

Marriage and the male contribution to unintended pregnancy:

Contraceptive behavior comparisons
of national survey data

A close-up, black and white photograph of a man's eye, looking directly at the camera. The image is partially obscured by the text overlay on the left.

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Research Questions

1. How is the contraceptive behavior of men (type of method used or no method used) modified by age, marital status and race; and how does this compare to women?
2. What are the similarities differences in contraceptive methods reported among married men and women in US?
3. In what way do men contribute to unintended pregnancy outcome in the United States?

Background

- NSFG 2002 female data was previously examined as a function of marital status, age, race and religious affiliation covariates*
- In the male dataset, each 'pregnancy-eligible' male respondent was asked about contraceptive method used at last intercourse *for the couple*
- Anticipate that NSFG data taken from this *independent* (unmatched) sample of married men would correlate in terms of contraceptive behavior and the type of method used to the given sample of married women

* Kramer MR, Hogue CJ, and Gaydos, LM. "Noncontracepting behavior in women at risk for unintended pregnancy: what's religion got to do with it?" Ann. Epidemiology May 2007

NSFG Study Population

- Respondents were chosen by area probability sample to represent the household population of all 15-44 year olds in the US
- Equal response rates among the genders for both the male and female datasets: 78% and 80% respectively
- 7643 females and 4928 males ages 15-44 interviewed; Blacks, Hispanics and teens were oversampled for 12,572 total interviews between datasets*

* All data from NSFG survey description: <http://www.cdc.gov/nchs/about/major/nsfg/nsfgback.htm>
Mosher, W, and S. Willson, "Using Data from the National Survey of Family Growth" (CDC)

Eligible study sample

- Eligible 'at-risk' sample: sub-population of sexually active, non-sterile men (or women) whose partner not currently pregnant or seeking pregnancy reporting intercourse in the last 3 months
- Proportion at-risk for unintended pregnancy: % of men (or women) reporting 'no method used' at last intercourse of those eligible men (or women) at risk within each covariate stratum or age, marital status, and race

Data Preparation: Creating the “Method” Variables

- **“Method Type”**: In each the male and female dataset, the variable recodes METH3M1 - METH3M4 (contraceptive method used last sex past 3 months- the 1st to the 4th method mentioned) were combined to estimate which method(s) were used at last intercourse.
- **“No Method”**: In the female dataset, the **MTHUSE3** variable (whether respondent used any contraceptive method at last sex in past 3 mos) gives the raw number of those **not** using a method. For males, ‘no method’ is coded as **METH3M1-M4= 95 or 96**. (The **CONSTAT1** variable in the female dataset measures ‘current contraceptive status’ for females, but would not capture coitus-dependent methods if there was no intercourse in the past 3 months)

Methods: Variable Recodes

- **METH3M1 to METH3M4** variables grouped over time for each method type to give truest representation of all/any methods used, regardless of when mentioned by respondent
- **METH3M method types** combined to create 5 primary methods used by men and women: **condom, pill, permanent method, other interval method, or no method used**
- **METH3M1 and METH3M2** variables (method used, 1st mentioned; method used, 2nd mentioned) combined to create a variable for '**dual method**' use- both for men and women

Methods: Descriptive Statistics

- Weighted US averages, proportions and SE's calculated from raw sample numbers with SUDAAN
- SAS 9.1 (survey means) and SUDAAN 8.02 (crosstab) used to generate frequencies (mean estimates) of men and women at risk for unintended pregnancy ('non-contraceptors') by selected covariates of age, marital status, and race
- Among married men and women, crosstab procedure also used for estimates of single method, dual method, and no method use

Table 1: Distribution of non-contraceptors among US men at risk for unintended pregnancy, aged 15-44; by age, marital status, and race

| Category | Total US men (weighted numbers) | | At-risk: definition 1* | | At-risk: definition 2** | | At-risk: definition 3*** | | Total at Risk (excluding any/all of previous 3 categories)**** | | | No Method used: Proportion at Risk for unintended preg: % with NM of those total at risk | | | |
|------------------|---------------------------------|-------|------------------------|-------|-------------------------|-------|--------------------------|-------|--|-------|------|--|------|------|-----|
| | # | % | # | % | # | % | # | % | # | % | SE | # | % | SE | |
| Total (weighted) | 61147 | | 56661 | | 43522 | | 54844 | | 33536 | | | 9190 | | | |
| Age | | | | | | | | | | | | | | | |
| | 15-19 | 10208 | 16. | 10152 | 99 | 3233 | 31.6 | 10204 | 99 | 3174 | 31 | 1.8 | 282 | 8.9 | 2.3 |
| | 20-24 | 9883 | 16.1 | 9366 | 94.7 | 6827 | 69 | 9811 | 99 | 6275 | 63.4 | 1.8 | 905 | 14.4 | 1.7 |
| | 25-29 | 9226 | 15.1 | 8045 | 87 | 7291 | 79 | 8879 | 96 | 5774 | 62.5 | 2.7 | 1061 | 18.3 | 2.1 |
| | 30-34 | 10137 | 16.6 | 8856 | 87 | 8634 | 85 | 8962 | 88 | 6291 | 62 | 2.6 | 1731 | 27.5 | 3.2 |
| | 35-39 | 10556 | 17.2 | 9539 | 90.3 | 8713 | 82.5 | 8372 | 79 | 5806 | 55 | 2.5 | 2147 | 36.9 | 3.3 |
| | 40-44 | 11135 | 18.2 | 10701 | 96 | 8822 | 79 | 8614 | 78 | 6214 | 56 | 3.1 | 3011 | 48.4 | 4.1 |
| Marital | | | | | | | | | | | | | | | |
| | Married | 25807 | 42.2 | 21923 | 84.9 | 24549 | 95 | 20916 | 81 | 15999 | 62 | 1.9 | 5884 | 36.7 | 2.2 |
| | Cohabit | 5653 | 9.2 | 5127 | 90.6 | 5505 | 97 | 5064 | 90 | 4414 | 78 | 3.1 | 1218 | 27.6 | 2.7 |
| | Never | 25412 | 41.5 | 25412 | 100 | 10898 | 43 | 25160 | 99 | 10815 | 42.5 | 1.3 | 1344 | 12.4 | 1.4 |
| | Formerly | 4274 | 7 | 4274 | 100 | 2645 | 62 | 3778 | 88 | 2382 | 55 | 3.6 | 744 | 31.2 | 5.0 |
| Race | | | | | | | | | | | | | | | |
| | Hispanic | 10188 | 16.6 | 9316 | 91.4 | 7549 | 74 | 9452 | 92 | 6080 | 59.6 | 2.2 | 1918 | 31.5 | 2.5 |
| | Non-Hispanic white | 39977 | 65.3 | 37094 | 92.7 | 28404 | 71 | 35450 | 88 | 21445 | 53.6 | 1.5 | 5402 | 25.1 | 1.9 |
| | Non-hisp black | 7277 | 11.9 | 6836 | 93.9 | 5409 | 74.3 | 6804 | 93 | 4535 | 62.3 | 2.0 | 1417 | 31.2 | 3.1 |
| | Other | 3703 | 6.1 | 3490 | 94.2 | 2235 | 60.3 | 3213 | 86 | 1549 | 41.8 | 4.4 | 453 | 29.2 | 5.7 |

* Definition 1 excludes men whose partners are currently pregnant or those seeking pregnancy.

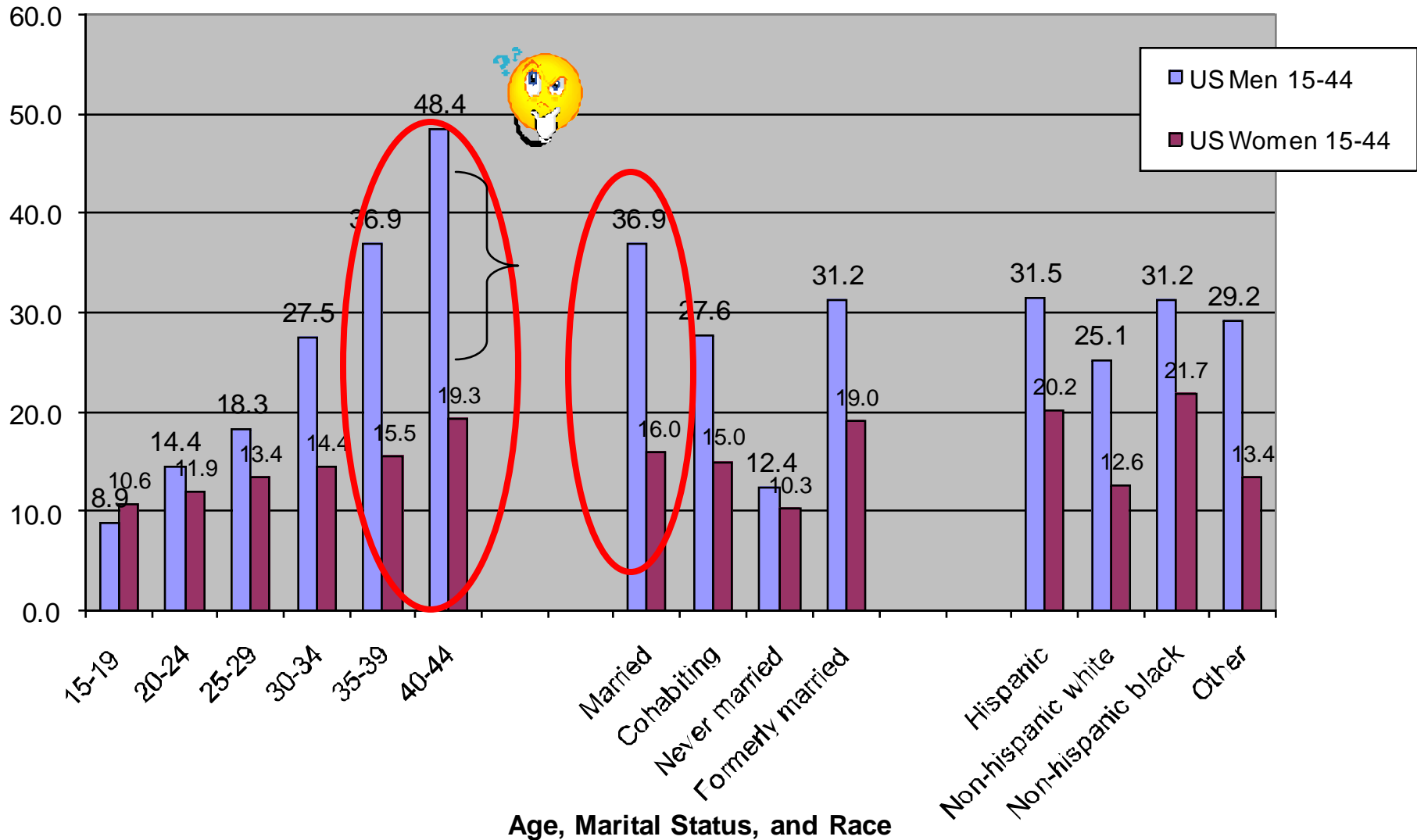
** Definition 2 excludes men who have never been sexually active or those who have not had sex in the last 3 months

***Definition 3 excludes men who reported having a vasectomy or whose partner is sterile

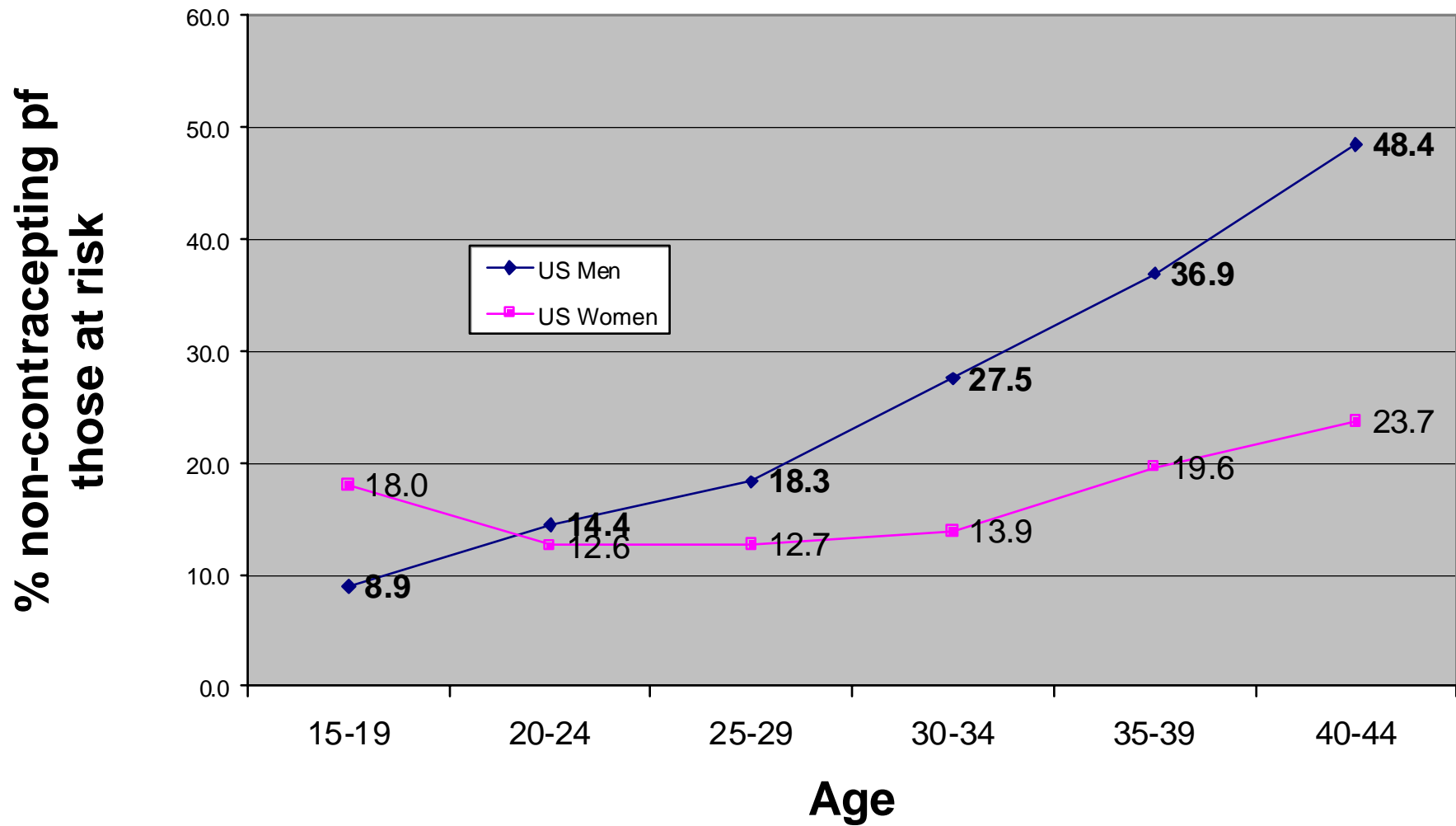
**** Total at risk is not a sum of all of the previous 3 categories, as any one man can be disqualified from "at-risk" status for more than one reason (ie, no sex in last 3 months AND partner is sterile).

Results

Percent of men and women at risk of unintended pregnancy by select covariates

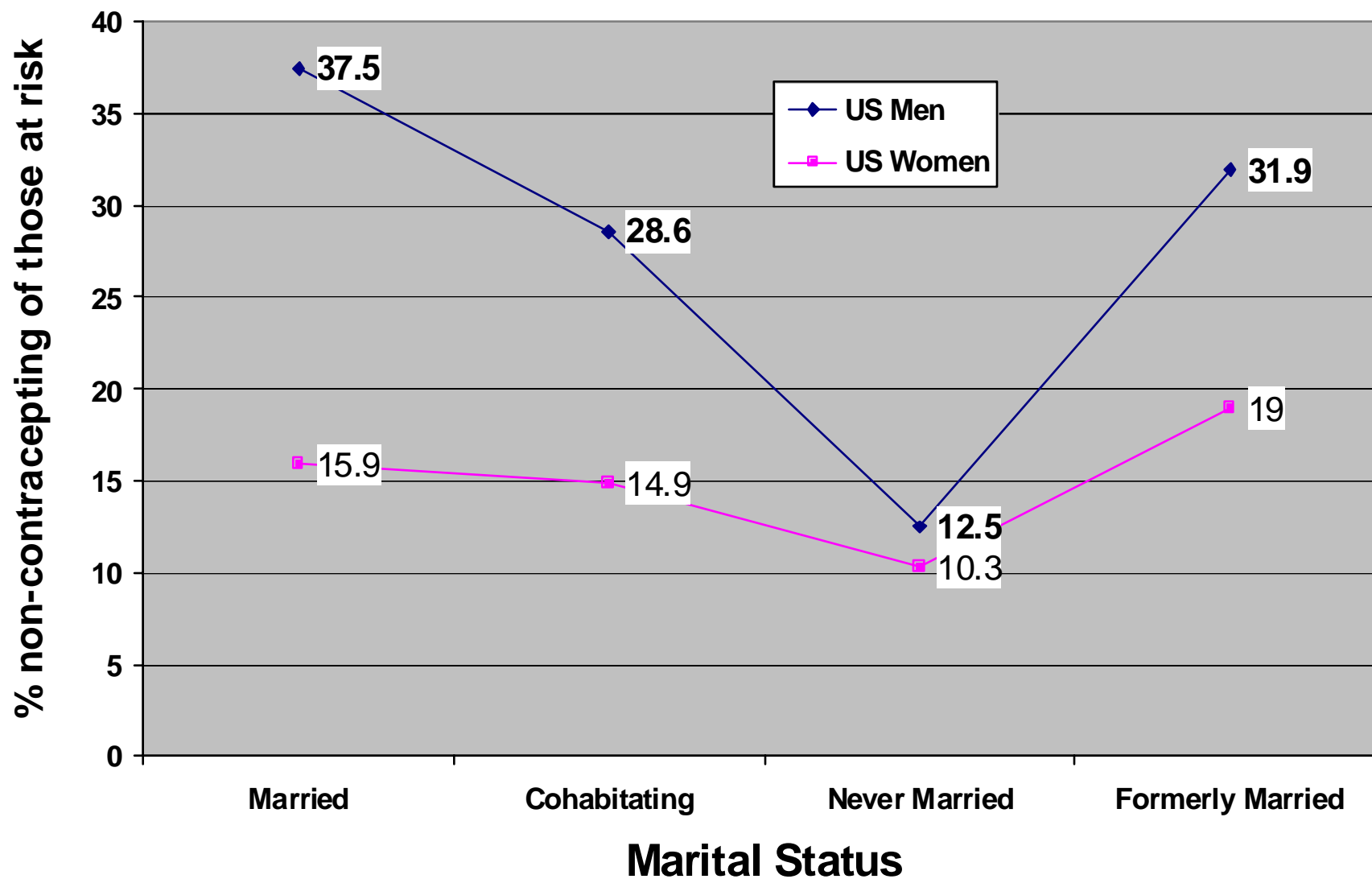


Non-contraceptors at risk for unintended pregnancy by age*

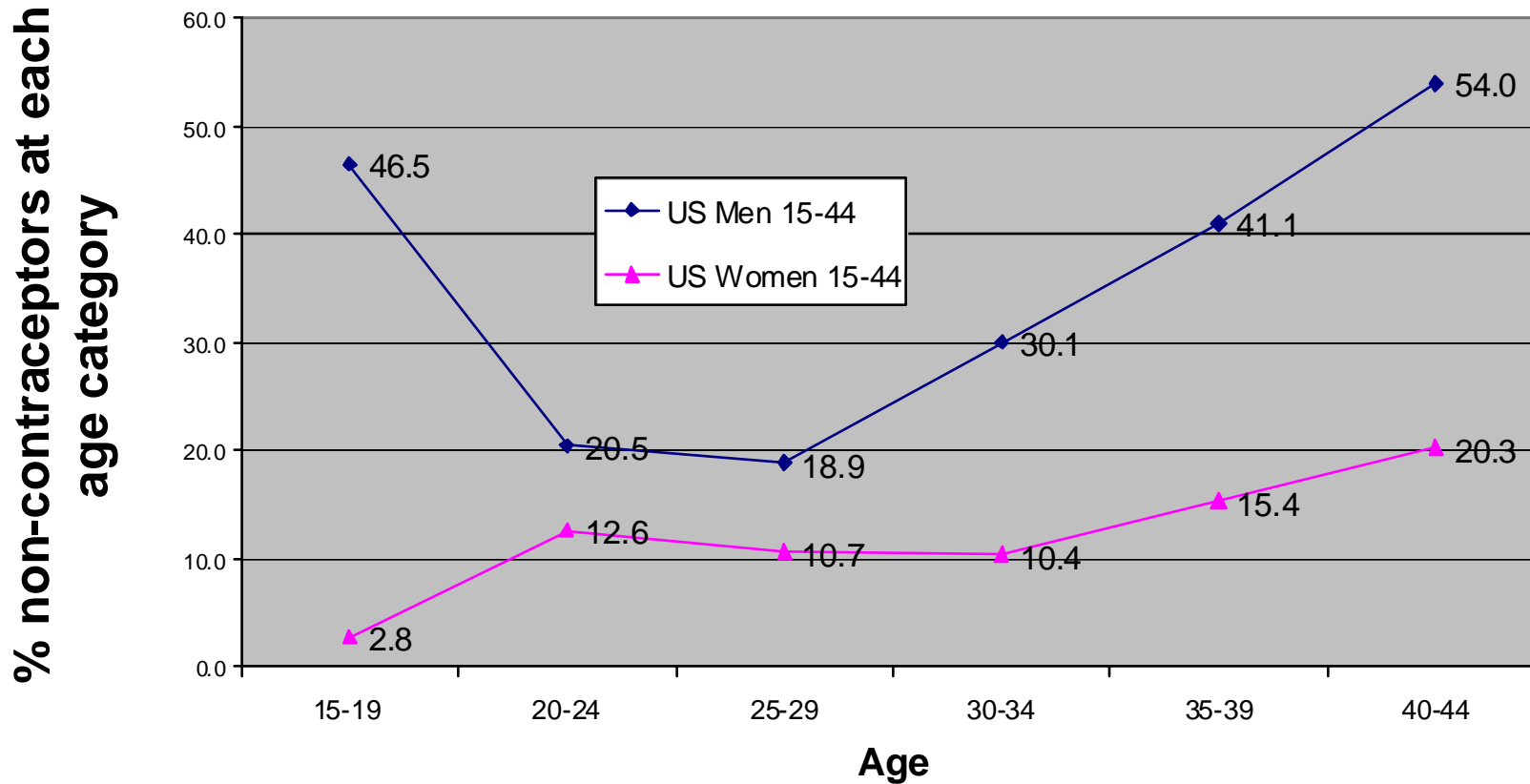


* Using female 'Constat' variable; Kramer, MR 2005

Non-contraceptors at risk for unintended pregnancy by marital status



Married non-contraceptors at risk for unintended pregnancy by age*



| | | | | | | |
|--------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Men | 46% SE 3.0 | 20.5% SE 5.6 | 18.9% SE 2.9 | 30% SE 4.5 | 41% SE 4.5 | 54% SE 5.1 |
| Women | 2.8% SE 2.9 | 12.6% SE 2.4 | 10.7% SE 1.8 | 10.4% SE 1.8 | 15.4% SE 2.0 | 20.3% SE 4.0 |

*Using female "CONSTAT" variable, Kramer 2005

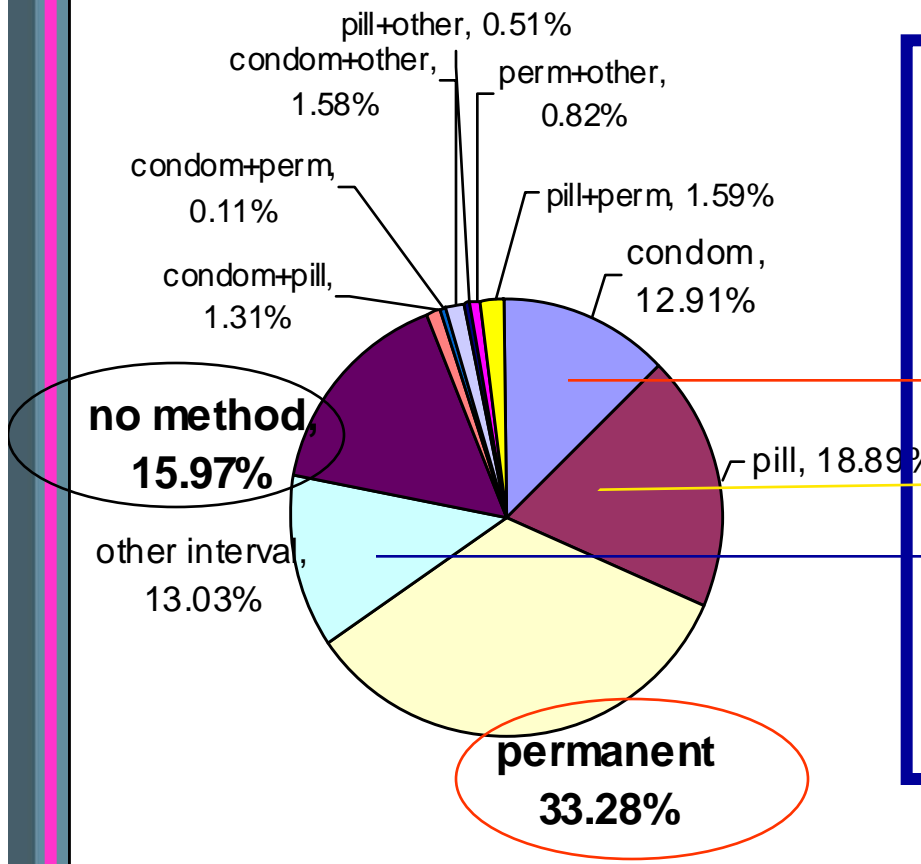
Results

At-risk population: 2545 men, 3713 women
(raw numbers)

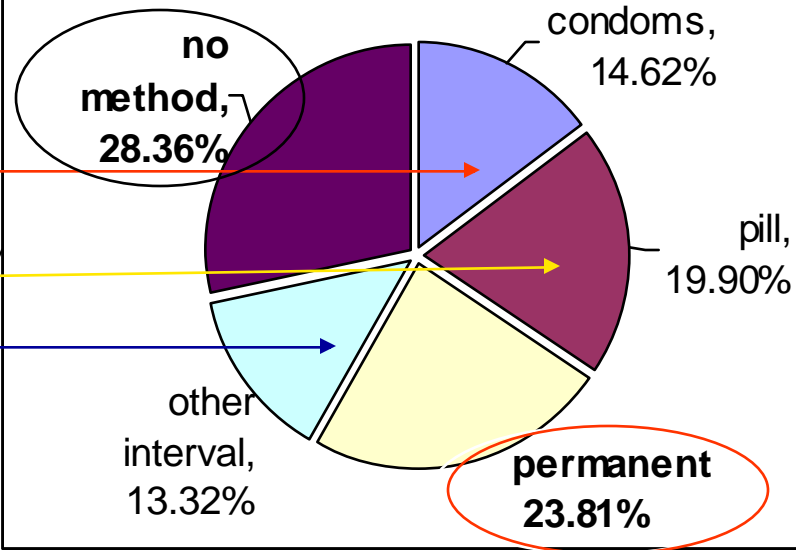
- Number of men reporting no method used increased sharply with age relative to women
- Among men 40-44 years old at risk of unintended pregnancy, 48% (SE: 4.1) reported “no method used” as compared to 23% (SE: 3.3) of women
- This difference is most pronounced among married men relative to married women

Methods Used among Married Respondents

Distribution of contraceptive methods for married women 15-44 at risk of unintended pregnancy



Contraceptive methods for married men 15-44 at risk of unintended pregnancy



*All methods reported include both male and female methods. Permanent methods include male vasectomy, all female sterilizations

Results

- Pill use, condom use, and other interval method use reporting is about equal between married men and married women
- Married men at risk of unintended pregnancy reporting 'no method used' at last intercourse is 28% vs. 16% of married women
- Married men reporting permanent methods used at last intercourse is 24% vs. 35% of married women
- Sterilization reports among married women are larger than those of married men by approximately the same amount that 'no method' reports are larger in the male dataset

Conclusions

Measurement Error in Male/Female Reporting:

- Married men are unaware of their partner's contraceptive status thus *underreporting* permanent method use for the couple
- Married men who know their wives are sterilized do not think of female sterilization as a method of contraception (even though 'no method' and 'female sterilization' are both separate response options)*
- Married men are less likely to answer for their spouses when answering questions for the couple: no dual method use reports for men.

*Abma, J, et al. (2005). Fertility, family planning, and reproductive health of US women: Data from the 2002 NSFG. Vital Health Statistics, Series 23, Number 25. December, 2005. Appendix 2, pg 135

Conclusions

Age Differential between married couples:

- Married men are more likely to have younger female partners and married women are more likely to have male partners of the same age or older*
- Female use of sterilization increases sharply between the 30-34 and 35+ age groups** (19%, 29.2% and 34.7% respectively) so cannot expect equivalent levels of female sterilization reporting between males and females of the same age

•Darroch, J, Landry, DJ and Oslak, S. "Age Differences between sexual partners in the US." Family Planning Perspectives. Vol 31 (4), July/August 1999.

•**Chandra A., Martinez, GM, Mosher, WD, Abma, JC, Jones J. 2005. Fertility, family planning, and reproductive health of US women: Data from the 2002 NSFG. Vital Health Statistics, Series 23, Number 25. December, 2005.; Email correspondence with Joyce Abma.; Oct 12, 2006.

However...

- **US:** 33% of men in their 30's do not have any children. This figure drops to 15% when men are in their 40's. " At the same time, the proportion of men with 3+ children rises from 20%-31%." *
- While men in their 30's are responsible for 1.5 million births per year, " men in their 40's are responsible for 213,000 births-- almost as many in total as men in their 20's" *
- Among men in their 30's and early 40's, about 1/3 of births are 'unintended.' *
- **Worldwide:** sexually active unmarried men use contraception more than married men, particularly in the developing world. **

* Source: "In Their Own Right: Addressing the Sexual and Reproductive Needs of American Men" The Alan Guttmacher Institute; 2002; pgs 44-48, http://www.guttmacher.org/pubs/us_men.pdf

**"Men's Surveys: New Findings." Population Reports, Series M, No. 18. John's Hopkins Bloomberg School of Public Health Info Project., 2004

Research Question:

Q.) Do older married men at risk of unintended pregnancy actually exhibit a higher degree of non-contracepting behavior and thus contribute disproportionately to the unintended pregnancy rate?

A.) *maybe, maybe not*

Recommendations

- Age-adjusted curves of method and no method use for married couples would correct for the M/F age difference and give clearer picture of what the male contribution to unintended pregnancy is
- Surveying men regarding contraceptive methods used by the couple should (further) probe on questions about female sterilization.

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- **Michael Kramer**, Women's and Children's Center and Dept of Epidemiology, Emory University, Atlanta, GA

Technical Appendix: Measures



Creating the "Method"

Variable: Male Respondents

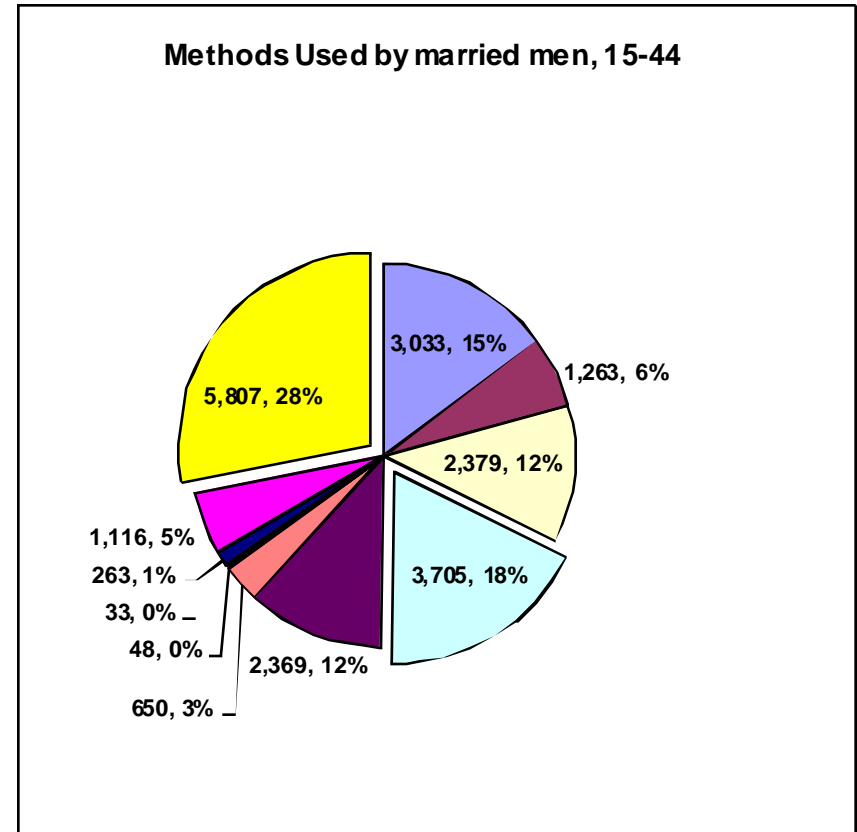
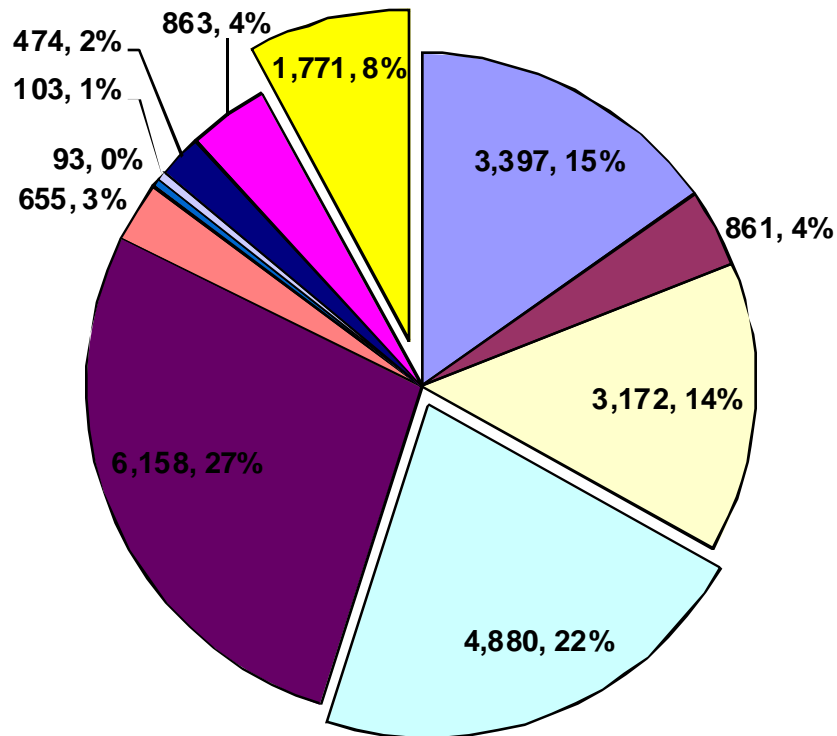
- Exclude all men who have never had sex and those who did not have sex with opposite sex partner in the past 3 months (METH3M1=' .') combined **n=1857**
- Exclude all men whose current wife/partner is pregnant now (CWPPRGNW=1) or trying to get pregnant (CWPTRYPG=1) combined **n=245**
- From above sample, exclude all men who reporting having a vasectomy or reporting partner sterile (METH3M1-M4 =3 vasectomy and METH3M1-M4 =5 female sterilization) combined **n=281**
- Eligible study sample narrowed from **4928 to 2545** men at risk

Creating the "Method" Variable: Female Respondents

- Exclude all women who never had sex or did not have sex with opposite sex partner in the past 3 months (MTHUSE='.' or MTHUSE= 95) **n=2301**
- Exclude all women who are currently pregnant (currpreg=1) **n=267**; exclude those who are trying to get pregnant (wynotuse=1) or whose partner is trying to get pregnant (hppregq=1) among those reporting no method (MTHUSE=2) **n=289**
- Exclude all sterilizations from METH3M1-M4 variables: partner's vasectomy (3), female sterilizing operation/tubal ligation (4), R or R's partner temporarily sterile (20, 21) **n=1073**
- Eligible study sample from **7643** to **3713** women at risk

METHOD RESPONSE CATEGORIES (MEN AND WOMEN)

Methods used by married women and married men, 15-44;
Results from August 2006



- | | | | |
|--------------------------|----------------|-----------------------------------|--------------------|
| ■ Condom | ■ Withdrawal | ■ Vasectomy | ■ Pill |
| ■ Female sterilization | ■ Depo-provera | ■ Foam, jelly, cream, suppository | ■ Hormonal implant |
| ■ Rhythm/calendar method | ■ Other* | ■ NO METHOD | |