Original Article

Men's perception and participation in maternal and child health care in the field practice area of a teaching hospital: A cross-sectional study from rural Bengal

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Abstract

Introduction: Participation of men in maternal and child health (MCH) is crucial for the reduction of infant and maternal mortality. MCH care services have been focused on providing information and services to women, but males' behaviour and decisions affect the health of the child and mother. **Objectives:** The objectives of the study were to assess the perception and participation of males in MCH care as well as, to identify the association of their perception and participation with socio-demographic characteristics and to find out the correlation between perception and participation regarding MCH care. **Materials and Methods:** A descriptive type of observational study with a cross-sectional design was conducted among 125 male residents from selected subcentres in Budge Budge II block of South 24 Parganas. Data were collected by face-to-face interviews using a predesigned, pretested, structured schedule. Multivariable binary logistic regression was done to identify the association between dependent and independent variables ($P < 0.05$). The correlation between perception and participation was assessed by Spearman's rho. **Results:** The mean age of the participants was 34.3 (±5.6) years with most (59.2%) between the ages of 31–40 years of age. About 24% were unaware of pregnancy registration time, and 30.4% did not know the number of minimum antenatal check-ups. In total, 20% of study participants did not accompany their partner to the Antenatal Care (ANC) clinic, 6.4% did not accompany them during delivery, and almost 33.6% did not accompany their child to the immunization session. No variables were found to be significantly associated with the dependent variables. A statistically significant positive correlation was found between perception and participation ($\rho = 0.3$). **Conclusion:** Men's perception and participation in MCH care services were found to be reasonably good though they can be improved. Awareness raises about the importance of men's role in supporting their partner's health during pregnancy and postpartum, as well as the overall well-being of their children through public health campaigns, community events, and targeted educational programs.

Keywords: Maternal and child health care, participation, perception

Introduction

Male involvement in childcare is one of the most important issues in reproductive and child health programmes in both developed and developing countries. It entails men being present, accessible, available, understanding, and eager to learn about the pregnancy process, providing emotional, physical, and financial support to the expectant woman. However, studies have shown that male involvement in maternal and child health (MCH) care is limited in various regions. The participation of men in the broader perspective of safe motherhood is, however, still inadequate.[1-3] It is evident that in developing

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countries, husband involvement in maternal health care is particularly very low.[4] Similarly, in Indian societies, childbirth and childcare have traditionally been perceived as women's responsibilities, despite efforts to emphasize the importance of male partners' involvement. Studies in different states of India, including Gujarat and Maharashtra, have highlighted the lack of knowledge among men regarding pregnancy-related issues and their limited presence at routine antenatal visits.[5,6] Recognizing the significance of male behaviour and perceptions in MCH care, national programmes have attempted to encourage male involvement. While West Bengal has made considerable progress in reducing maternal and infant mortality rates, largely due to the availability and accessibility of MCH services, male awareness and involvement remain essential, especially in rural conservative and patriarchal societies.[7] Against this backdrop, the present study was undertaken to assess the perception and participation of male residents in the rural field practice area of a teaching hospital in the state. The research aimed to identify the factors associated with male partner's perceptions and participation in MCH care as well as explore the correlation between perception and participation. By understanding and addressing these factors, the MCH indicators in the state can be further improved.

Methods

Study setting

The study was conducted in Budge Budge II block in the district of south 24 Parganas of West Bengal. It is the rural field practice area of Department of Community Medicine of IPGME&R, Kolkata.

Study design, sampling technique, and sample size

The study was community based with a cross-sectional design**.** A sample of 125 eligible males was selected by multistage random sampling. There were 24 subcentres in the Budge Budge II block. In the first stage, 4 out of 24 subcentres were randomly selected; in the second stage, 1 village was randomly selected from each subcentre; and in the third stage, household list with eligible population was prepared and participants were randomly selected using the probability proportionate to size sampling [Figure 1].

The sample size for the study was calculated using Cochran's formula as follows: $n = Z^2pq/d^2$, where Z = Standard normal deviate, 1.96 using 95% confidence interval with type 1 error as 5%, p = proportion of men's participation (72.5%) in MCH care from a study by Suryawanshi *et al.*,[8] $q = 1-p$, d = absolute error of precision (taken as 10% in this study), and a design effect of 1.5 was used. The final sample size calculated was 125.

Study population, inclusion, and exclusion criteria

Consenting male respondents whose partners had given birth within the last two years preceding the study were considered eligible for the study. The selected participants were all permanent residents of the area.

Study period

The study was conducted from February 2023 to April 2022 among the male respondents whose partners had given birth within last two years preceding the study in selected subcentres of Budge Budge II block of West Bengal.

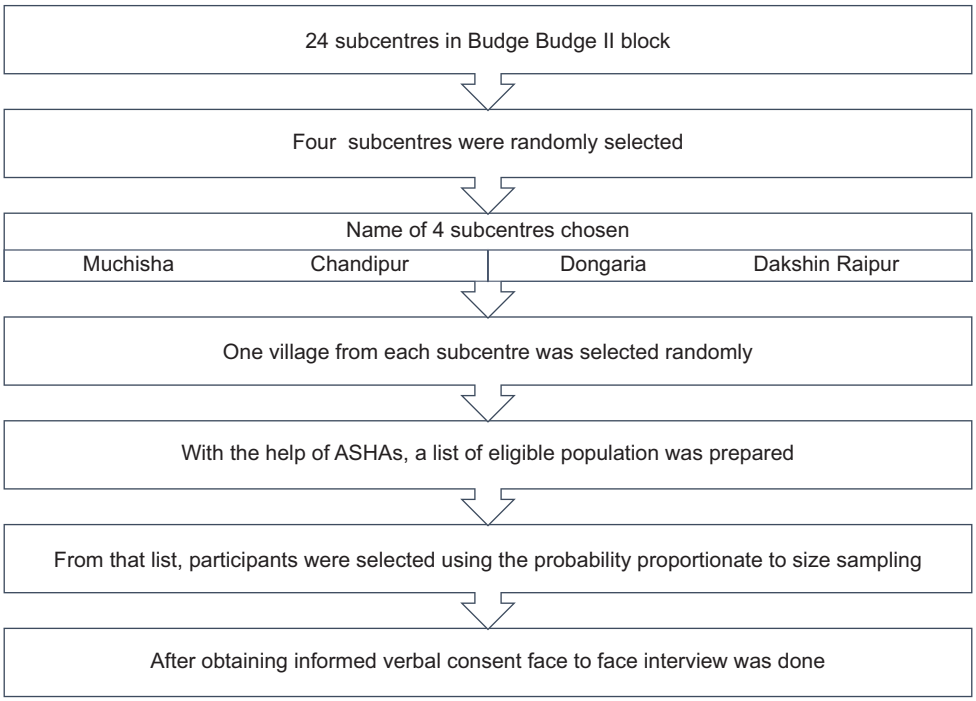

Figure 1: Multistage random sampling

Data collection instrument

A schedule was designed for the study by the investigators which comprised of both close-ended and open-ended questions. The schedule was in three sections: Section A was designed to collect sociodemographic information; Section B sought to collect information on men's perception in MCH care; and Section C sought to elicit information on the level of male involvement or participation in MCH care (antenatal care, delivery, and postnatal care). The schedule was translated into Bengali (local language) and the latter was back translated into English by two different subject matter experts to ensure reliability. The final Bengali schedule was unambiguous, simple to understand, had semantic equivalence, and conformed to the objectives of the study. Pretesting of the study tool was done in the nearby Howri subcentre on 13 men who were not included in the study population. The schedule was modified according to the feedback. Face and content validity were ensured by the experts at the Department of Community Medicine of the Institute and the final schedule was used for the study.

Data processing and analysis

The data collected from the field were edited for any inconsistencies and appropriately coded, after which data were tabulated into Microsoft Excel 2019 (Microsoft Corp, Redmond, WA, USA) and then imported to Statistical Package for the Social Sciences (SPSS for Windows, version 25.0, SPSS Inc., Chicago, USA) for analysis. The dependent variables for the study were the perception and participation of male respondents in specific activities related to MCH care like knowledge about the timing of registration of pregnancy, cash incentives during pregnancy, exclusive breastfeeding, complementary feeding, immunization of the child, etc., and whether the participant had accompanied his pregnant partner and his child to the health centre for antenatal care, delivery, postnatal care, and for immunization, respectively. The independent variables considered in the study were the following: sociodemographic characteristics of the respondents (age, employment status, education of the man, education of the spouse, religion, type of marriage status, number of children, and living arrangement). For assessing perception, there were 15 questions. Each correct response was given a score of 1, so a maximum possible score of 15 was attainable. Responses were categorized as 'correct', 'incorrect', and 'don't know' for questions related to perception in various aspects of MCH care. The correct response was given 1 point and incorrect and do not know were merged and given 0 points for analytical purposes. The perception was categorized as adequate (≥ median score) and inadequate (<median score) according to total perception scores. Participation was assessed by 10 questions and categorized as adequate (≥ median) and inadequate (<median) according to total participation scores attained. Both descriptive and inferential statistics were employed in the analysis. The multivariable binary logistic regression was also conducted to identify variables that show a significant relationship between independent variables and dependent variable. Significance level was set at $P < 0.05$.

Ethical consideration

Ethical approval was obtained from the Institutional Ethics Committee (IEC) of IPGME&R, Kolkata (Vide memo no. IPGME&R/IEC/2023/113). An informed verbal consent was taken from each selected participant to confirm willingness after giving a description of the study. The participants were assured about their privacy and confidentiality. Appropriate health education, whenever needed, were provided to all the patients after the interview.

Operational definition

MCH care: Participation is defined as whether the male partner ever accompanied his wife during antenatal checkup, delivery, and postnatal checkup and immunization of the child.

Results

As shown in Table 1, the mean age of the participants was 34.3 (±5.6) years with most (59.2%) between the ages of 31–40 years of age. The majority of the participants were Hindus (94.4%) and belonged to the General caste (84%). Almost half of the study participants (28%) were educated up to a higher secondary level followed by 23.2% of the participants were educated up to a secondary level. More than half of

Table 1: Distribution of the study participants according to their socio-demographic characteristics (*n*=125)

Variables	Categories	Frequency (%)
Age	21–30	33 (26.4)
	31–40	74 (59.2)
	41 and above	18 (14.4)
Religion	Hinduism	118 (94.4)
	Islam	7 (5.6)
Caste	General	105 (84.0)
	Scheduled caste	16 (12.8)
	OBC	4 (3.2)
Literacy status	Illiterate	3 (2.4)
	Primary	13 (10.4)
	Middle	19 (15.2)
	Secondary	29 (23.2)
	Higher secondary	35 (28)
	Graduate and above	26 (20.8)
Type of occupation	Unskilled	16 (12.8)
	Semiskilled and skilled	58 (46.4)
	Clerical	13 (10.4)
	Semiprofessional	38 (30.4)
Type of family	Nuclear	54 (43.2)
	Joint	71 (56.8)
Addiction	Yes	51 (40.8)
	No	74 (59.2)
Distance from health facility	Within 2 km	33 (26.4)
	≥2 km	92 (73.6)
SES	Upper middle	13 (8.8)
	Middle	54 (43.2)
	Lower middle	58 (45.6)
No. of children	1	78 (62.4)
	≥2	47 (37.6)

the study participants (56.8%) belonged to joint families and 62.4% of respondents had one child only. Nearly 45.6% of the participants belonged to the lower-middle class according to the B.G Prasad scale, 2022. A little less than half of the study participants (46.4%) were skilled workers. In total, 40.8% of the respondents were addicted to tobacco; among them, 56.8% were addicted to smoking and 25.5% were addicted to both chewing and smoking tobacco; none of the respondents reported addiction to alcohol.

Table 2 presents a summary of responses about perceptions regarding various aspects of MCH care reported by respondents in the study. The results shows that nearly one-third of the study participants (24%) were not aware of the correct time of registration of pregnancy. Almost 30.4% of the participants were unaware of the minimum number of antenatal check-ups. The majority (67.2%) of the respondents did not know the number of recommended doses of the Td vaccine. Over 40% of the study participants (44.8%) were not aware of cash incentives provided by the government for pregnant women and 28% were not aware of the free-of-cost medicines supplied by the government. The majority of the study participants (72.8%) of participants had incorrect knowledge regarding warning signs of pregnancy. Nearly two-thirds (65.6%) were aware of taking an extra meal during pregnancy. Over 43.2% of the study population did not know about the minimum number of postnatal visits recommended for mothers. Again nearly 20% of the participants had incorrect perceptions regarding exclusive breastfeeding during the first 6 months of life. In total, 77.6% of the study population had correct perceptions regarding the type of food to be used for complementary feeding. Except for 2, the entire study population felt that vaccines were safe, while only 4 of the respondents felt that vaccines were not useful for the child. Most of the participants (96%) had correct knowledge regarding the food to be given to the child immediately after birth, while 76.8% knew about the correct time of initiation of breastfeeding.

Table 2: Perceptions of respondents regarding various aspects of maternal and child health care (*n*=125)

Perceptions regarding	Categories	Frequency (%)
Time of registration	Correct	88 (70.4)
	Incorrect	7 (5.6)
	Don't know	30 (24.0)
Minimum no. of ANC	Correct	74 (59.2)
	Incorrect	13 (10.4)
	Don't know	38 (30.4)
Recommended doses of Td vaccines	Correct	29 (23.2)
	Incorrect	12 (9.6)
	Don't know	84 (67.2)
Availability of medicines free of cost during antenatal/intranatal or postnatal period	Correct	90 (72.0)
	Incorrect	35 (28.0)
Availability govt. cash incentives during antenatal/intranatal or postnatal period	Correct	69 (55.2)
	Incorrect	56 (44.8)
Danger signs during pregnancy	Correct	34 (27.2)
	Incorrect	91 (72.8)
Birth preparedness	Correct	94 (75.2)
	Incorrect	31 (24.8)
Extra meals during pregnancy	Correct	82 (65.6)
	Incorrect	43 (34.4)
Minimum no. of PN visits	Correct	35 (28.0)
	Incorrect	36 (28.8)
	Don't know	54 (43.2)
First food to be given after birth	Correct	120 (96.0)
	Incorrect	5 (4.0)
Time of initiation of breastfeeding	Correct	96 (76.8)
	Incorrect	8 (6.4)
	Don't know	21 (16.8)
Foods recommended for the baby during first 6 months after birth	Correct	97 (77.6)
	Incorrect	28 (22.4)
Safety of vaccines for infants	Correct	123 (98.4)
	Incorrect	2 (1.6)
Usefulness of vaccines for infants	Correct	121 (96.8)
	Incorrect	4 (3.2)
Contraception immediately after childbirth	Correct	53 (42.4)
	Incorrect	72 (57.6)

Table 3 shows results of male involvement in various MCH services. It was found that 88% of the study participants had planned their last pregnancy. Though 20% of study participants did not accompany their partner to the ANC clinic, it was found that only 6.4% did not accompany during delivery. However, 33.6% did not accompany their child to immunization sessions. Almost 20.8% of the study participants did not discuss health issues regarding their partner's pregnancy with the healthcare provider. Also, almost 22% did not take any leave from work during the gestational period of their partners and a quarter (24.8%) of study participants did not help their partner in performing household chores during pregnancy.

Table 3: Participation of respondents in various aspects of maternal and child health care (*n*=125)

Participation in	Categories	Frequency (%)
Planning of last pregnancy	Yes	110 (88.0))
	No	15 (12.0)
Making joint plans for emergency	Yes	115 (92.0)
	No	10 (8.0)
Ever accompanying partner to ANC clinic	Yes	100 (80.0)
	No	25 (20.0)
Accompanying partner to health facility during delivery	Yes	117 (93.6)
	No	8 (6.4)
Ever accompanying child for immunization	Yes	83 (66.4)
	No	42 (33.6)
Bearing all expenses during antenatal intranatal and postnatal period	Yes	97 (77.6)
	No	28 (22.4)
Performing household chores during antenatal intranatal and postnatal period	Yes	94 (75.2)
	No	31 (24.8)
Discussing health issues of partner related to pregnancy or childbirth with HCP	Yes	99 (79.2)
	No	26 (20.8)
Availing leave from work for pregnancy or childbirth-related issues of partner	Yes	98 (78.4)
	No	27 (21.6)

Binary logistic regression performed between the independent variable (sociodemographic characteristics) and adequate perception found that participants who were educated up to higher secondary and above (odds ratio [OR] = 2.43 [1.03–5.71]), belonging to middle socioeconomic class ([OR] = 4.10 [1.02–16.47]), involved in semiprofessional type of occupation ([OR] = 4.14 [1.20–14.30]) had statistically significant higher odds of distress than the references.

However, after adjusting the effect of other variables, the multivariate logistic regression model showed that no variables were found to be significantly associated with men's perception regarding MCH care [**Table 4**].

Binary logistic regression performed between the independent variable (sociodemographic characteristics) and adequate participation found that no variables were found to be significantly associated with men's participation regarding MCH care.

A statistically significant positive correlation was found between perception and participation ($\rho = 0.3$) [Figure 2].

Discussion

In the current study, about 72% of the participants had education up to the secondary level or above, which was slightly lower than that found in Chakrabarti *et al.*[7] who reported that 55% of the participants had the education level above primary in rural areas of Bengal.

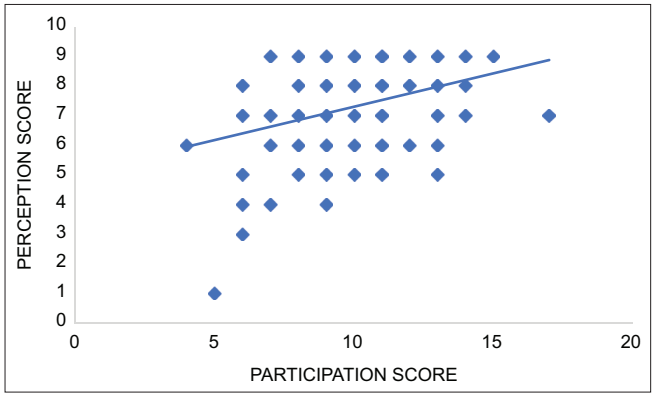

Figure 2: Scatter plot showing a correlation between perception scores and participation scores regarding various aspects of MCH care ($n = 125$)

A study conducted in rural communities in southeast Nigeria[9] revealed that most participants (75.8%) were aware of safe motherhood components such as the need to prepare for birth, facility delivery, a joint decision in maternal health, special nutrition in pregnancy, and helping with household chores. In the present study, nearly two-thirds of the participants (65.6%) were aware of taking an extra meal during pregnancy and 70% were aware of the correct time of registration of pregnancy which was greater than that found by Chakrabarti *et al.*[7] from West Bengal who reported it as 35.5%.

Almost half of the study participants (44.8%) were not aware of cash incentives provided by the government for pregnant women and 28% were not aware of the free of cost medicines supplied by the government. However, 77.6% bore all expenses during the antenatal intranatal and postnatal period. Knowledge on available government schemes related to pregnancy and childbirth could be beneficial in reducing out of pocket responses.

Majority of the study participants (72.8%) of participants had incorrect knowledge regarding warning signs of pregnancy. However, the study by Chakrabarti *et al.*[7] reported that though 85.5% of the participants could identify decreased foetal movement as a warning sign of pregnancy not a single respondent could enumerate all danger signs of pregnancy.

Over 43.2% of the study population did not know about the minimum number of postnatal visits recommended for mothers. Again nearly 20% of the participants had incorrect perceptions regarding exclusive breastfeeding during the first 6 months of life. This could be because childcare practices are still regarded as the prime responsibility of mothers and women folk in the family. A qualitative study by Bilal *et al.*[10] found that the majority of the fathers perceived childcare mainly as a responsibility of mothers; however, they were also involved in routine child-care activities, although this was often mentioned in a way of helping the mother. In total, 77.6% of the study

Table 4: Multivariable binary logistic regression of perception of the participants with socio-demographic variables (n=69)

Variables	Categories	Adequate perception *n* (%)	aOR (95% CI)	*P*
Literacy status	Below secondary	16 (23.2)	Ref	
	Secondary	12 (17.4)	0.77 (0.27–2.16)	0.62
	HS and above	41 (59.4)	1.57 (0.60–4.08)	0.35
Socio-economic status	Upper middle	10 (14.5)	Ref	
	Middle	33 (47.8)	1.75 (0.36–8.39)	0.48
	Lower middle	26 (37.7)	1.61 (0.72–3.60)	0.23
Type of occupation	Unskilled	7 (10.2)	Ref	
	Semiskilled and Skilled	29 (42)	1.20 (0.38–3.79)	0.74
	Clerical	4 (5.8)	0.57 (0.12–2.76)	0.49
	Semiprofessional	29 (42)	2.63 (0.66–10.40)	0.16

Omnibus test *P* - 0.029; Hosmer and Lemeshow Test *P*- 0.305; Nagelkerke R^2 - 0.175

participants had correct perceptions regarding the type of food to be used for complementary feeding. There is evidence in literature[11-14] that male involvement during pregnancy and postpartum period results in significant benefit in not only maternal health outcomes but also in service utilization than involvement only during the time of delivery. In the current study, 20% of study participants did not accompany their partner to the ANC clinic even once during pregnancy and 6.4% did not accompany during their partners during delivery. Though most participants of the present study did accompany their wives during delivery, literature suggests that the presence of husband at the time of delivery was not statistically significant on delivery outcome.[15,16]

A study from South India identified the various reasons for absence of male partners during antenatal checkups as professional commitment, patriarchy, financial constraints, and health facility-related challenges.[8] An explorative study is required to bring to light the factors which led to not accompanying partners to antenatal clinics in about 20% of the participants.

A study from Ghana in 2017 by Craymah *et al.*[17] found that 35% accompanied their partners to antenatal care, 44% to delivery, and 20% to postnatal care. The present study found a greater involvement of males in all the above domains related to childbirth.

However, male involvement in antenatal clinic visit during the same period had been better in India as revealed by NFHS-4 data in 2015–2016, which showed the presence of 67% of men during their partners' antennal checkups.[18] However, there were regional variations with states like Bihar and Uttar Pradesh reporting male accompaniment during antenatal checkups well below the national average (44% and 55%). The present study reported a well-marked improvement when compared to the above findings in males escorting their wives during antenatal visits.

A study by Suryawanshi DS *et al.*[8] from South India in 2019 reported the percentage of husbands accompanying during antenatal visit were 72.5%, while it decreased to 27.5% during labour and further decreased to 20.3% during immunization. In contrast in the current study, there was as increase in the proportion of husbands accompanying their wives during delivery (93.6%) than during antennal checkups (80%). The proportion of husbands ever accompanying wives to immunization clinic was also much above the findings of the South Indian study (66.4% vs 20.3%).

The current study found that 75% of the participants helped with household chores during antenatal intranatal and postnatal periods. A study of housework among tea plantation workers in India found that though women were mainly responsible for domestic labour, more than half of husbands usually or sometimes helped their wives with cooking, fuel wood collection, and childcare.[19]

The study identified certain gaps in the knowledge and perceptions of participants concerning antenatal and postnatal care. To address these issues, it is essential to involve male partners of pregnant women or fathers of under-five children during health camps and meetings organized by Accredited Social Health Activist (ASHA), providing them with relevant knowledge. Health education messages tailored for male partners on childbearing and caring practices can also be disseminated through mobile phones. Achieving male involvement in MCH care requires repeated education and sensitization of the community. Therefore, health messages and posters should depict male participation in MCH care and be customized for this purpose. ASHAs should also receive training to effectively communicate these messages to male family members, considering their availability and perceptions. Considering that most participants belong to lower-income groups, educating them about government-provided cash incentives to support MCH care expenses is crucial. Encouraging paid paternal leaves can ensure husbands' presence during antenatal and postnatal care visits, delivery, and vaccination sessions, as well as their involvement in sharing household chores during pregnancy and childbirth. Incentives and cash benefits can be provided to both mothers and fathers to further increase male participation in MCH care. Additionally, to address the lack of time as a common reason for not accompanying their wives or children to health centres, fathers should have access to childcare leaves as well.

Limitations

The study was conducted in only one block of a district of West Bengal. Therefore, the results of this study may not be generalizable. This study was conducted in men whose wives had given birth in the last 2 years; occasionally, another person in the family (Mother-in-law) may be aware of pregnancy and childbirth-related matters and sometimes respondents provided socially acceptable answers. Additional research is needed to adequately explore the influence of in-laws in decision-making and paternal involvement.

Conclusion and Recommendations: This study identified a good perception and participation of the male partner regarding different aspects of MCH care though it can be improved. Raising awareness about the importance of men's role in supporting their partner's health during pregnancy and postpartum, as well as the overall well-being of their children, can be done through public health campaigns, community events, and targeted educational programs. Community health care workers play a crucial role in informing male partners about pregnancy,- delivery-, and childcare-related matters, which can significantly reduce the maternal mortality ratio and infant mortality rate. Ensuring that male partners of pregnant women are included in the design and implementation of MCH care policies and programmes can help make these services more accessible and appealing to them. Engaging local communities, including leaders, religious institutions, and common-interest groups, can help create a

supportive environment for men to voice their concerns and seek help relating to their family's health care needs.

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Conflicts of interest

There are no conflicts of interest.

References

1. Davis J, Vyankandondera J, Luchters S, Simon D, Holmes W. Male involvement in reproductive, maternal and child health: A qualitative study of policy maker and practitioner perspectives in the Pacific. Reprod Health 2016;13:81.
2. Mullick S, Kunene B, Wanjiru M. Involving men in maternity care: Health service delivery issues. Agenda Special Focus 2005;1:124–35.
3. Kakaire O, Kaye DK, Osinde MO. Male involvement in birth preparedness and complication readiness for emergency obstetric referrals in rural Uganda. Reprod Health 2011;8:12.
4. Kululanga LI, Sundby J, Chirwa E, Malata A, Maluwa A. Barriers to husbands' involvement in maternal health care in a rural setting in Malawi: A qualitative study. J Res Nurs Midwifery 2012;11:1–10.
5. Jungari S, Paswan B. What he knows about her and how it affects her? Husband's knowledge of pregnancy complications and maternal health care utilization among tribal population in Maharashtra, India. BMC Pregnancy Childbirth 2019;19:70.
6. Godbole NB, Moberg MS, Patel P, Kosambiya J, Salihu HM, Campos EA, *et al.* Paternal involvement and adverse birth outcomes in South Gujarat, India. Int J MCH AIDS (IJMA) 2020;9:161–6.
7. Chakrabarti S, Sarkar D. Awareness and involvement of male spouse in various aspects of antenatal care: Observation in a rural area of West Bengal. Int J Community Med Public Health 2017;4:1179-82.
8. Suryawanshi DS, Rajaseharan D, Venugopal R. Involvement of husband in maternal and child health care in rural field practice area of a tertiary medical college in South India—A mixed method study. J Family Med Prim Care 2021;10:2829-33.
9. Eze II, Ossai EN, Akamike IC, Okedo-Alex IN, Ogbonnaya LU, Uneke CJ. Males' perceptions and practices towards maternity care in rural southeast Nigeria: Policy implication of participatory action research for safe motherhood. Olorunsaiye CZ, editor. PLoS One 2023;18:e0282469.
10. Bilal S, Spigt M, Czabanowska K, Mulugeta A, Blanco R, Dinant G. Fathers' perception, practice, and challenges in young child care and feeding in Ethiopia. Food Nutr Bull 2016;37:329–39.
11. Senturk V, Abas M, Berksun O, Stewart R. Social support and antenatal depression in extended and nuclear family environments in Turkey: A cross-sectional survey. BMC Psychiatry 2011;11:48.
12. Lteif Y, Kesrouani A, Richa S. [Depressive syndromes during pregnancy: Prevalence and risk factors]. J Gynecol Obstet Biol Reprod (Paris) 2005;34:262–9.
13. Chattopadhyay A. Men in maternal care: Evidence from India. J Biosoc Sci 2012;44:129–53.
14. Mullany BC, Becker S, Hindin MJ. The impact of including husbands in antenatal health education services on maternal health practices in urban Nepal: Results from a randomized controlled trial. Health Educ Res. 2007;22:166–76.
15. Sapkota S, Kobayashi T, Kakehashi M, Baral G, Yoshida I. In the Nepalese context, can a husband's attendance during childbirth help his wife feel more in control of labour? BMC Pregnancy Childbirth 2012;12:49.
16. Wan Yim Ip. Chinese husbands' presence during labour: A preliminary study in Hong Kong. Int J Nurs Pract 2000;6:89–96.
17. Craymah JP, Oppong RK, Tuoyire DA. Male involvement in maternal health care at Anomabo, Central Region, Ghana. Int J Reprod Med 2017;2017:1–8.
18. National Family Health Survey. rchiips.org. Available from: https://rchiips.org/nfhs/factsheet_NFHS-4.shtml.
19. Luke N, Xu H, Thampi BV. Husbands' participation in housework and child care in India. J Marriage Fam 2014;76:620–37.