

## Birth Places in Context of Husband's Education and Economic Status in a Remote Rural Region- an Observational Study

Shakuntala Chhabra<sup>1\*</sup>, Kumar N

<sup>1</sup>Senior Consultant, Obstetrics Gynaecology. Shri Vile Parle Kelavani Mandal's

<sup>2</sup> Additional Professor, Obstetrics Gynaecology

**\*Corresponding author:** Shakuntala Chhabra, Senior Consultant, Obstetrics Gynaecology. Shri Vile Parle Kelavani Mandal's.

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### Abstract

**Background:** In many parts of world, men play pivotal role in maternity care decisions, including antenatal care, its place, birth place. Objective Present study was conducted to know impact of men's education, economic status on choice of birth place in a remote rural region. Methodology: Present community based, cross sectional observational study included 4500 randomly selected tribal women between  $\geq 15$  to  $\leq 49$  years, who resided in 140 villages and consented to participate. Face-to-face interviews of participants were conducted for 15-30 minutes using semi-structured questionnaire as per objectives.

**Results:** Of 4500 women interviewed, husbands of many (46.7%) were educated up to secondary/higher secondary level, many belonged to low economic class (31.3%). Of all participants interviewed, 36.1% had home births conducted by traditional birth attendants (TBAs) or family members (FM) or quacks, 5.4% at sub centres /primary health centres, 23.0% at sub district hospital /district hospital, 5.6% at private health facilities. Husband's education and economic status had more impact on place as well as mode of birth at referral. It was observed that women whose husbands had low education and low middle or low economic class had more often last child birth at home, assisted by TBAs/FM/quacks. And in women whose husbands had higher education and better economic status had health facility births. Conclusion: Study revealed that husband's education and economic status had a lot of impact on place of birth, with lower-status more home births and those with better economic status, and education, more had health facilities births. Basic education of men seemed very important for appropriate for place of childbirth.

**Keywords:** Maternity care; Education; Economic status, Husband. Place of birth.

### Background

World Health Organization (WHO) opined that men often played significant role in reproductive health decisions and impact critical area of reproductive health, maternity care [1]. A quasi study about effect of husband's education in childbirth support on women's self-efficacy and labour outcomes revealed that husband's education in childbirth support increased the mother's childbirth self-efficacy and birth outcomes [2]. If husband is basically educated to get educated about child birth, it becomes easier. A cross-sectional study in Netherlands [3]. To identify the preferences of pregnant women for place of birth and the factors that influenced the preference, revealed obvious relationship between women with middle and high educational level with regard to the level of importance of place of birth. However, there is lack of information regarding tribal men's involvement, particularly in getting involved supporting women's maternity,

place of birth inclusive.

### Objectives

A community-based study was conducted to know the impact of tribal men's education and economic status on birth places.

### Material and methods

**Study design:** Observational, cross-sectional study

**Study setting and duration:** The study was conducted over two years in 140 tribal villages in a remote, forestry, and hilly region. These villages were around the village with the health facility, the study centre.

**Inclusion criteria:** Randomly 30-35 women, between  $\geq 15$ - $\leq 49$

years of age from each village and willing to undergo a personal interview were enrolled as study participants, some villages were small and others larger.

**Exclusion criteria:** Women less than 15 years or more than 49, unmarried, and those with mental health disorders, and unwilling to participate were excluded from the study.

**Sample size:** The rounded calculated sample size was 4500 with 95% confidence and 2% absolute precision. The sample size was calculated using a free online statistical calculator (statulator) [4].

## Data Collection

After the institutional ethical committee's approval and informed consent from the participants, socio-demographic features of all the participants including age, education, occupation, economic status, and parity were collected by a research assistant (trained nurse midwife) and were recorded on a pre-designed tool, a semi-structured questionnaire with open and close-ended questions. In-depth face-to-face interviews of the study subjects were conducted regarding mode and place of last childbirth in context of education and socio-economic status, especially of husbands. Each interview lasted for around 15 minutes, maintaining confidentiality and privacy in an area convenient to participants and the research assistant who recorded information on the hard tool.

## Results

Of all the 4500 women interviewed, husbands of the majority (46.7%) were educated up to secondary or higher secondary level and belonged to a lower economic class (31.3%). Of these 4500 women, 1624 (36.1%) had home births conducted by traditional birth attendants (TBAs) or (FMs) or quacks, 1593 (35.4%) at Sub centres (SC), Primary health centres (PHC), 1033 (23.0%) at Sub district hospital (SDH)/District hospital (DH). The remaining 250 (5.6%) women had last child births at private health facilities. Mostly those with problems had births at SDH and DH, because of better facilities and because caesarean section (CS) facilities were only at SDH/DH and private health facilities. So quite a few women who had births at these places had caesarean births as shown in table I. Table I depicts the relationship between education and the economic status of husband and birth details. The study revealed that men with less education and those from lower-middle or lower economic backgrounds had more often their last child's birth at home, often assisted by TBAs or FMs or quacks. And in cases, husbands had higher education and better economic status mostly had births at health facility such as PHC, SDH, DH, or private hospitals. There was very highly significant impact of economic status in numbers of home births ( $P < .001$ ) and births at private health facilities ( $P < .001$ ) with significant difference with education too ( $P < .05$ ), not much difference with education with numbers at SDH or DH.

The study also tried to study relationship with the economic and educational characteristics of women themselves. Many

women were between 20 and 29 years old (49.5%), had completed secondary or higher secondary education (46.7%), were employed as casual labourers (55.5%), and their first pregnancy (31.4%). Significantly more women had first child birth at SDH or DH ( $P < .05$ ). There was not much difference in CS rates with age and education, but significantly more women ( $P < .05$ ) women with 5 or more births had CS and significantly less women who worked as agriculture labourer had CS ( $P < .05$ ).

At referral hospitals where C S facilities were available and mostly women with problems went or were referred, vaginal births were more common among women aged 20 to 29 years (71.1%), those with secondary or higher secondary education (73.5%), agricultural labourers (89.1%), and those with one or two previous births (83.9%). CS rates were higher among graduates (48.4%), working women (50.9%), and those with a history of five or more births (60.9%). Additionally, the study revealed that older women (40 to 49 years), illiterate agricultural labourers, and prim gravidas had home births by TBAs or FMs or Quacks compared to younger (20 to 29 years) and middle-aged women (30 to 39 years) with higher education levels, as shown in table II. (Table II).

## Discussion

Many women in low-income countries view inadequate knowledge, along with a lack of male involvement as key factors hindering access to essential healthcare services. A study about the role of husbands in maternal health and safe childbirth in rural Nepal revealed that, although complex, expectant fathers did have an important role in maternal health and safe childbirth. Male involvement needed to be recognized and addressed in health education due to the potential benefits brought to both maternal and child health outcomes [5]. For this it is essential that husbands are basically educated. It has been opined that husbands accompanying women when receiving health services is positively correlated with women's use of skilled maternal neonatal health (MNH) services. Special initiatives should be taken for encouraging husbands to accompany their wives while availing MN services. These initiatives should aim to increase men's awareness regarding MN issues, but should not be limited to this [6]. And it has also been opined that there is a need to educate the husband regarding the importance of husband's involvement during delivery. Programs should also include men as the stakeholders for accountability and better MCH care for women [7].

The present study conducted to know about impact of education and economic status especially of husbands on place of their last child birth revealed that in women whose husbands were illiterate and belonged to lower-middle or lower economic classes had more often home births assisted by TBAs or FMs or quacks. Men with higher education and from upper economic classes had their wives deliver at PHC, SDH, DH, or private health facilities more often. In the present study there was significant impact of husband economic status and education,

economic status had highly significant difference in place of birth. However, education had hardly any impact on SDH or DH births, may be because of referral. The impact was more correlated to husband's education than wives.

A study conducted in Ethiopia revealed that many husbands (62.5%) accompanied their wives to maternity visits. The husband's age and educational status were significantly associated with their involvement in support [8]. Similarly, research from Ghana revealed that respondents with partners aged 50–59 were less likely to report high male involvement in maternity compared to those with partners aged 20–29. Additionally, men who lived with their partners were nearly twice as likely to be actively involved in maternity compared to those who did not cohabit with their partners [9]. In Asmara, Eritrea, another study revealed that husband's education, religious affiliation, and overall knowledge played a critical role in their participation in their wives' maternity care [10].

A recent study from North West Ethiopia revealed that male involvement in maternal care was relatively low, with only 46.8% of men participating. Main factors which influenced involvement included men's attitude towards maternal care, the absence of invitations for men to join their partners in the examination rooms, the couple's living arrangements, and the educational level of the men [11]. A study from Tanzania revealed several key barriers to male involvement in their wives' maternal care services [12].

A study conducted in Southern Ethiopia revealed that male

involvement in their wives' maternity care was higher among men aged 20–29 years. Greater participation was also associated with exposure to information on male involvement, higher education levels, employment in the government sector, and awareness of maternity danger signs [13]. Other studies have similarly revealed that increasing awareness among male partners about their shared responsibilities in maternity can significantly encourage their involvement in their wives' maternity care. To promote this engagement, policymakers and healthcare planners should develop targeted programs and strategies that actively support male participation in maternal healthcare services. [14,15,16].

## Conclusion

Present study revealed that husband education, economic status had real impact on the place of child birth. Women whose husbands had lower education and low economic status had more often home births, economic status impacting more, while those with higher education and better financial standing had child births health facilities such as PHC, SDH, DH, or private hospitals but not much difference in SDH or DH births. The findings underscore the need for a holistic approach to male involvement in maternity care, recognizing men as key stakeholders within their families and communities. Effective male participation in the maternal healthcare depends on their education, economic status also. Targeted programs and policies that address these aspects can foster supportive environments, ultimately improving maternal and child health outcomes.

**Table I:** Husband's Education, Economic Status and Place and Mode of Last Childbirth

Variables	Total	Place of Last Child Birth and Mode								
		SDH/DH	%	Private	%	CS at SDH/DH/P%	Home	%	SC/PHC	%
<b>H u s b a n d Education</b>										
<b>Illiterate</b>	964	196	20.3	49	5.1	28.3	429	44.5	290	30.1
<b>Primary/</b>	1340	253	18.9	57	4.3	33.7	576	43.0	454	33.9
<b>Secondary/ H i g h e r Secondary</b>	2103	561	26.7	102	4.9	29.3	609	29.0	831	39.5
<b>Graduate</b>	93	23	24.7	42	45.2	60.2	10	10.8	18	19.4
<b>Total</b>	<b>4500</b>	<b>1033</b>	<b>23.0</b>	<b>250</b>	<b>5.6</b>	<b>31.0</b>	<b>1624</b>	<b>36.1</b>	<b>1593</b>	<b>35.4</b>
<b>Economic Status</b>										

Upper Class	165	79	47.9	80	48.5	59.4	1	0.6	5	3.0	
Upper Middle Class	510	400	78.4	80	15.7	39.8	5	1.0	25	4.9	
Middle Class	1060	245	23.1	75	7.1	25.6	390	36.8	350	33.0	
Lower Middle Class	1355	250	18.5	10	0.7	32.7	735	54.2	360	26.6	
Lower Class	1410	59	4.2	5	0.4	27.0	493	35.0	853	60.5	
Total	4500	1033	23.0	250	5	.6	31.0	1624	36.1	1593	35.4

CS – Caesarian section

P- Private Health facility

SC- Sub Centre

PHC- Primary Health Care

DH- District Hospital

SDH- Sub District Hospital

**Table II:** Socio-demographic Factors of Women and Place and Mode of Last Childbirth

Variables	Total	Place and Mode of Last Child Birth								
		SDH/DH	%	Private	%	CS at SDH/ DH/P%	Home	%	SC/PHC	%
<b>Wife</b>										
≥20-≤29	2230	749	33.6	174	7.8	28.9	630	28.3	677	30.4
≥30-≤39	1574	204	13.0	64	4.1	32.3	489	31.1	817	51.9
≥40-≤49	696	80	11.5	12	1.7	34.8	505	72.5	99	14.2
<b>TOTAL</b>	<b>4500</b>	<b>1033</b>	<b>23.0</b>	<b>250</b>	<b>5.6</b>	<b>31.0</b>	<b>1624</b>	<b>36.1</b>	<b>1593</b>	<b>35.4</b>
EDUCATION										
<b>Illiterate</b>	964	125	13.0	83	8.6	33.7	502	52.1	254	26.3
<b>&lt; +Primary</b>	1340	357	26.6	61	4.5	35.0	406	30.3	516	38.5
<b>&gt;primary, Secondary/ H i g h e r Secondary</b>	2103	522	24.8	92	4.4	26.5	698	33.2	791	37.6
<b>&lt;+Graduate</b>	93	29	31.2	14	15.1	48.4	18	19.4	32	34.4
<b>Total</b>	<b>4500</b>	<b>1033</b>	<b>23.0</b>	<b>250</b>	<b>5.6</b>	<b>31.0</b>	<b>1624</b>	<b>36.1</b>	<b>1593</b>	<b>35.4</b>

PROFESSION										
Home Maker	502	124	24.7	94	18.7	17.7	169	33.7	115	22.9
Agriculture Laborer	1443	352	24.4	82	5.7	10.9	543	37.6	466	32.3
C a s u a l Laborer	2498	545	21.8	60	2.4	44.8	893	35.7	1000	40.0
Shop keeper	57	12	21.1	14	24.6	50.9	19	33.3	12	21.1
<b>TOTAL</b>	<b>4500</b>	<b>1033</b>	<b>23.0</b>	<b>250</b>	<b>5.6</b>	<b>31.0</b>	<b>1624</b>	<b>36.1</b>	<b>1593</b>	<b>35.4</b>
PARITY										
P <sub>0</sub>	1412	471	33.3	63	4.5	20.5	553	39.2	325	23.0
P <sub>1-2</sub>	1219	225	18.5	86	7.1	16.1	462	37.9	446	36.6
P <sub>3</sub>	1321	189	14.3	90	6.8	43.6	423	32.0	619	46.9
≥P <sub>5</sub>	548	148	27.0	11	2.0	60.9	186	33.9	203	37.0
<b>TOTAL</b>	<b>4500</b>	<b>1033</b>	<b>23.0</b>	<b>250</b>	<b>5.6</b>	<b>31.0</b>	<b>1624</b>	<b>36.1</b>	<b>1593</b>	<b>35.4</b>

CS – Caesarian section      P- Private Health facility  
SDH- Sub district hospital      SC- Sub Centre  
DH District Hospital      PHC- Primary Health Care

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