Can Couple Focused Counselling Improve Outcomes for Newborns and Recently Delivered Women? Evidence from Rural India, 2019-21

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Background

While commendable progress has been made in health and care access parameters in general over the course of this century, India may still not be in a position to meet many of the health-related SDG goals by 2030. For instance, even in 2019-21, 18 percent of children in India were born with low birth weight, and rates were particularly high in rural areas and less progressive states. The neonatal mortality rate (NNMR) was 29.5 per 1,000 live births with 83 percent of neonatal deaths resulting from complications associated with low birth weight (Dandona et al., 2020). And just three in five newly delivered women (62%) received their first postpartum checkup in the first two days after delivery (IIPS & ICF, 2021). Among the social determinants that may be associated with these somewhat sluggish achievements may be the limited engagement of husbands in women's pregnancy and post-partum care. Including male partners in the process of pregnancy-related care has the potential for reducing negative health outcomes (Alio et al., 2010; Barua et al., 2004; Caleb-Varkey, 2001; Caleb-Varkey et al., 2004; Feldman et al., 2000; Walston, 2005; Singh, 2009; Singh et al., 1998). Women themselves have expressed a desire for partners to be more involved in maternal and child health care, and in many cases, men are interested in being involved (Population Council, 2005).

In India, though policies and programmes have acknowledged the importance of reaching men in order to enhance couple reproductive health, in practice, programmes are struggling to engage men. Studies relating to couple counselling have adopted different approaches. Some define couple-based counselling as activities reaching couples together, and couple-focused counselling as a flexible model that may initially target the couple together, but later involves individual-based activities and services separately to partners depending on the couples' expressed wishes (Hart et al., 2006; Lasee & Becker, 1997). A systematic review has observed that common indicators of male involvement have been attendance at antenatal visits, during childbirth and HIV testing, and provision of financial support; it notes however that studies rarely collected data from men directly (Galle et al., 2021).

The objective of this study is to explore the extent to which counselling of women and their husbands, whether separately or jointly, affects maternal health outcomes. More specifically, we explore whether exposing women as well as their husbands to comprehensive counselling is more likely to improve outcomes than providing no or partial information or engaging only women or only husbands. Comprehensive counselling is defined here as exposure to information on maternal danger signs, delivery advice, nutritional care and post-natal contraception; outcomes include birth weight, postpartum care, and contraception use. The study is unique in that it draws on data available in India's National Family Health Survey (NFHS-5 2019-21) that refer to couples rather than individuals, and allow us to explore associations between specific items of counselling and maternal health outcomes.

Data and methods

The NFHS-5 couple file included a matched sample of 43,581 women and their own husbands, Counselling-related questions related only to the last birth that took place in the five years preceding the survey, bringing the total number of couples for this study down to 11,613, and further, after excluding missing values, to 10,250 for birth weight, 11,497 for mother's postnatal care, and 8,566 for contraceptive use. Data were analysed using bivariate and multivariate associations, adjusting for confounding sociodemographic factors.

Outcome indicators

We explore the association of couple counselling with three outcome indicators. Birth weight was assessed through questions on whether the baby was weighed at birth, his/her weight as assessed by recall as well as through a health card if one was available. Birth weight was coded

as 1 if weight was under 2500 grams, and 0 if 2500 grams or more (WHO, 2014). Postnatal care was coded as 1 if the mother attended the health facility for postnatal care services within 42 days of delivery, and 0 if she had not sought services in this period. Finally, contraceptive use was measured through a calendar providing a monthly history of reproductive events – for this study, we excluded those who were pregnant or whose last child was aged less than six months. Those who had practiced contraception were assigned a value of 1, and if not, 0.

Explanatory variables

We explored four components of counselling received by the woman and/or her husband during pregnancy and childbirth, and delivered by any health worker: provision of information regarding pregnancy complications, the importance of institutional delivery, general health and nutrition, postpartum care and family planning. Women were asked whether (a) they received counselling any time during their last pregnancy in the course of their ANC check-ups or interaction with any health worker, and whether, in the course of these interactions they were told about signs of pregnancy complications, and specifically, vaginal bleeding, convulsions, prolonged labour, severe abdominal pain and high blood pressure, and the facility they should attend if experiencing these complications; (b) whether, during the last three months of the last pregnancy, they met an ANM, lady health visitor, ASHA, Anganwadi worker or other community health worker and were provided health and nutrition education; (c) whether, in the course of these interactions, the provider informed the woman about the importance of institutional delivery; and (d) whether she had been advised about family planning for delaying or avoiding another pregnancy. Husbands were asked a similar (but not identical, less detailed) set of questions on the same themes. Based on the responses to these questions, we generated four sub-groups, namely, couples among whom (a) the woman, the husband or both had received partial information on 1-3 matters or had not received any information on these matters; (b) the husband had received comprehensive information, and the woman received partial or no information; (c) the woman had received comprehensive information, and the husband received partial or no information; and (d) both the woman and the husband had been fully informed on all matters.

Confounding factors

Our analyses controlled for a number of background variables. These included the woman's age, level of schooling completed, birth order of the last child, employment status, exposure to television, and the age gap between the woman and her husband. The husband's education and occupation and exposure to television were also controlled. At household level, household size, economic status as measured by wealth quintiles, religion, social groups (scheduled castes, scheduled tribes, other backward classes and others). Finally, region was also controlled (north, north-east, south, central, west and east).

Statistical analysis

Initial findings were derived from descriptive statistics and bivariate analysis. Two sets of logistic regression models were constructed: the first compared outcomes among couples with different counseling statuses, while the second focused on couples where at least one partner had received comprehensive counseling. Both models adjusted for potential confounders. Results are presented as adjusted odds ratios (AOR) with 95% confidence intervals (CI). Statistical significance was set at $p<0.05$, and sampling weights were incorporated to ensure national representativeness. This approach allowed for assessing the independent effects of counseling on maternal and newborn health outcomes while comparing the relative effectiveness of counseling wives alone, husbands alone, or both partners.

Results

Large proportions of women and husbands received counselling on all indicators. As seen in Table 1, 57 percent of husbands, compared to 74% of women were advised about pregnancy related complications, 74 percent and 89%, respectively, had received delivery advice from healthcare workers; 81 percent and 85 percent, respectively, were given nutritional advice, and just 67% of husbands, compared to 84% of women were informed about family planning. Conversely, 10 percent of husbands and eight percent of women nationwide received no

counselling in pregnancy related complications, delivery advice, nutritional advice or family planning. An overview of key outcome healthcare indicators in India during 2019 to 2021 suggests that 17 percent of infants were of low birth weight. Postpartum care services within 42 days of delivery were received by 84 percent of women, and 73 percent of couples were using any method of contraception.

Table 1: Exposure to various components of counselling among married women aged 15-49 and husbands and key outcomes experienced (%)

Counselling	Women	Husbands
Components of counselling		
Told what to do if mother has pregnancy related complications	73.8	56.9
Discussed the importance of institutional delivery	89.4	73.8
Provided health and nutrition advice	85.2	80.5
Discussed family planning to delay subsequent pregnancy	84.2	66.8
Comprehensive counselling	**Women**	**Husbands**
All information received [a]	66.3	51.8
Some information received [b]	25.9	37.8
No information received [c]	7.8	10.4
Key outcomes	**Percentage (N)**	
Low Birth Weight	17.09 (10,520)	
PNC availed*	84.16 (11,497)	
Contraceptive use**	73.17 (8,566)	

*Notes: PNC: Post-Natal Care; [a] Both woman and husband received all information; [b] Woman or husband received only partial information; [c] Both woman and husband not received any information; *Postnatal health checks are checks on mother's health within 42 days of the birth, **Women using any contractive method who had child aged more than 6 months and not pregnant, and, N=total sample.*

In multivariate analyses, we explored the relationship between counselling status and selected outcome indicators, adjusting for confounding factors, namely age, educational level, woman's employment status and husband's occupation, spousal age gap, birth order and sex of infant, exposure to television, household size, household wealth status, religion, caste and region of residence. A consistent picture emerges. Outcomes were strongly associated with counselling status (Table 2). For example, when all couples are considered (Panel A), compared to couples among whom neither partner received comprehensive counselling, those among whom only the husband reported comprehensive counselling (AOR: 0.83; 95% CI: 0.74–0.93), those among whom only the woman reported comprehensive counselling (AOR: 0.65; 95% CI: 0.57–0.74, and in particular, those among whom both had received comprehensive counselling (AOR: 0.60; 95% CI: 0.52–0.68) were far less likely to deliver a low birth weight baby. Similarly, the odds of accessing postpartum care services were significantly greater among couples among whom both the woman and her husband had received comprehensive counselling than those among whom neither or just one had been counselled (AOR: 4.23; 95% CI: 3.55–5.03); however, the probability of women availing PNC was greater when just the woman was comprehensively counselled (AOR: 3.89; 95% CI: 3.22–4.71) than when just the husband was. And finally, the odds of contraception among couples among whom both partners were comprehensively counselled were significantly greater than those in which neither or just one had received counselling (AOR: 1.67; 95% CI: 1.45–1.92), with those couples in which just one partner had been so exposed falling in between (AOR: 1.34; 95% CI: 1.17–1.52) (husbands only) and AOR: 1.56; 95% CI: 1.34–1.82 (women only).

Further, to explore whether engaging women as well as their husbands in counselling sessions is more likely to improve outcomes than engaging only women, a second set of models are presented (Panel B) in which we exclude those couples among whom both members received no or partial information. In this case, we consider those couples among whom (a) only the

woman and (b) both members were comprehensively counselled, compared with those among which only the husband received comprehensive counselling. Odds ratios in all three instances confirm that counselling women has a stronger effect on outcomes than counselling only husbands, but that counselling both partners has the strongest association: infants were far less likely to be of low birth weight (AOR: 0.79; 95% CI: 0.68–0.90 and 0.71, 95% CI, 0.62-0.81), women were far more likely to access postpartum care (AOR: 2.99; 95% CI: 2.45-3.64; 3.32, 95% CI: 2.77-3.98), and couples were far more likely to practice postpartum contraception (AOR 1.16, CI: 1.01-1.29 and 1.26, CI, 1.09-1.46).

Table 2. Odds ratios (and 95% confidence intervals) from logistic regression analyses assessing relationship between counselling status and selected outcome indicators, women aged 15-49 and husbands for all couples and those among whom at least one member received counselling

	Low birth weight (N=10,250)	**Woman sought postpartum services (N=11,497)**	**Couple practised family planning (N=8,566)**
A. All couples			
Both mother and father received some or no information **(Ref)**	-	-	-
All information received by father only, mother received some or no information	0.83***(0.74-0.93)	1.27***(1.12-1.43)	1.34*** (1.17-1.52)
All information received by mother only, father received some or no information	0.65***(0.57-0.74)	3.89 ***(3.22-4.71)	1.56***(1.34-1.82)
All information received by both mother and father	0.60*** (0.52-0.68)	4.23*** (3.55-5.03)	1.67***(1.45-1.92)
B. Couples among whom at least one member received counselling*			
All information received by father only, mother received some or no information **(Ref)**	-	-	-
All information received by mother only, father received some or no information	0.79***(0.68-0.90)	2.99***(2.45-3.64)	1.16**(1.01-1.29)
All information received by both mother and father	0.71***(0.62-0.81)	3.32***(2.77-3.98)	1.26***(1.09-1.46)

Notes: *Controlling for spousal age gap, husband's occupation, woman's employment status, education, woman's age at last birth, birth order, sex of child, exposure to television, household size, wealth quintiles, religion, caste and region; *excludes those couples among whom both women and husbands received no or only partial information; *** p<=.05*

Discussion and Conclusions

The research demonstrates that counselling husbands comprehensively – together with or independently of –women positively affect pregnancy related outcomes. It finds that compared with couples among whom neither member had been comprehensively counselled, those among whom only the husband was counselled, only the wife was counselled and especially couples among whom both were counselled (separately or together) consistently reveal better postnatal outcomes. This study demonstrates that counselling husbands comprehensively together with or independently of women positively affect pregnancy related outcomes, that is, birth weight of infants, postpartum care seeking and postpartum contraception. Literature from diverse settings supports the hypothesis that engaging husbands in maternal health counselling enhances outcomes (Tokhi et al., 2018; Mullany et al., 2007). Our findings reiterate that while counselling women is paramount for improving pregnancy outcomes, but including husbands in the counselling process significantly enhances these effects. To address health system challenges in patriarchal settings like India, male health workers may be more effective in counselling husbands, bridging communication gaps, and explaining pregnancy, childbirth, and postpartum care. This approach aligns with India's RMNCH+A strategy to include men in reproductive health programmes.

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