

# Extent and Factors Affecting Male Partner Involvement in Maternal Healthcare in Rural Area of District Amritsar, Punjab, India: A Cross-sectional Study

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## Abstract

**Background:** Reproductive, maternal, and child health are essential components of public health, with significant implications for the overall well-being of individuals and communities. The aim of this study was to assess the extent and factors affecting male partner involvement in maternal healthcare in rural Punjab, India.

**Materials and Methods:** A cross-sectional study was done on 400 male partners in the rural field practice area in Amritsar who were selected by probability proportional to size sampling technique. A predesigned, pretested, structured questionnaire was used to assess the male partner involvement in maternal health. The analysis of data was performed using SPSS version 23.

**Conclusions:** The study underscores the varying levels of male involvement in maternal healthcare, with higher participation during the antenatal period compared to the postnatal period. Significant association (p value = 0.001) was seen between maternal period and level of involvement in maternal care.

**Key words:** Male Partner, Male involvement, Reproductive, Maternal care.

## Introduction

The maternal health has been one of the most important components of a nation's health.<sup>1</sup> Maternal healthcare service comprises services provided for women during pregnancy, delivery, and postnatal.<sup>2</sup>

Maternal health is essential component of public health, with significant implications for the overall

well-being of individuals and communities. In India, where maternal indicators have historically been a cause for concern, efforts have been made to improve access to healthcare services and enhance health outcomes for women and children.

Male Partner involvement in maternal and child health is a practice which results in accessing better

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health services. Many studies in recent times have demonstrated that involving males in antenatal care has resulted in better outcomes for mother and child.<sup>3</sup> Research into the influence of husbands and fathers on health-related behaviours suggest that building men's knowledge regarding maternal health may be beneficial in terms of care-seeking for pregnancy and birth.<sup>4</sup> Male partner influences on women's reproductive health in the areas of contraception, pregnancy and childbirth, infertility, and foetal harm has a positive impact<sup>5</sup>

**Material and methods:** The cross-sectional study was conducted in the rural field practice area (including 11 villages with the total population of 31568) attached to department of Community Medicine, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar from 1<sup>st</sup> August 2023 to 31<sup>st</sup> December 2024, after taking ethical clearance from Institutional ethical committee vide letter no.(Ref. No. SGRDU/CONT/THESIS/24-558). A predesigned, pretested, structured questionnaire was used to assess the male partner involvement in maternal health. Consent was taken and confidentiality of information from study subjects was assured.

#### Operational Definitions:

**Male Partner:** A male partner is defined as a man who marries a woman and is responsible for the pregnancy of that women.

**Male Partner Involvement:** A man is involved if he is "present, accessible, available, understanding, willing to learn about the pregnancy process and provides emotional, physical and financial support to the woman carrying the child".<sup>6</sup>

**Inclusion Criteria:** All the male partners of couples having at least one child below 5 years of age were included.

**Exclusion Criteria:** Couples not cohabiting during the pregnancy and postnatal period were excluded.

Sample size was calculated by using the formula:

$$n = \frac{z^2 Pq}{(e)^2}$$

Where,

n = sample size

z = (1.96) at 95% Confidence Interval

p = Presumed prevalence of male involvement in maternal health care (0.5)

q = 1-p (0.5)

e = absolute margin of error (0.05)

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2}$$

$$\frac{0.96}{(0.05)^2} = 384 \text{ (which is rounded off to 400)}$$

**Sampling Technique:** The study subjects were selected by Probability Proportional to Size (PPS) sampling technique from 11 villages, 31, 31, 70, 38, 32, 34, 31, 33,33,33,34 and participants were drawn from each village to reach the requisite sample size (400). The analysis of data was performed using SPSS version 23. The associations were deemed significant at p value less than 0.05.

## Results

**Table 1. Distribution of the study subjects according to Sociodemographic variables.**

S. No	Sociodemographic variables	n (%)	
1	Age (years)	20-30	135 (33.8%)
		31-40	261 (65.3%)
		41-50	4 (1.0%)
2	Religion	Hindu	10 (2.5%)
		Sikh	387 (96.8%)
		Christian	3 (0.8%)
		Muslim	0 (0%)
3	Caste	General	140 (35.0%)
		SC/ST	238 (59.5%)
		OBC	22 (5.5%)
4	Type of Family	Nuclear	344 (86.0%)
		Joint	56 (14.0%)
5	Socio Economic status *	Upper	4 (1.0%)
		Upper-Middle	24 (6.0%)
		Lower-Middle	171 (42.8%)
		Upper-Lower	179 (44.8%)
		Lower	22 (5.5%)

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6	Level of Education	Illiterate	11 (2.8%)
		Till Higher secondary	363 (90.7%)
		Graduate	19 (4.7%)
		Post graduate	7 (1.8%)
7	Primary occupation	Unemployed	11 (2.8%)
		Employed	55 (13.8%)
		Self Employed	334 (83.5%)

\*ModifiedKuppuswamy Scale

Table 1. Illustrates the distribution of study subjects according to their sociodemographic

variables. Among 400 study subjects, 261 (65.3%) belonged to the age group of 31-40 years. Mean age of the study subjects is  $31.6 \pm 3.6$  years. Out of 400 study subjects, majority 387 (96.8%) were Sikh by religion. 238 (59%) belonged to scheduled caste. 344 (86.0%) lived in nuclear family. According to Modified Kuppuswamy Scale maximum study subjects 179 (44.8%) belonged to upper lower socio-economic class followed by 171 (42.8%) lower middle class. Majority 363 (90.7%) of male subjects were educated till higher secondary and 19 (4.7%) were graduates. 334 (83.5%) males were self-employed.

**Table 2. Distribution of study subjects according to their involvement in maternal care during antenatal and postnatal period.**

S. No.	Involvement of male partner in maternal care	Antenatal care n (%)	Postnatal care n (%)
1	Accompanying the wife to the health care facility for health checkup.	330 (82.5%)	221 (55.2%)
2	Assisted wife in household chores	41 (10.3%)	39 (9.7%)
3	Taking care of extra dietary needs of wife.	157 (39.3%)	150 (37.5%)
4	Interaction with community health care provider at home.	49 (12.3%)	9 (2.2%)
5	Interaction with health care provider at healthcare facility	11 (3.3%) *	37 (16.8%) **

\*n= 330, \*\*n = 220

Table 2. shows that during the antenatal period out of the 400 study subjects, 330 (82.5%) accompanied their wives to the healthcare facility for health check-up, 41 (10.3%) males assisted their wives in household chores, 157 (39.3%) males said that they took care of extra dietary needs of their wives. During antenatal period interaction with community health provider who visited home was done by 49 (12.3%) males, while during the visit to the health care facility for antenatal check-up 11 (3.3%) males interacted with the health

care provider. During postnatal period, out of the 400 study subjects, 221 (55.2%) accompanied their wives to the healthcare facility for health check-up, 39 (9.7%) males assisted their wives in household chores, 150 (37.5%) males took care of extra dietary needs of their wives. Interaction with community health provider who visited home was done by 9 (2.2%) males. Out of 221 (55.2%) study subjects who accompanied their wives to healthcare facility, 37 (16.8%) interacted with the health care provider.

**Table 3. Association between socio demographic variables and level of involvement of male partner in maternal health care during the antenatal period.**

S.No.	Socio Demographic Variables		Good Involvement (n = 39)	Poor Involvement (n = 361)	$\chi^2$	p-value	df
1	Literacy Status	Up to Matric (n = 336)	27 (8.0%)	309 (92.0%)	7.01	0.008	1
		Above matric (n = 64)	12 (18.8%)	52 (81.2%)			

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2	Type Of Family	Nuclear (n = 344)	32 (9.3%)	312 (90.7%)	0.56	0.45	1
		Joint (n = 56)	7 (12.5%)	49 (87.5%)			
3	Socio Economic status	Upper class (n = 4)	1 (25.0%)	3 (75.0%)	11.74	0.019	4
		Upper-Middle (n = 24)	2 (8.3%)	22 (91.7%)			
		Lower-Middle (n = 171)	22 (12.9%)	149 (87.1%)			
		Upper-Lower (n = 179)	9 (5.0%)	170 (95.0%)			
		Lower (n = 22)	5 (22.8%)	17 (77.2%)			

Table 3. shows the association between socio demographic variables with the level of male involvement in antenatal care. The following criteria were considered to measure the level of involvement of male partner in antenatal and postnatal care: Accompanying the wife to the health care facility for health checkup, assisting wife in household chores, taking care of extra dietary needs of the partner, interaction with community health care provider at home and interaction with health care provider at healthcare facility. Every criterion was given a score of 1 and the scores were added. Score of 1 to 3 was considered as poor involvement while score of 4 and 5 considered as good involvement.

Out of 400 study subjects, 336(84%)who studied up to matric,27 (8.0%) showed good involvement, while poor involvement was seen in 309 (92.0%). In 64 (16%) subjects who were educated above matric, good

involvement was seen in 12 (18.8%).Involvement in antenatal care in joint family was better,7 (12.5%) as compared to nuclear family 32 (9.3%). According to the modified Kuppuswamy scale, males belonging to upper socio-economic class had good involvement,1 (25.0%)and poor involvement was seen in3 (75.0%). In lower socio-economic class, out of 22(5.5%), 5 (22.8%) showed good involvement while 17 (77.2%) showed poor involvement in antenatal care.

The association of male involvement in antenatal care with literacy status was found to be significant ( $\chi^2 = 7.01$ ,  $df = 1$ ,  $p$  value = 0.008). Association of male involvement in antenatal care and socio-economic status was also found to be statistically significant ( $\chi^2 = 11.74$ ,  $df = 4$ ,  $p$  value = 0.019) but association with type of family was found to be statistically insignificant.

**Table 4. Association between socio demographic variables and level of involvement of male partner in maternal health care during the postnatal period.**

S. No.	Socio Demographic Variables		Good Involvement n = 7	Poor Involvement n = 393	$\chi^2$	p-value	df
1	Literacy	Up to Matric n = 336	4 (1.1%)	332(98.9%)	3.82	0.05	1
		Above matric n = 64	3 (4.7%)	61 (95.3%)			
2	Type of family	Nuclear n = 344	5 (1.4%)	339 (98.6%)	1.25	0.26	1
		Joint n = 56	2 (3.6%)	54 (96.4%)			

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3	Socio economic status	Upper class n = 4	1 (25%)	3 (75%)	0.58*	0.007
		Upper-Middle n = 24	0 (0%)	24 (100%)		
		Lower-Middle n = 171	4 (2.3%)	167 (97.7%)		
		Upper-Lower n = 179	2 (1.1%)	177 (98.9%)		
		Lower n = 22	0 (0%)	22 (100%)		

\*Fisher Exact Test

**Table 5. Association of level of male involvement in maternal care with maternal period.**

Maternal period	Good involvement	Poor involvement	$\chi^2$	p - value	df
Antenatal period	39 (9.75%)	361 (90.25%)	23.61	< 0.001	1
Postnatal period	7 (1.75%)	393 (98.25%)			

Table 4. shows the association between socio demographic variables with the level of male involvement in postnatal care. Out of 400 study subjects, 336(84%) who studied up to matric, 4 (1.1%) showed good involvement. Out of 64 (16%) who studied above matric, good involvement was seen in 3 (4.7%). Good involvement 2(3.6%) was seen in joint family as compared to nuclear family 5 (1.4%). According to the Modified Kuppuswamy Scale, male belonging to upper socio-economic class, 1 (25.0%) had good involvement and 3 (75.0%) had poor involvement. Out of the 22 (5.5%) study subjects belonging to lower socio-economic class, none of them showed good involvement.

The association of level of male involvement in postnatal care with socio-economic status was found to be statistically significant (fisher exact = 0.58 p value = 0.007). While the literacy status and type of family were not significantly associated.

Table 5. shows that good involvement was shown by 39 (9.75%) of male partners in antenatal period and by 7 (1.75%) in postnatal period. The association between the maternal period and the level of male involvement in maternal care was found to be highly significant ( $\chi^2 = 23.61$ , df = 1, p value = 0.001).

## Discussion

Among 400 study subjects, 261(65.3%) belonged to the age group of 31-40 years. Mean age of the study subjects is  $31.6 \pm 3.6$  years. Similar age group of the participants was seen in the study conducted in rural India of Chhattisgarh.<sup>7</sup> In the present study out of 400 study subjects, the majority 387(96.8%) were Sikh by religion, 238(59%) belonged to scheduled caste. This is in consonance with the data from NFHS- 5 that states that 44% to 50% of the household in Punjab belongs to scheduled caste/scheduled tribes/other backward classes.<sup>8</sup> The present study shows that majority 363(90.7%) of male subjects were educated till higher secondary and 19 (4.7%) were graduates. NFHS-5 report indicates that a significant proportion of Indian males have completed higher secondary education, with a smaller percentage achieving graduate-level education. In the present study, 334 (83.5%) males were self-employed. Similar findings were reported by the Periodic Labour Force Survey (2020-2021), revealing that a substantial portion of the male workforce in India is self-employed, particularly in rural areas.<sup>9</sup>

**The present study shows that during the antenatal period, out of the 400 study subjects, 330 (82.5%) accompanied their wives to the healthcare facility for health check-up. The**

results were similar to the study done by Paul and Pandey, which showed that in Punjab 89.7% men accompanied their wives to health care facility.<sup>10</sup> The male who accompanied their wives to healthcare facility during antenatal period were more (82.5%), as compared to study done in Uganda and Nigeria, which reported that 65.4% and 63.0% males respectively, accompanied their partners to antenatal clinic.<sup>11,12</sup> During the postnatal period, in the present study 55.2% of males accompanied their partner to the healthcare facility as compared to 68% in a study done in Karnataka.<sup>13</sup>

**Association of male involvement in antenatal care with literacy (p= 0.008) and socio-economic status (p=0.019) was found to be significant in present study.** Study done by Paul and Pandey showed that the household wealth index was positively associated with male involvement in antenatal care.<sup>10</sup> Study in Kenya established that male partners level of education has significant effect (p = 0.00) on male partner involvement in antenatal care.<sup>14</sup>

**In the present study, socioeconomic status is significantly associated with male partner involvement in postnatal care (fisher exact = 0.58 and p=0.007)** this is in contrast with the study done in Ethiopia.<sup>15</sup> Literacy status was not associated with the level of male involvement in postnatal care in the present study. Similar association between male involvement in postnatal care and literacy status was seen in the study done in Nepal.<sup>16</sup> However, in contrast with the study done in Northern Ethiopia which found that level of male involvement increases with education status.<sup>15</sup>

The present study indicates 39 (9.75%) males had good involvement in antenatal period. Similar finding was reported in study done in Kenya where 34.1% male involvement was found in antenatal care.<sup>17</sup> During the postnatal period, the present study indicates that male partner involvement was 7 (1.75%), which is notably lower compared to a study conducted in Ethiopia, where male involvement during the postnatal period was reported at 23.7%.<sup>15</sup> **The association between the maternal period and the level of male involvement in maternal care was found to be highly significant (p value = 0.001) in the present study.**

## Conclusion

The study was done on 400 male participants. Mean age of the study subjects was  $31.6 \pm 3.6$  years. Out of 400 study subjects, majority 387 (96.8%) were Sikh by religion. According to Modified Kuppaswamy Scale maximum study subjects 179 (44.8%) belonged to upper lower socio-economic class followed by 171 (42.8%) lower middle class. 344 (86.0%) belonged to nuclear family. Majority 363 (90.7%) of male subjects were educated till higher secondary. 330 (82.5%) and 221 (55.2%) accompanied their wives to the healthcare facility for health check-up during antenatal and postnatal period respectively. **The association of male involvement in antenatal care with literacy status (p value = 0.008) and socio-economic status was found to be statistically significant (p value = 0.019). Highly significant association was seen between male partner involvement in postnatal care and socio-economic status (p value = 0.007).** The association between the maternal period and the level of male involvement in maternal care was found to be highly significant (p value = 0.001).

Future research should integrate qualitative methods to better understand the cultural, social, and psychological factors that hinder male participation in maternal healthcare, especially during the postnatal phase. Additionally, comparative studies across various districts or states in India could uncover region-specific influences and highlight effective approaches that encourage male involvement in maternal health.

**Limitations:** The study relied on self-reported data from male partners, where participants might have overstated their involvement to appear more supportive or engaged.

**Conflict of Interest:** There are no conflicts of interest

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