

Predictors of coitus interruptus as a family planning method in Pakistan Results from Pakistan Demographic and Health Survey

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Significance/Background: The withdrawal method (or coitus interruptus) is one of the oldest recorded means of contraception. It is also the least effective (73%) and has a high failure rate (31%); nearly 70% discontinue usage after two years (PDHS, 2012-13). Half of the discontinued usage was due to a high failure rate, inconvenience or general opposition to the method. However, the Pakistan Demographic and Health Survey showed usage to be 4.1% of the total contraceptive prevalence rate (CPR) in 2006-2007, increasing to 5.7% in 2009 and 8.5% in 2012-13. One-fourth of all women using reversible methods used withdrawal; with women aged 30-35 using it most frequently, for either limiting or spacing (PDHS, 2012-13).

Main question/hypothesis: The purpose of this study was to assess the impact of key socio-economic and demographic factors on the uptake of the withdrawal method as a means of family planning

Methodology: The data set used was Pakistan Demographic and Health Survey 2012-2013. The target population for this particular study was married women of reproductive age, between the ages of 15 and 49. In the data, women who were currently pregnant were excluded, only including women who were using any form of contraceptive method and were at risk of pregnancy. We distinguished between users and non-users of withdrawal (1=withdrawal user, 0=users of modern methods).

Univariate analyses and binary logistic regression was conducted on major socio-economic and demographic factors. In the multivariate model, withdrawal was regressed against the decision maker for contraceptive choice, wealth, visits to family planning facilities, residence and visits from a Community based outreach health worker family planning worker. A further univariate regression was carried out on withdrawal users and gender parity. The gender parity information was derived from the available information on desired family sizes and current family sizes, while accounting for the gender balance of the children in the family.

The main multivariate model was stratified at provincial level for the four major regions in Pakistan, with an overall model for all of Pakistan, while the gender parity univariate logit model considered pan-Pakistan data.

Results/key findings: Overall there were 4651 MWRAs in the sample. We found that when the contraceptive decision maker was the husband alone, and not the respondent, the odds of using withdrawal was 8.2 times the odds of using modern methods (95% CI 3.74-18.21). Similarly, where the respondent had never visited a family planning facility, compared to visitors, usage was 2.4 times higher than modern method usage (95% CI 1.985-3.055). Women belonging to richer wealth quintiles were 1.56 times more likely to use it, compared to women in the poorest quintiles (CI 1.17-2.08). This effect was

assessed by husband's education; while assuming the respondent had no education, rich respondents more frequently used it compared to poor respondents by 7%. Furthermore, when both couples were uneducated 17% used the method and when the husband had higher education 24.1% were found to use it. We found that meetings with family planning workers (LHWs) also had an effect on choice of modern methods, even though the result was not statistically significant. In addition, an ancillary analysis done on gender parity was found to have a relatively strong effect on withdrawal use at a univariate level but the effect disappeared when adjusted with other covariates. The strongest association of withdrawal use was with GP1, where the couple had no children (2.55, CI 0.985-6.61). GP2 and GP3 show similarly strong associations, that is: couples with one child and no sons (GP2) (1.82, CI 1.295-2.574) and one child and one son (GP3) (1.8, CI 1.38-2.525).

Knowledge contribution: Our findings are similar to Husain et al (2013), however, there are no publications primarily addressing withdrawal usage in Pakistan. Conflictingly, usage was highest amongst highly educated, rich, urban dwellers, as well as amongst those failing to visit health facilities with FP services. The South Asian preference for sons also appeared to be a strong factor for couples in Pakistan. Male dominance in household decision making and contraceptive choices also had a large effect on usage, potentially stemming from a desire to maintain control over family size. Furthermore, future studies are needed to understand why these particular trends take place and what FP delivery channels are required to convert this group of coitus interruptus users to modern users.