

# FACTORS INFLUENCING FAMILY PLANNING METHOD AND EFFECTS ON MATERNAL HEALTH CARE OF TRIBAL WOMEN IN THENI DISTRICT, TAMIL NADU

<sup>1</sup>Dr. S. KARTHIKEYAN, <sup>2</sup>Dr. S. SENTHILKUMAR

<sup>1</sup>Assistant Professor, Department of Economics and Centre for Research in Economics, The Madura College (Autonomous), Madurai

<sup>2</sup>Assistant Professor and Head, Department of Economics, Cardamom Planters' Association College, Bodinayakanur

---

**Abstract:** Maternal Health (MH) administrations give a priceless chance to advise and instruct ladies about Family Planning (FP). It is normal that this would empower ladies to pick a proper strategy and start contraception from the get-go in the post pregnancy period. In this investigation we analyzed communications with wellbeing suppliers for Maternal Health administrations, and the impact of Family Planning data arrangement during the study. This paper focuses for the factors motivating family planning adoption of tribal women and the effect of family planning on maternal health care Theni District of Tamil Nadu.

**Keywords:** India, Family Planning Service Provision, Maternal Health Services, Tribal Women.

---

## 1. INTRODUCTION

The basis for knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of the country. More than 100 million women in developing countries or about 17 per cent of all married women would prefer to avoid a pregnancy but are not using any form of family planning. The results find that the use of modern family planning methods reduces the portability of death related to maternal causes and increase the likelihood of tribal women experiencing positive maternal health levels. The result also highlights the importance of tribal women experiencing positive maternal health levels. The result also highlights the importance of a number of indeterminate factors of maternal health and maternal mortality, including educational attainment, age, and number of childless, access to health care facilities and access to safe drinking water supplies.

## OBJECTIVES OF THE STUDY

There are two objectives framed for the present study, they are:

1. To discuss the attitude of tribal women in the reproductive age group towards their health care before, during and pregnancy in Theni district.
2. To analyze the factors influencing family planning method and effect on maternal health care in the study area.

## HYPOTHESES

In addition to the above objectives, two hypotheses also framed to strengthen the present study, they are:

1. The increase usage of family planning, including community health care programs, modern methods or contraceptive commodities, is associate with an increase in maternal health.
2. The increase of knowledge to family planning, which includes education of modern methods, contraceptive commodities and health service programs, is associated with an increased in maternal health

### THE ANALYTICAL FRAMEWORK

The study is based on primary and secondary data where used. For the research analysis, this study used midline information collected from 65 tribal women from the sample study area who had conveyed a live birth between January 2019 and the date of the midline review in 2020. These women were posed a progression of inquiries about their last conveyance, incorporating connections with health care advisors during pregnancy, conveyance and the post pregnancy time frame, in the event that they got Family Planning data during these communications. A log- linear regression model has been used for analyzing the maternal health as dependent variable. The model takes into account the effect on modern family planning knowledge and use of modern family planning practices in order to assess the impact of family planning programmes.

### APPROACHES USED TO MEASURE MATERNAL HEALTH

$$\begin{aligned} \text{Maternal Health} &= \text{Family planning Knowledge and Family planning} \\ \text{Health} &= \text{Family planning Knowledge} + \text{Family planning Use} + \\ &\quad \text{Ever Married} + \text{Age} + \text{Education} + \text{Working} + \text{Rural} + \\ &\quad \text{Number of Children} + \text{Wantedness of pregnancy} + \\ &\quad \text{Locality of Health Facility} + \text{Health of Individual} + \\ &\quad \text{Age of First Sexual Experience} + \text{Access to Safe Water.} \end{aligned}$$

### Variable in Mode, Definitions and Predicated Relationships

	Variable Name	Definition	Predicted Relationship
Y <sub>2</sub>	Maternal Health	Dependent Variable Maternal Health* -Indicator Variable of mother's hemoglobin level. 0=Inappropriate levels (<110 and >115); 1=Appropriate levels (≥110 or ≤115)*	
X <sub>1</sub>	Family Planning Knowledge (FP knowledge)	Respondents had knowledge of modern contraceptive methods where 1=Yes, 0=No.	Positive
X <sub>2</sub>	Family Planning Use (FPU)	Respondents was using a modern contraceptive method where 1=Yes, 0=No.	Positive
X <sub>3</sub>	Marriage (ever married)	Marital Status of Respondents where 1=Ever Married, 0=Never Married	Positive
X <sub>4</sub>	Age (age)	Age of Respondents in years, continuous.	Positive
X <sub>5</sub>	Education Level (noeduc, primaryeduc, secondaryeduc, highereduc)	Dummy Variables for Highest level of Education Attainment where Primary=at least Primary Level, Secondary=at least Secondary level, Higher= Higher educational attainment.	Positive
X <sub>6</sub>	Employment (working)	Occupation status where 1=Working, 0=Not Working	Positive
X <sub>7</sub>	Residence (rural)	Residence Location where 1=Rural, 0= Urban	Negative
X <sub>8</sub>	Number of Children (b parity)	Number of Children of Respondent, continuous.	Negative
X <sub>9</sub>	Antenatal visits (antevisits)	Antenatal Visit Status, number of visits during last pregnancy, continuous.	Positive
X <sub>10</sub>	Wantedness of Pregnancy (wantedpreg)	Wantedness of Pregnancy where 1=Wanted last Pregnancy during Pregnancy, 0=Unwanted Pregnancy during Pregnancy.	Positive
X <sub>11</sub>	Locality of Health Facility (far health facility)	Distance to Health Facility where 1=Far Distance to Health Facility, 0=Proximity to Health Facility.	Negative
X <sub>12</sub>	Health of Respondent (BMI)	Health Status of Respondent. Continuous variable of Body Mass index level of respondent.	Positive
X <sub>13</sub>	Age of First Sexual Experience (firstsexage)	Age of Respondent in Years at First Sexual Experience.	Positive
X <sub>14</sub>	Access to Safe Water (safewater source)	Access of Safe Water Supply where 1=Access to safe water sources, 0=Access to unsafe water sources	Positive

## 2. RESULTS AND DISCUSSION

### Maternal Care

#### Antenatal Care

A study area antenatal care pertains to immunization, medical checkups and intake of medicines and tonics. This is because lack of cooperation for medical checkups despite the availability of services in the study area because of the ignorance and shyness of pregnant women which is supported by their husbands and other elders. The vitamin tablets and tonics when provided are thrown away after the health workers leave place or kept unused because the respondents feel that these are not much necessary for them.

#### a. Immunization

The details of immunization and awareness among tribal women are given in the Table 1.

**TABLE 1: DETAILS ON IMMUNIZATION AND AWARENESS**

Particulars	Easy Access (N = 15)	Moderate Access (N = 19)	Remote Access (N = 31)	Grand Mean N = 65
1) Imm. Awareness(mothers)	60.00 (9)	73.68 (14)	67.74 (21)	66.15 (43)
2) Awareness through				
i) NGOs	44.45 (4)	35.71 (5)	38.09 (8)	37.21 (16)
ii) Government	22.22 (2)	28.57 (4)	23.82 (5)	25.58 (11)
iii) Husband	11.11 (1)	21.43 (3)	4.76 (1)	11.63 (5)
iv) Neighbour	22.22 (2)	14.29 (2)	33.33 (7)	25.58 (11)
3) Immunized mothers				
i) partial	66.67 (8)	64.29 (9)	58.82 (10)	60.98 (25)
ii) not immunized	33.33 (3)	35.71 (5)	41.18 (7)	39.02 (16)
4) Children<6 yrs				
i) partial	66.67(6)	25.00 (1)	75.00 (9)	71.87 (23)
ii) not immunized	33.33 (3)	75.00 (3)	25.00 (10)	28.13 (9)

\*Figures within brackets indicate number of respondents

According to the details given the Table 1, among the 65 mothers, 66.15 (43) are aware of immunization. In the easy access 60.00 per cent of the mothers are aware of Immunization, and it is 73.68 per cent moderate access. In the remote access it is 67.74 per cent. Due to frequent visits of the health personnel (Table 1) and their interaction with the womenfolk, mothers in the moderate and remote access are aware of immunization programs but in the easy access, health personnel do not visit, which lead to lack of awareness. Awareness about immunization through Non – Government Organization (NGOs) were, 37.21 per cent (16) among respondents 25.58 per cent (11) by the government sources. 11.63 per cent (5) of mothers had awareness through their husbands and remaining 25.58 per cent (11) of the mothers through their neighbours. From this it is obviously known that the NGOs play a major role in disseminating knowledge about immunization.

In this study area only 60.98 per cent (25) of mothers are immunized during gestating period. Even though 66.15 (43) of the women are aware of immunization, they had no idea about the booster doses necessary to complete the immunization schedule, Appallingly neither the health care delivery agencies nor the beneficiaries keep records of their immunization. The respondents also are not given any card to keep record of the immunization schedules they had. Hence it is not possible to find out from the mothers or from the agencies whether they had been immunized along with required booster doses. Thus it could not be confirmed among the vaccinated, 60.98 per cent of the mothers vaccinated mothers could not inform whether they had completed the schedules while the rest did not have any immunization at all. The local health workers in easy access also confirmed that respondents were at times repeatedly immunized for a given diseases but often with incomplete booster doses. This is due to lack of coordination between different agencies involved in the immunization program and ignorance of the respondents.

**b) Diet**

Diet details of Tribal pregnant women is given in the Table 2.

**TABLE 2: DAILY INTAKE OF FOOD STUFFS (GM) BY THE PREGNANT WOMEN**

Particulars	Easy Access (N = 15)	Moderate Access (N = 19)	Remote Access (N = 31)	Mean N = 65	Kcal/day
Rice	92	104	84	92	331.56
Pulse	4	5	3	3.34	12.51
Vegetable	3	4	2	2.85	0.63
Oil	1	7	1	0.32	2.91
Greens	8	9	10	9.31	6.54
Fruits	5	8	9	7.28	6.24
Total					356.39

Energy value calculated adopting values from “Nutritive value of Indian Foods” (National Institute of Nutrition ICMR, Hyderabad, India, 1991)

Pregnant tribal women do not take special diet. Their food like that of all the other members of the family comprises of rice, pulse, vegetable, oil, greens and fruits. Their average energy consumption works out to 356.39 kcal/day which is far below the recommended norm of 2225 kcal intake per day even for moderate female workers let alone an extra intake of 300 kcal/ day during pregnancy as advised by Indian Council for Medical Research.

Moreover, the tribal women do not drink milk because they do not like its flavor. During pregnancy they avoid eating pineapple and papaya fruits since these fruits are believed to induce abortion. Such food taboos are universal among pregnant women in all regions of India.

In moderate access, the intake of food stuffs is high because the of food items distributed through public distribution system ( PDS) during working day are procured by the missionary for distribution during holidays: but in people have to walk up to 1-18 km to purchase in Government ration ships.

Besides they have to go foregoing their daily wage during the working days. So they tend to purchase in the private shops at higher prices on Sundays.

**Postnatal Care**

**a) Child Birth**

Table 3 exhibits the practices during delivery of Tribal women in the study area.

**TABLE 3: PRACTICES DURING DELIVERY OF THE NUMBER OF RESPONDENTS IN THE STUDY AREA**

Particulars	Easy Access (N = 15)	Moderate Access (N = 19)	Remote Access (N = 31)	Grand Mean (N = 65)
1) Delivery done by TBAs	100.00(15)	100.00(19)	100.00(31)	100.00(65)
2) Device used to cut umbilical villages				
a) Shaving Blade	80.00 (12)	47.37(9)	00.00(00)	53.85(35)
b) Sickle	20.00(3)	15.79 (3)	100.00(31)	38.46 (25)
c) Blade provided by PHC	00.00(0)	36.84 (7)	00.00(00)	38.46 (5)

Figures within brackets indicate number of respondents

TBAs – Traditional Birth Attendants, PHC – Primary Health Care

In the study area, 100 percentage of the labour is carried out by dais (Traditional Birth Attendants (TBAs). The Tribal women do their routine works till the time of delivery. Indeed there were 09 deliveries which took place in the working spot (estates, farms) itself. After delivery they go to field within 17+ 5 days. In developing countries, less than 20 per cent

of deliveries are attended by trained personnel, many of whom are trained not as physicians and nurses but as birth attendants. At the time of delivery TBAs give the mothers a root to chew, which is said to facilitate easy delivery. The mothers also feel strongly that the soothing words of the TBAs render a psychological comfort which helps in easy delivery. They also feel at home in the presence of TBAs. TBAs do not maintain hygienic measures like washing hands with soap or sterilize vessels used during labour. TBAs cut the umbilical cord with shaving blade ( 53.85 per cent) sickle 38.46 per cent and 7.69 per cent used the blades provided by PHC through ANMs. Shaving blade is used widely in easy and moderate access areas. Besides if the new blade is not available, the old blade is used. In the III category villages, sickle is used. Moreover, antiseptic medicine is not applied after severing the umbilical cord.

The new born baby is bathed in warm water with toilet soap and turmeric powder. After two or three hours the infant is fed with sugar solution followed by colostrums. The practice of feeding colostrums is in vogue for the past 7 years, since NGOs and Government Health personnel convinced the mothers of the need to feed the infants. After delivery, mothers are fed with chicken soup once in 10 days to recover energy and health.

**TABLE 4: REASONS FOR THE CHILD DELIVERY AT HOME**

REASONS	PERCENTAGE
i. No complications	27.69 (18)
ii. Local dais are skilled	21.54 (14)
iii. Traditional System is better	12.31 (8)
iv. Less expensive	7.69 (5)
v. Afraid of hospital delivery	6.15 (4)
vi. Remote access to hospital	10.77 (7)
vii. Do not like hospital	13.85 (9)
Total	100.00(65)

Regarding the place of deliveries, 27.69 per cent of the mothers preferred home delivery because; they did not experience any complications at home, 21.54 per cent believe the their TBAs are skilled, 13.85 per cent of mothers do not like hospitals, 12.31 per cent believe in traditional system and believe that God blesses both mother and child if delivery is at home. 10.77 per cent, 7.69 per cent mothers feel delivery at home is less expensive, remote access to hospital and fear to deliver at hospitals respectively.

**b) Breast Feeding**

Table 5. exhibits the details about duration of breast feeding and reasons for weaning.

**TABLE 5: DETAILS ON DURATION OF BREAST FEEDING (PERCENTAGE) AND REASONS FOR WEANING IN 6 MONTHS**

Practices	Easy Access (N = 15)	Moderate Access (N = 19)	Remote Access (N = 31)	Mean (N = 65)
Duration Months 1 – 6	20.00% (3)	26.32% (5)	32.25% (10)	26.80% (18)
6 – 12	53.33% (8)	47.37% (9)	45.18% (14)	49.20% (31)
12 – 18	26.67% (4)	21.05% (4)	16.13% (5)	21.20% (13)
18 – 24	00.00% (0)	5.26% (1)	6.44% (2)	2.80% (3)

Figures within brackets indicate number of respondents.

In the study area among 65 mothers, 26.15 per cent (17) and 49.23 per cent (32) of mothers breast fed the children up to 6 months and one year respectively. 21.54 per cent (14) and 3.08 per cent (2) of mothers breast fed the children up to 12-28 and 18-24 months respectively. In easy access, 53.33 per cent of the mothers could feed their infants with breast milk till their 12 month. In the case of moderate access, 52.63 per cent of the mothers fed their children upto 12 months and only 5.26 per cent mothers fed their children up to 24 months, in the case of remote access, 45.16 per cent of mothers feed upto 12 months and also 6.45 per cent upto 24 months.

**EFFECTIVENESS OF FAMILY PLANNING METHOD ON MATERNAL HEALTH**

Further, an attempt has been made to test the following two hypotheses regarding access to information about modern family planning and use of modern family planning practices on maternal health. The estimated results of Logistical Regression model with Maternal Health as dependent variables for easy access are given in the Table 6.

**TABLE 6: ESTIMATED REGRESSION CO-EFFICIENT FOR A LOGISTICAL MODEL WITH MATERNAL HEALTH AS THE DEPENDENT EASY ACCESS**

Sl. No	Explanatory Variables	Easy Access	
		Estimates	t-value
1.	Constant	-0.693	
2.	Modern Family Planning (FP) use	1.693*	4.109
3.	Modern FP Knowledge	0.256*	3.036
4.	Ever Married	-0.309*	-5.118
5.	Age	-0.167*	-3.669
6.	Education – Primary	1.1411*	4.887
7.	Education – Secondary	0.068	0.389
8.	Education – Higher	-0.157	-0.112
9.	Working	0.242*	-5.678
10.	Rural Residue	0.093	0.919
11.	Number of Children	0.113*	3.589
12.	Antenatal Visits	-0.015	-0.066
13.	Wantedness of Pregnancy	0.265*	4.311
14.	Locality of Health facility	0.006	0.076
15.	Body Mass Index (BMI)	0.015*	3.186
16.	Age of First Sexual Experience	0.065*	4.0109
17.	Safe Drinking Water Source	0.709*	3.985
18.	Age Squared	0.011	0.074
19.	Number of Children after FP use	0.286*	-4.013
	Number of Observations	15	
	R <sup>2</sup>	0.76	
	F- test	27.34	

\*Indicates significance at 5 percent level.

The results from Table 6 in easy access area indicate that both proposed hypotheses (5 & 6) were significant and one hypothesis was supported. It can be seen from the table that a number of variables exhibit statistical significance regarding their effect on the level of maternal health of a tribal women of reproduction age. The use of modern family planning methods is significant, and positive, supporting the first hypothesis. The results suggested that women who utilize modern family planning methods are nearly 3 times more likely to experience appropriate hemoglobin levels on good maternal health, compared to women who do not employ modern family planning methods. As observed, the majority of women surveyed suffer from extremely low hemoglobin levels, indicating poor maternal health, become the desired range of 110 to 130. However, the knowledge of modern method is significant, but the results indicate a positive relationship between knowledge of modern family planning methods are approximately 0-70 times more likely to face outside the range appropriate maternal health levels, based on hemoglobin measures. Compared to women with no knowledge of modern family planning methods.

A number of other variables are significant and indicate a relationship to maternal health levels. The age variable suggests a negative relationship between ageing and maternal health. The variable measuring the number of children per women suggests a positive relationship between number of children and maternal health. The primary education, body mass index, age at first sexual experience, wantedness of pregnancy, and access to safe drinking water sources variables are all positively related to maternal health while the ever married and working variables are negatively related. The result suggest that women with educational attainment at least primary school are almost three times more likely to experience good maternal health compared to women without any educational attainment. The results also suggest that women with

access to safe drinking water sources are twice as likely to experience good levels of maternal health compared to women without access to safe drinking water sources. The results suggest that with an increase in body mass index, as a proxy for nutritional status of women, of one unit women are 1.02 times more likely to be associated with good maternal health levels.

### 3. CONCLUSION

The dominant factors which influence health and health care of tribal women are poor nutrition, lack of personal hygiene and sanitation, failure to complete treatment, distant location of settlement and health care delivery centers. Most of the tribal's villages do not have easy access the road, market place, working spots and health care delivery centers. Hence the Government or NGOs may take steps to link tribal villages with road, transport and communication facilities and may be provided at least twice in a day. Hence, the tribal women must be motivated and made aware of advantage of moderate method of family planning medicine and the need to complete a course of treatment.

### REFERENCES

- [1] Dhulasi Birundha Varadharajan and Chitra, M (1997), Infant Survival Rate in Tamil Nadu from 1970 – 71 to 1990 - 91, *Journal of Social Medicine*, Vol.I, Winter.
- [2] Dhulasi Birundha Varadharajan and Deivamani, K. (2000), Health Status in Tamil Nadu, *Indian Journal of Regional Science*. Vol.XXXII.
- [3] Indian Council for Medical Research (1991), “Nutritive Value of Indian Foods, National Institute of Nutrition, ICMR, Hyderabad.
- [4] Katona – APTE, J (1977), “The Socio-Cultural aspects of Food Avoidance in a low income population in Tamil Nadu, South India”, *Environmental Child Health*.
- [5] Marion Danis Elicitling (2007), Health Insurance Benefit Choices of Low Income Group, *Economic and Political Weekly*, Vol.XVII, No.32, August 11.
- [6] Panikar P.G.K. (1999), Health Transition in Kerala, Discussion paper No.10, Centre for Development Studies, Trivananthapuram.
- [7] Sharkant V. Khandewale (1996), Health Administration and Weaker Sections in an Indian Metropolis, Devika Publications, Delhi.
- [8] Sri Ranga Rao. G. (1999), Inter–District variation in Health Facilities in Andhra pradesh, *Southern Economist*, January 1.
- [9] Stanly Chazhoor (2007), Consumer Right to Health Care - A View, *Southern Economist*, June 15.