Spousal Discrepancy in Reporting Contraceptive Use

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Short Abstract

This paper will describe discrepancies in spouses' reports of contraceptive use and analyze the factors that may contribute to these discrepancies. I use data on 322 spouse pairs from the Chitwan Valley Family Study in rural Nepal whose contraceptive use was followed monthly between 1997 and 2013. Here I focus on temporary, reversible methods of contraception, and find that there are several months during which wives reported different use of contraception from what their husbands reported. Using logistic regression, I analyze whether varying degrees of marital arrangement by parents/relatives, marital duration, and spouses' reported love for one another help to predict these discrepancies. I find that many of these marital characteristics do help to predict discrepancy in spouses' reports of contraceptive use, and that husbands' and wives' characteristics can be predictive of discrepant reports in opposing directions.

Research Question and Significance

The accuracy of spouses' knowledge about each other's contraceptive use can have important implications for fertility and child outcomes, insofar as they result in an unintended (by at least one spouse) pregnancy or birth (Barber and East 2009), and may also have implications for marital cohesion. Moreover, the question of whether spouses report the same usage of contraception is an important question to explore in survey research, as there has been a move toward including men in surveys geared toward understanding fertility decisions (Bankole and Singh 1998, Greene and Biddlecom 2000, Greene et al. 2006). If spouses' reports contradict each other, then we as survey researchers must carefully consider the best approach to fielding and analyzing questions about couples' contraceptive use.

In this paper, using evidence from rural South Asia, I describe spouses' reports of contraceptive use, discuss why reports may be discrepant, and investigate aspects of marriage that may predict that discrepancy. I use data from the Chitwan Family Valley Study (CVFS) in rural Nepal, which offer monthly observations from spouse pairs on their independent reports of contraceptive use. I focus on the reversible, or temporary, methods of contraceptive use: condoms, birth control pills, depo-provera shots, IUDs, contraceptive foam, Norplant, and abstinence. I will investigate whether discrepancies in spouses' reports of contraceptive use can be predicted by the type of marriage (arranged, "love," or a combination), whether discrepancies dissipate over the duration of marriage, and whether discrepancies are more or less likely depending on how much spouses report that they love one another. Because these data are based on monthly observations, concern about recall bias and the extent to which each spouse can remember their or their spouse's contraceptive use is minimized. Moreover, I employ self-reported measures of marital arrangement both from wives' and husbands' perspective, as well as self-reports of both wives' love for their husband and husbands' love for their wives.

Conceptual Framework, Summarized

Spouses who are limited in their emotional closeness may be the most likely to differ in their reports of their contraceptive use. Discrepant reports of contraceptive use may be due to poor communication, or intentional deceit. Spouses in arranged marriages or marriages of shorter duration may have had less opportunity to establish emotional closeness, and this may lead to less open discussion of contraceptive use and family planning. Similarly, spouses who report less love for one another may be less motivated to tell their spouse about their (invisible) contraceptive use or more motivated to be dishonest about their contraceptive use. These mechanisms will be explored more thoroughly as this paper develops.

In the case of coitally specific methods—such as condoms, foam, or abstinence—we cannot be sure that reports of the use of this method are specific to the marital relationship. Hence, spouses may be discrepant in reports of these methods due to infidelity and may reflect real discrepancy in their use, rather than lacking knowledge on the part of either spouse.

Data

Data come from the Chitwan Valley Family Study (CVFS) in rural, southern Nepal. The baseline survey for the CVFS was conducted in 1996, with the purpose of collecting data on family and marital attitudes and events. Using cluster sampling, the data collection began in 1996 with face-to-face baseline interviews conducted with all household members aged 15–59 and their spouses (even if outside this age range or living elsewhere) of every household in 151 sampled neighborhoods. Special care was taken to interview spouses simultaneously in separate locations to ensure the independence of their responses. Beginning within a few months of the baseline interview, in 1997, monthly follow-up interviews were conducted that collected information about a range of demographic events, including childbearing and contraceptive use.

This study uses a sample of 322 couples (for whom there are complete data) to investigate spouses reports of contraceptive use in the monthly follow-up interviews, using 192 months (16 years) of data. This sample is restricted to couples in which wives were aged 34 and younger in 1996 because fertility beyond this age is very limited among women in our sample and, therefore, the significance of contraceptive use is also limited. I also restrict the sample to couple-months in which neither spouse reported themselves to be sterilized.

Measures

Our dependent measure is a monthly measure of spousal discrepancy in reports of the use of temporary methods of contraception, coded 1 if spouses reports of use of the method during the monthly observation are discrepant and 0 otherwise. This measure allows for repeated spells, and couples only drop out of the risk set if either spouse self-reports that they have been sterilized. This measure includes reports of the use of the birth control pill, condoms, abstinence, depo provera, foam, IUDs, and Norplant.

Our key independent measures of interest are marital arrangement, marital duration, and love for spouse. Marital duration is coded in years and reflects the number of years since the spouses' marriage occurred, as of 1996. The measure of marital arrangement is coded as a series of three dummy variables for each spouse's marriage (totaling six variables). The first variable indicates whether the marriage was completely arranged by the respective spouse's parents or relatives. The second variable indicates whether the respective spouse shared their choice of spouse with their parents/relatives. The third variable indicates whether the respective spouse solely chose their spouse on their own, often locally called a "love marriage". I include variables to reflect each spouse's marital arrangement because the extent to which a marriage was arranged can be different from each spouse's perspective. Finally, the measure of love for spouse is taken from a survey question that asks "How much do you love your (husband/wife)? Very much, some, a little, or not at all?". I code this measure so that a high value indicated greater love for spouse.

I also account for a series of covariates that may impact the relationship between these marital characteristics and discrepancies in reports of contraceptive use. These covariates include wives' age and

husbands' age in 1996, the wives' number of live births, whether the couple was living with (at least one of) the husband's parents in 1996, the wife's and the husband's years of education, and ethnicity. I control for five classifications of ethnicity that were likely to be associated with achieved fertility because of the different propensities of these ethnic groups to have large families: Brahmin/Chhetri (high-caste Hindu), Dalit (low-caste Hindu), Newar, Terai Indigenous, and Hill Indigenous. Because very few couples in the CVFS are in inter-ethnic marriages (Jennings 2014), this variable is generally indicative of both spouses' ethnicity.

Analysis

I use logistic regression to predict spousal discrepancy in reports of contraceptive use, with a time-varying measure of this discrepancy as the outcome. Couples cease to contribute to the couple-months of observation upon sterilization, as self-reported by the husband or wife.

I discuss the results as odds ratios. These odds ratios can be interpreted as the amount by which the odds are multiplied for each unit change in the respective independent variable. If the odds ratio is greater than 1, the effect is positive, meaning that couples are more likely to discrepantly report contraceptive use; if it is less than 1, the effect is negative, meaning that couples are less likely to discrepantly report contraceptive use. Moreover, these ratios can be easily transformed into percentage change in the odds associated with each unit change in the respective independent variable by subtracting 1 from the odds ratio and multiplying by 100 (Thornton, Axinn, and Xie 2007, pp. 352-353).

Preliminary Findings

Table 1 displays the means of variables used in the logistic regression model. Wives and husbands reported discrepant use of contraception during a total of 2% of the monthly observations, or 634 months out of the 32,883 total couple-months of observation. In Table 2, we see these discrepancies exist mostly in the reporting of condom use, birth control pills, depo-provera, and abstinence. Wives and husbands tend to be fairly equal in their reports of use of each method even as the other spouse reports not using the method.

Table 1 also shows that most marriages were arranged, both from wives' and husbands' perspectives, with almost a third of both having shared spouse choice with their parents or relatives. On average, marriages of the sampled couples were about six years in duration as of the 1996 interview. Wives and husbands are of similar age, and they have about 2 children on average. A fifth of the couples lived with the husbands' parents as of 1996. Wives and husbands have similar years of education—around 5 years. About a third of couples are of Brahmin/Chhetri ethnicity, another third are terai tibeto Burmese, and the remainder are hill tibeto Burmese, Dalit, and Newar.

Table 3 displays results from logistic regression, with couple-months of discrepancy in spouses' reports of contraceptive use as the outcome. The model shows that marital characteristics can be predictive of spousal discrepancy in reports of contraceptive use, and that spouse's characteristics can differentially impact that outcome. First, couples in which wives chose their spouse alone or in conjunction with family members are less likely to be discrepant in their reports of contraceptive use relative to couples in which the wives' parents/relatives arranged the marriage for her. In fact, the model predicts that if the wife had complete choice in her spouse (a "love marriage"), then the couples are about half as likely (OR=0.52) to

report discrepantly compared to couples in which wives had fully arranged marriages. Couples in which wives had partial choice are 19% less likely (OR=0.81) to discrepantly report use of contraception.

Interestingly, the reverse is true of husbands' marital arrangement: if he held some or all of the choice in his wife then couples are 22% and 35% more likely to have discrepant reports of contraceptive use, respectively, relative to couples in which husbands' parents arranged the marriage for him.

Next, we see that marital duration does not have a significant impact on whether spouses' reports of contraceptive use are discrepant.

Finally, the model shows that couples in which wives report greater love for their husbands are less likely to discrepantly report contraceptive use, while the reverse is true for husbands' report of love for their wives. For each unit increase in a wife's report of love for their husband, on a 4-point scale, the couples' likelihood of discrepant reporting is reduced by 11%, while a one-unit increase in husband's report of love for their wife is associated with a 13% increase in likelihood of discrepant contraceptive reporting.

Discussion and Next Steps

This paper is designed to investigate discrepancies in couples' monthly reports of contraceptive use, among a sample of 322 couples in rural Nepal. Given that there is a push toward including more men in studies of reproductive health (Greene et al. 2006), it is important to understand the accuracy of spousal reports and reasons that there may be inaccuracy. With these preliminary results, I find that wives' and husbands' marital characteristics can be important predictors of discrepant reports of contraceptive use, and that they operate in opposite directions. When wives had more choice in their spouse and report greater love for their husband, this reduces the odds of discrepancy in reporting of couples' contraceptive use, while the opposite is true for husbands' marital arrangement and love for wife.

In the coming weeks and months I will advance the paper both analytically and theoretically. I will explore these associations further and develop possible theories for why these associations may be operating. I will also take care to account for pregnancy and spousal separation (e.g., due to labor migration) as times when couples are not "at risk" of discrepant reporting. Moreover, I will look into discrepancy in reports of sterilization, and especially vasectomy—a common method in this setting. It will be interesting to unpack any discrepancies in reports of these more permanent methods, as one spouse may have secretly sought out a sterilization procedure in spite of their spouse's preference for more children. Similarly, I will parse out effects of other invisible methods (i.e., the pill, IUD, depo-provera, and possibly Norplant), as spouses (mostly wives, as most of these methods are woman-controlled) may use these methods to intentionally hide their fertility-limiting behavior. I will also delve into the possibility that discrepant reports are due to infidelity by parsing out the effects of coitally specific methods (i.e., condoms, foam, and abstinence). Additionally, I will employ measures of how frequently spouses discuss family planning and spouses' differing childbearing preferences to assess these factors as mechanisms. Finally, I will also expand the sample to include couples in which wives are ages 44 and younger.

Table 1. Means of variables, 322 couples

	Mean	SD	Range
Discrepancy in report of use of any temporary contraceptive method*	0.02	0.14	0-1
Love for Spouse			
Wife's report	3.04	0.72	1-4
Husband's report	3.07	0.72	1-4
Wife's marital arrangement			
Parents chose spouse	0.49	0.50	0-1
Wife chose spouse	0.33	0.47	0-1
Both parents and wife chose spouse	0.18	0.38	0-1
Husband's marital arrangement			
Parents chose spouse	0.52	0.50	0-1
Husband chose spouse	0.30	0.46	0-1
Both parents and husband chose spouse	0.17	0.38	0-1
Marital duration (years)	6.21	4.49	0-19
Wife's age	25.39	4.58	16-34
Husband's age	24.77	4.88	15-49
Number of children born, 1996	1.79	1.45	0-6
Lives with husband's parents	0.20	0.40	0-1
Years of education			
Wife's education	5.44	4.36	0-16
Husband's education	4.79	4.39	0-16
Ethnicity			
Brahmin/Chhetri	0.35	0.48	0-1
Dalit	0.14	0.35	0-1
Hill tibeto Burmese	0.15	0.36	0-1
Terai tibeto Burmese	0.32	0.47	0-1
Newari	0.04	0.18	0-1

*Based on 32,883 couple-months

Table 2. Spouses reporting on monthly contraceptive use, 32,883 couple-months of observation

	Number of months husband, only, reported using	Number of months wife, only, reported using	Number of months both report use
Condoms	196	194	2618
Birth control pills	54	50	869
Depo-provera	74	73	2246
IUD	4	2	84
Norplant	1	1	39
Foam	3	3	2
Abstinence	44	45	386
Any temporary method (i.e., any of the above)	314	320	6188

Table 3. Logistic regression, predicting spousal discrepancy in reports of temporary contraceptive use methods

	Odds Ratio	Z-score
Wife's marital arrangement (Ref: Parents chose spouse)		
Respondent chose spouse	0.52***	-6.26
Both parents and respondent chose spouse	0.81*	-2.05
Husband's marital arrangement (Ref: Parents chose spouse)		
Respondent chose spouse	1.22+	1.80
Both parents and respondent chose spouse	1.35*	2.18
Marital duration	0.98	-1.10
Love for Spouse		
Wife's report	0.89*	-2.02
Husband's report	1.13*	2.08
Covariates		
Wife's age	0.91***	-6.78
Husband's age	1.06***	4.49
Number of children born, 1996	1.03	0.58
Lives with husband's parents	2.15**	3.10
Years of education		
Wife's education	1.08***	5.78
Husband's education	1.04*	2.41
Ethnicity (reference: Brahmin/Chhetri)		
Dalit	2.15***	5.01
Hill tibeto burmese	1.98***	5.02
Terai tibeto burmese	3.33***	8.95
Newari	1.02	0.09
Couples	*322*	
Couple-months	*32,883*	

two-tailed tests, + p<.10 , * p<.05, **P<.01, *** p<.001

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