex, anal sex, and same-sex sexual partners, among other things
 - ACASI data for 2011-2013 are already included in the public-use data file. However, to apply for ACASI data from Cycles 5, 6, and 2006-2010, researchers need to send their request to NSFG staff (nsfg@cdc.gov).

NSFG Data Files (Continued)

- Contextual data: Geographic variables were created for the respondent's address.
 - These variables are available for Cycles 5, 6, 2006-2010 NSFG, and 2011-2013 NSFG. NSFG surveys at different years may have different levels of contextual variables. For example, Cycles 5, 6 and 2006-2010 NSFG have context variables measured at the state, county, tract, block group, and block levels, but 2011-2013 NSFG have variables at the state and county levels.
 - To obtain the files, researchers need to contact the Research Data Center (RDC) at NCHS
- Region data: One region variable indicates whether the respondent lives in Northeast, Midwest, South, or West.
 - Region variable is available for 2011-2013 NSFG.
 - To obtain the region data, researchers need to send request to NSFG staff (nsfg@cdc.gov).

NSFG Data Files (Continued)

- Interviewer observation: When respondents complete the ACASI portion of survey, interviewers filled out a paper questionnaire about the interview process
 - These data are used mainly for survey planning and management, for evaluating data quality, and for assessing the effectiveness of interviewer training.
 - Interviewer observation data file is also available through RDC

Availability of NSFG Data Files

Table 2. NSFG data files

Name	Year	Public-Use Data Fiile	ACASI data	Contextual data	Region Data	Interviewer observational data
Cycle 1	1973	1973NSFGData.dat				
Cycle 2	1976	1976NSFGData.dat				
Cycle 3	1982	1982NSFGData.dat				
Cycle 4	1988	1988FemRespData.dat 1988PregData.dat				
Cycle 5	1995	1995FemRespData.dat 1995PregData.dat	X	X		X
Cycle 6	2002	2002FemResp.dat 2002FemPreg.dat 2002Male.dat 2002curr_ins.dat 2002HHvars.dat	X	X		X
2006-2010 NSFG	2006-2010	2006_2010_FemResp.dat 2006_2010_FemPreg.dat 2006_2010_Male.dat	X	X		X
2011-2013 NSFG	2011-2013	2011_2013_FemRespData.dat 2011_2013_FemPregData.dat 2011_2013_MaleData.dat	X	X	X	X
2015-2019 NSFG	2015-2019	n/a	n/a	n/a	n/a	n/a

Topics in 2011-2013 NSFG

Table 3. The Topics Covered in the Male and Female Respondent Data files in 2011-2013 NSFG		
	Male Respondent Data	Female Respondent data
	Respondent ID and Selected Screener Items	Respondent ID and Pregnancy Order
Section A.	Demographic Characteristics; Household Roster; Childhood Background; Marital/Cohabiting Status	
Section B	Sex Communication, Ever Sex, Number of Sexual Partners, Enumeration and Relationship With Up To 3 Recent (Or Last) Sexual Partner(s)	Raw variables
		Pregnancy-based recodes
Section C	Current Wife or Cohabiting Partner	
Section D	Recent (Or Last) Sexual Partner(s) and First Sexual Partner	
Section E	Former Wives and First Cohabiting Partner	Raw variables
		Pregnancy-based recodes
Section F	Other Biological Children, Other Adopted Children, Other Pregnancies	
Section G	Fathering	
Section H	Desires and Intentions for Future Children	
Section I	Health Conditions and Health Services	
Section J	Residence and place of birth; Religion; Military service; Past and current work (R and current wife/partner); Attitudes	
Section K	Audio CASI	
	Recode Variables and Imputation Flags	Selected respondent file variables
	Weights and Other Variables	Pregnancy recode imputation flags
		Respondent recode imputation flags included on pregnancy file
		Weights and related variables
		Date of interview, key reference dates, and fieldwork variables

Topics in 2011-2013 NSFG (Continued)

Table 4. The Topics Covered in Pregnancy Data files in 2011-2013 NSFG	
	Pregnancy Data file
	Respondent ID and Selected Screener Variables
Section A.	Calendar Instructions; Demographic Characteristics; Household Roster; Childhood Background
Section B	Pregnancy & Birth History; Adoption & Nonbiological Children
Section C	Marital and Relationship History
Section D	Sterilizing Operations and Impaired Fecundity
Section E	Contraceptive History and Pregnancy Wantedness
Section F	Family Planning and Medical Services
Section G	Birth Desires and Intentions
Section H	Infertility Services and Reproductive Health
Section I	Insurance; Residence and place of birth; Religion; Past and current work (R and current H/P); Attitudes
Section J	SECTION J: Audio CASI
	Recode Variables and Imputation Flags
	<i>Weights and Other Variables</i>

Examples of Faculty's Work using NSFG

Guzzo K. B., & Hayford, S. (2011). Fertility following an unintended first birth. *Demography*, 48, 493-516.

Joyner K, Peters, H.E., Hynes, K, Sikora, A, Taber, J.R., & Rendall, M.S. (2012) The quality of male fertility data in major U.S. surveys. *Demography*, 49, 101-122.

Manning, W. D., & Cohen, J. A. (2012) Premarital cohabitation and marital dissolution: An examination of recent marriages, *Journal of Marriage and Family*, 74, 377–387.

Manning W.D., & Brown, S. L. (2014). Two decades of stability and change in age at first union formation. *Journal of Marriage and Family*, 76, 247-260.

Stykes, J. B., Manning, W. D., & Brown, S. L. (2013) Nonresident fathers and formal child support: Evidence from the CPS, NSFG, and SIPP. *Demographic Research*, 29, 1299-1330

Navigate NSFG Website

http://www.cdc.gov/nchs/nsfg/index.htm

The screenshot shows a web browser window displaying the National Survey of Family Growth (NSFG) website. The browser's address bar shows the URL www.cdc.gov/nchs/nsfg/index.htm. The website header includes the CDC logo and the text "Centers for Disease Control and Prevention" with the tagline "CDC 24/7: Saving Lives, Protecting People™". A search bar is located in the top right corner. Below the header, a blue banner reads "National Center for Health Statistics". The main content area features a sidebar on the left with a menu for "National Survey of Family Growth" containing links for "About NSFG", "What's New", "Questionnaires, Datasets, and Related Documentation", "Key Statistics from NSFG", "Publications and Information Products", "Bibliography", "Research Conferences", and "NSFG Survey Participants". The main content area has a sub-header "National Survey of Family Growth" with a breadcrumb "CDC > NCHS" and a "Language: English" dropdown. The main text describes the survey's focus on family life, marriage, divorce, pregnancy, and fertility. A "What's New" section lists recent publications, including "Trends in Attitudes About Marriage, Childbearing, and Sexual Behavior: United States, 2002, 2006-2010, and 2011-2013" and "Sexual Behavior, Sexual Attraction, and Sexual Orientation Among Adults Aged 18-44 in the United States: Data From the 2011-2013 National Survey of Family Growth". A "For Survey Participants" section provides information for those selected to take part in the survey.

Navigate NSFG Website (Continued)

http://www.cdc.gov/nchs/nsfg/nsfg_questionnaires.htm

The screenshot shows a web browser window displaying the CDC website. The address bar shows the URL: www.cdc.gov/nchs/nsfg/nsfg_questionnaires.htm. The page header includes the CDC logo and the text "Centers for Disease Control and Prevention" with the tagline "CDC 24/7: Saving Lives, Protecting People™". A search bar is visible with the text "Search NCHS" and "SEARCH". A "CDC A-Z INDEX" dropdown menu is also present.

The main content area is titled "National Center for Health Statistics". Below this, there is a section for the "National Survey of Family Growth" (NSFG). The page is structured as follows:

- National Survey of Family Growth** (Main heading)
- About NSFG**
- What's New**
- Questionnaires, Datasets, and Related Documentation** (Expanded menu item)
- 2011-2013 NSFG** (+)
- 2006 - 2010 NSFG** (+)
- NSFG Cycle 6 (2002)** (+)
- NSFG Cycle 5 (1995)**
- NSFG Cycle 4 (1988)**
- NSFG Cycle 3 (1982)**
- NSFG Cycle 2 (1976)**
- NSFG Cycle 1 (1973)**
- Key Statistics from NSFG** (+)
- Publications and Information Products**

Under the "Questionnaires, Datasets, and Related Documentation" section, there are social media icons for Facebook, Twitter, and a plus sign. Below these icons, a list of links is provided:

- [2011-2013 NSFG](#)
- [2006 - 2010 NSFG](#)
- [NSFG Cycle 6 \(2002\)](#)
- [NSFG Cycle 5 \(1995\)](#)
- [NSFG Cycle 4 \(1988\)](#)
- [NSFG Cycle 3 \(1982\)](#)
- [NSFG Cycle 2 \(1976\)](#)
- [NSFG Cycle 1 \(1973\)](#)

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2011-2013 NSFG webpage

NSFG website provides information on each NSFG survey.

Take 2011-2013 NSFG as an example, the website provides:

- Interactive Codebooks and User's guide
- Design and Data Collection Methods
- Variance Estimation Examples
- Questionnaires
- Informed Consent Materials
- The location of downloadable Data Files
- Program Statements for SAS, Stata, and/or SPSS.
- The availability of other Data Files

Questionnaire

NSFG questionnaire has two formats:

1. CAPI-Lite format provides abridged representations of the question wording variants and short descriptions of skip patterns through the interview

TIMESMAR

CA-1. (Including your present marriage,) how many times have you been married?

Number _____

{ CA-2, CA-2b, & CA-2c ARE INTENDED TO OBTAIN NAMES OR INITIALS OF HUSBANDS,
{ ONLY FOR PURPOSES OF LOOPING THROUGH CA SERIES.
{ IF R HAS ANSWERED DK/RF FOR # OF TIMES MARRIED, SHE IS LOOPED ONLY ONCE
{ THROUGH CA SERIES.

Questionnaire (Continued)

2. CAPI Reference Questionnaire (CRQ) provides comprehensive specifications of each question that NSFG staff provided to the computer programmers to create the CAPI instrument.

```
TIMESMAR
CA-1. IF FMARIT = 1 or 4 (married or separated), ASK:
    Including your present marriage, how many times have you been married?

    ELSE IF FMARIT = 2 or 3 (widowed or divorced), ASK:
    How many times have you been married?

    * ENTER number

[HELP AVAILABLE]

    Number _____

    UNDERLYING RANGE: 1 to 95
    (But we want to allow space for only 6 husbands in looping)

FLOW CHECK C-4:  IF MARSTAT = 1 (married) AND 1 LE TIMESMAR LE 6, ASK CA-2
HUSBNAMEX FOR EACH FORMER HUSBAND IF ANY (up to TIMESMAR-1)
AND THEN ASK CA-2b HSBVERIF TO VERIFY NAME OF CURRENT
HUSBAND.

    ELSE IF 2 LE CA-1 TIMESMAR LE 6 OR (CA-1 TIMESMAR = 1 AND
AB-1 MARSTAT NE 1), ASK CA-2 HUSBNAMEX FOR EACH OF THE
[TIMESMAR] FORMER (or currently separated) HUSBANDS.

    ELSE IF MARSTAT = 1 (married) AND 1 LE TIMESMAR LE 6 AND
CHPNAME = "YOUR HUSBAND", ASK CA-2 HUSBNAMEX FOR EACH
FORMER HUSBAND IF ANY (up to TIMESMAR-1) AND THEN GO TO CA-
2c CHVERIFY TO FIND OUT NAME OF CURRENT HUSBAND.

    ELSE IF TIMESMAR = DK OR RF, GO TO CA-2c CHVERIFY TO FIND
OUT NAME OF CURRENT OR MOST RECENT HUSBAND (BASED ON
MARSTAT VALUE).

    ELSE IF TIMESMAR GT 6 AND MARSTAT = 1 (married), ASK
HUSBNAMEX FOR HER FIRST 5 FORMER HUSBANDS AND THEN ASK CA-
2c CHVERIFY OR CA-2b HSBVERIF (as appropriate based on
CHPNAME value) ABOUT R's CURRENT HUSBAND. (For currently
married women with more than 6 marriages, we will only ask
about her 1st 5 husbands and her current husband.)

    ELSE IF TIMESMAR GT 6 AND MARSTAT NE 1 (married), ASK
HUSBNAMEX FOR HER FIRST 6 FORMER HUSBANDS. (For currently
unmarried women with more than 6 marriages, we will only
ask about her 1st 6 marriages.)
```

Interactive Codebook

The screenshot shows a web browser window displaying the National Survey of Family Growth (NSFG) Interactive Codebook search results. The browser's address bar shows the URL www.icpsr.umich.edu/icpsradmin/nsfg/search. The page header includes navigation links for [CDC Home](#), [NCHS Home](#), and [NSFG Home](#). The main content area features a search bar with the text "timesmar" entered, a dropdown menu set to "All Files", and a "Search" button. Below the search bar, the results are displayed as "Results 2 for (timesmar).". The first result is [TIMESMAR](#) -- CA-1 Number of Times R Has Been Married. The second result is [TIMESMAR](#) -- AG-2 How many times R has been married - R ever married. The left sidebar contains a navigation menu with links for "Female Respondent File Codebook", "Female Pregnancy File Codebook", "Male Respondent File Codebook", and "Public Use Data Files, Codebooks, and Documentation". At the bottom of the page, there are links for [CDC Home](#), [NCHS Home](#), [NSFG Home](#), and [Contact us](#), along with the U.S. Department of Health and Human Services logo and the CDC logo.

Download Data

NSFG data can be downloaded from the NSFG FTP site:
ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NSFG/

The screenshot shows a web browser window displaying the index of NSFG datasets. The address bar shows the URL: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NSFG/. The page content includes a table with columns for Name, Size, and Last Modified. The table lists various datasets, including .cache, .cache+, 1973NSFGData.dat, 1976NSFGData.dat, 1982NSFGData.dat, 1988FemRespData.dat, 1988PregData.dat, 1995FemRespData.dat, 1995PregData.dat, 2002curr_ins.dat, 2002FemPreg.dat, 2002FemResp.dat, 2002HHvars.dat, 2002Male.dat, 2006_2010_FemPreg.dat, 2006_2010_FemResp.dat, 2006_2010_Male.dat, 2011_2013_FemPregData.dat, 2011_2013_FemRespData.dat, 2011_2013_MaleData.dat, C5FieldworkData.asc, c6_curr_ins.sas7bdat, cyc2psu.sas7bdat, hhpartynew.sas7bdat, HHPARTYPNEWASC.DAT, sas, spss, and stata.

Name	Size	Last Modified
.cache		9/4/1998 12:00:00 AM
.cache+		9/4/1998 12:00:00 AM
1973NSFGData.dat	19374 KB	4/5/2012 12:00:00 AM
1976NSFGData.dat	30973 KB	4/5/2012 12:00:00 AM
1982NSFGData.dat	31884 KB	4/5/2012 12:00:00 AM
1988FemRespData.dat	29320 KB	4/5/2012 12:00:00 AM
1988PregData.dat	54680 KB	4/5/2012 12:00:00 AM
1995FemRespData.dat	138406 KB	4/5/2012 12:00:00 AM
1995PregData.dat	8708 KB	4/5/2012 12:00:00 AM
2002curr_ins.dat	148 KB	11/15/2010 12:00:00 AM
2002FemPreg.dat	5947 KB	2/23/2005 12:00:00 AM
2002FemResp.dat	36782 KB	2/23/2005 12:00:00 AM
2002HHvars.dat	283 KB	11/29/2007 12:00:00 AM
2002Male.dat	14375 KB	2/23/2005 12:00:00 AM
2006_2010_FemPreg.dat	11287 KB	10/12/2011 12:00:00 AM
2006_2010_FemResp.dat	74982 KB	10/12/2011 12:00:00 AM
2006_2010_Male.dat	46174 KB	10/12/2011 12:00:00 AM
2011_2013_FemPregData.dat	4474 KB	12/11/2014 12:00:00 AM
2011_2013_FemRespData.dat	27119 KB	12/11/2014 12:00:00 AM
2011_2013_MaleData.dat	21804 KB	12/11/2014 12:00:00 AM
C5FieldworkData.asc	15586 KB	4/6/2010 12:00:00 AM
c6_curr_ins.sas7bdat	305 KB	11/15/2010 12:00:00 AM
cyc2psu.sas7bdat	209 KB	1/20/2015 12:00:00 AM
hhpartynew.sas7bdat	305 KB	4/2/2010 12:00:00 AM
HHPARTYPNEWASC.DAT	148 KB	4/2/2010 12:00:00 AM
sas		6/18/2015 12:00:00 AM
spss		12/10/2014 12:00:00 AM
stata		12/10/2014 12:00:00 AM

Weighting in NSFG Analyses

NSFG analysis needs to be weighted to adjust for:

- The complex survey design (not a simple random sampling)
- Oversample sub-populations
- Screener and interview non-response
- Estimated characteristics of population from the Census Bureau

The name of the weight variables may change across NSFG cycles.

Variables in 2006-2010	Variable in 2011-2013	Variable Description
SEST	SEST	The name of the stratum variable
SECU	SECU	The name of the cluster variable
wgtq1q16	wgt2011_2013	Final weight personal weight for the study period
wgtq1q8		Final weight for years 1 and 2 of data collection (quarters 1 to 8)
wgtq9q16		Final weight for years 3 and 4 of data collection (quarters 9 to 16)
finalwgt30		Final weight for the 1st 2 1/2 years of data collection (quarters 1 to 10)
wgtq5q16		Final weight for years 2, 3, and 4 of data collection (quarters 5 to 16)

Reading NSFG 2011-2013 Data

Stata : Modify the following lines in the Stata command file from the NSFG website.

```
cd "C:\temp\nsfg\nsfg\NCHS_7_11_16\2011_2013"  
local raw_data "2011_2013_FemPregData.dat"  
local dict "2011_2013_FemPregSetup"  
local outfile "2011_2013_FemPregData.dta"  
.  
.  
.  
save `outfile', replace
```

Linking A Female Respondent File with A Pregnancy File

* Sort the female respondent data by ID

use 2011_2013_FemRespSetup.dta, clear

sort caseid

save, replace

* Sort the pregnancy data by ID and pregnancy order

use 2011_2013_FemPregData.dta, clear

sort caseid pregodr

save, replace

* Merge and save data

use 2011_2013_FemRespSetup.dta, clear

merge 1:m caseid using 2011_2013_FemPregData.dta

save 2011_2013_fem_pregnancy.dta, replace

Pooling Men and Women Data from the Same Time Period

```
*****  
* Select variables from the male file  
*****  
use 2011_2013_MaleSetup.dta, clear  
keep caseid rscrninf wgt2011_2013 secu sest  
save temp1.dta, replace  
  
*****  
* Select variables from the female file  
*****  
use 2011_2013_FemRespSetup.dta, clear  
keep caseid rscrninf wgt2011_2013 secu sest  
save temp2.dta, replace  
  
*****  
* Pool two data sets together  
*****  
use temp1.dta, clear  
append using temp2.dta  
  
save 2011_2013_male_female.dta, replace
```

Using Weight Variables in Analyses

Table 3. Nine examples of using weight variables from the NSFG analyses

1	<u>Percent of women using the oral contraceptive pill by age</u>
2	<u>Total number of women using the oral contraceptive pill by age</u>
3	<u>Mean numbers of children ever born (PARITY), by race and Hispanic origin for women 20-44 years of age</u>
4	<u>Linear regression of PARITY on age, race and Hispanic origin, and education for women 20-44 years of age</u>
5	<u>Percent distribution of pregnancies by wantedness status, by race and Hispanic origin, and age at pregnancy outcome</u>
6	<u>Percent of male and female teenagers 15-19 years of age who have ever had sex, by gender and race and Hispanic origin (combined male/female files)</u>
7	<u>Percent of males 20-44 years of age who have ever fathered a child, by race and Hispanic origin</u>
8	<u>Percent of males and females who strongly agree that "a young couple should not live together unless they are married" by gender and age</u>
9	<u>Logistic regression for the probability of strongly agreeing that "a young couple should not live together unless they are married" by age, gender, race and Hispanic origin, and education</u>

Conclusions

- Since 2002, NSFG provide data from a nationally representative sample of men and women aged 15-44. The age range has been expanded to 15-49 in the most recent NSFG survey that is currently in the field.
- NSFG provides a unique opportunity to study life events (marriage, cohabitation, and fertility) and attitudes toward marriage and family. New NSFG data should come out this fall and will be great for new research project.
- Users should always use recoded variables, instead of raw variables because recoded variables had been corrected for possible errors and inconsistencies.
- You should always include weight variables in the analyses to take into account NSFG's complex sample design
- NSFG uses a repeated cross-sectional study design and respondents were not followed over time. In addition, female respondents and male respondents in the NSFG were selected from different households and are not couples.

If you have any questions about using NSFG data. Please feel free to contact Hsueh-Sheng Wu @372-3119 or wuh@bgsu.edu