



Turning Knowledge into Practice

Research Triangle Park, North Carolina

*The influence of question
wording on the reporting
of contraceptive method use*

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Background

- Estimates of the most recent contraceptive method use across surveys are inconsistent.
- Differences in question wording may be the reason (Santelli et al 2000). For example, Single Question format (National Survey of Family Growth 1995) vs. Separate question format: (National Survey of Adolescent Males 1995)

Literature

- Longer questions elicit more accurate answers (Laurent 1972; Bradburn et al 1979, Cannell et al 1981)
- Personal salience shapes reporting (Catania et al 1990; Coates et al 1986)
- Convergence in reporting of joint activity between self and proxy respondent is related to the level of discussion (Menon et al. 1995) The gap in reporting contraception used between couples is decreased as the level of interaction is increased (Koenig, Simmons and Misra 1984).
- Memory is a function of time (Wagenaar 1986)

Hypotheses

- **Separate question format will produce more reporting of contraceptive method use, especially women's controlling method.**
- The level of increase will be bigger
 - When ***sexual experience*** is increased
 - When ***the partner is out of marital relationship***
 - When the ***elapsed time*** is increased

Methods

- Data: National Survey of Family Growth Cycle VI (NSFG) male dataset
- Data collection period: Jan. 2002 to Mar. 2003
- Mode of data collection: In-person CAPI interview
- Sample: Multi stage area probability sample
- Population: Non-institutionalized population of the U.S. 15-44 years of age
- Sample size: Total of 12,571 (7,643 females and 4,928 males)
- Response rate : 79%

Question Wording

Single Format	Separate Format
<ul style="list-style-type: none"> • Did you or she use any methods to prevent pregnancy or sexually transmitted disease? 	<ul style="list-style-type: none"> • Did you, yourself use any method ~ ? • Did she use any methods ~?
<p>1. Yes 2. No</p>	<p>1. Yes 2. No</p>
<ul style="list-style-type: none"> • What methods did you and she use? 	<ul style="list-style-type: none"> • What methods did you, yourself use? • What methods did she use?

Variables

Independent Variables

- Question format (Single vs. Separate)
- No of life-time sexual partners(1-6 vs. 7 or more)
- Partner at the last sex(wife/cohabiting partner vs. other)
- Elapsed time from the last sex(-3m, 3-12m, 12m+)

Dependent Variables

- Any contraceptive method use(Yes/No)
- Birth control pill use(Yes/No)

Results

		Any Contraceptive Method Use		Birth Control Pill Use	
		Single question	Separate question	Single question	Separate question
		%	%	%	%
Total		68.9	72.0	23.3	23.9
No of sexual partners	1-6	70.5	71.4	24.2	25.1
	7 or more	66.7	72.6	22.2	22.4
Partner relation	Wife/cohabiting partner	60.0	64.0	21.1	19.6
	Other	86.2	87.7	27.8	32.4
Elapsed time	Within 3months	67.3	70.9	24.1	23.2
	3-12months	76.9	75.9	15.9	30.6
	12months or more	74.4	77.9	24.1	24.1

Results

The separate question format produced a little higher reporting but did not show statistical significance

Any Contraceptive Method Use		Rao-Scot
Single question	Separate question	
%	%	$X^2=1.55, p<0.21$
68.9	72.0	

Birth Control Pill Use		Rao-Scot
Single question	Separate question	
%	%	$X^2=0.66, p<0.81$
23.3	23.9	

Results

To test the other hypotheses, I fitted logistic models including terms representing the interaction of the question format and three respondent characteristics variables. The reporting of any contraceptive method use and birth control pill were predicted respectively.

Model 1A:

Logit (y) = $\beta_0 + \beta_1 \text{format} + \beta_2 \text{no.of partner} + \beta_3 \text{format*no. of partner}$

Model 1B:

Logit (y) = $\beta_0 + \beta_1 \text{format} + \beta_2 \text{relation} + \beta_3 \text{format*relation}$

Model 1C:

Logit (y) = $\beta_0 + \beta_1 \text{format} + \beta_2 \text{elapse} + \beta_3 \text{format*elapse}$

Results

The interaction term was not significant for overall contraceptive method use while it was ***significant for the birth control pill.***

For those whose last sex was recent, the reporting level was similar regardless of the question format. But, for those whose last sex was 3-12 months ago, the reporting was double in a separate question format.

Birth Control Pill Use		Wald X ²	P value
Overall Fit		7.67	0.18
Type III analysis	Question format	0.12	0.72
	Elapsed time	4.12	0.13
	interaction	7.23*	0.03

Results

While Although this result was consistent with the hypothesis, this result requires careful interpretation.

- This result was sensitive to the grouping of elapsed time into categories.
- For those whose last sex was three to twelve months ago, in the single question format, the reporting of birth control pill use was very low.
- This interaction pattern didn't hold for those whose last sex was more than a year ago - they reported the same level of birth control pill use regardless of the question format.

Summary

- Reporting of contraceptive method use overall and birth control pill use in particular did not differ by the question format.
- Interaction between question format and elapsed time from the last sex was significant: Those who had their last sexual intercourse three to twelve months ago were more likely to report birth control pill use (30.6%) in a separate question than in a single question (15.9%).
- This goes against other researchers' arguments that inconsistency of contraceptive method use reporting in health surveys is probably due to differences in questions (Santelli 2000).

Future work

- It is necessary to replicate this study to find out which format is better to assess the contraceptive method use. For example, some contraceptive measures, such as condom use, can be socially desirable behavior and may be overreported.
- When replicating this study, it will be useful to have a gold standard to validate the accuracy of answers.
- A study design including both female and male sexual partners may help to solve this problem.

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Thank you