DIFERENTIAL UTILIZATION IN REPRODUCTIVE HEALTH CARE: NORTHERN VERSUS SOUTHERN INDIA

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1.1 Introduction:

The ground for taking up this study is based on immense literatures that has proven early marriages have adverse effect on fertility and reproductive health. Since low age at marriages widen the fertility window, the usual outcome is high fertility along with high child loss (Acharya 2007, Dommaraju 2009). In the same lines other studies have shown with increase at age at marriage combined with other factors (awareness, education, etc.) initiates the practice of limiting fertility. Peculiarly, in the Indian case, there remains a vast diversity in terms of marriage practices, fertility behaviour and reproductive health with major differences between the northern and southern states (Dyson 2012). Studies show that low age at marriage and high fertility is a major practice in the northern states (Uttar Pradesh, Bihar, Rajasthan, Jharkhand, Madhya Pradesh, etc.), but high age at marriage and low fertility dominates in the southern states (Kerala, Tamil Nadu. To be noted: southern states of Andhra Pradesh and Karnataka exhibit low age at marriage but still shows low fertility outcome) (Agadjanian and Dommaraju 2009). Clearly, fertility behaviour dominates the concern in the Indian scenario with more than a billion population, little studies has been done on the reproductive health care practices as a dependent outcome of marriage and fertility behaviour.

1.2 Objectives, Variables, Data-source, Methodology:

The prime objective of the study is to identify factors that lead to differential utilisation of reproductive health care facilities by married mothers (since marriage is universal in India and the only pathway to fertility) and make a comparison between northern and southern states.
Since this study will analyse the reproductive health care behaviour of mothers with respect to birth, the dependent variables chosen for the study are **antenatal visits during pregnancy, baby's postnatal check** within two months of delivery and **place of delivery**. Antenatal visits during pregnancy and postnatal check after delivery is most vital for the health of mother and child, higher the visits better the surveillance. Place of delivery is best if done at a hospital (government or private) while deliveries at home has the worst health outcomes, sometimes even leading to death.

Dependent Variables	Questionnaire
Antenatal Visits During Pregnancy	During your pregnancy did you take any antenatal care ?
Place Of Delivery	Where was the place of your Delivery ?
Postnatal Check After Pregnancy	During the last 2 months after your Delivery did you take any postnatal care ?

The independent variables have been chosen based on evidential facts proving some significance in affecting reproductive health practices among women. Basic background characteristics like urban living, high educational level, and high standard of living are known to influence fertility behaviour among women in the positive way (Kulkarni 2002). Some literatures have shown that household characteristics like number of household members, sex and age of the household head, tend to influence women's health care practices through communication, combined decision making, living together, etc. (Jejeebhoy 2005, Santhya et all 2005) Early marriage, high fertility, lack of contraceptive usage clearly lead to adverse reproductive health care practices (Dommaraju 2005). Occupational and autonomy characteristics like working outside, work for pay, financial, mobility and decision making autonomy leads to timely and favourable reproductive health care practices through diffusion of ideas, awareness, etc. (Ram 2004, Jejeebhoy 1998).

Explanatory Variables chosen for the study		
Basic Background Characteristics (Model 1)	Type of place of residence	Urban / Rural
	Highest educational level	No education / Primary / Secondary / Higher
	Wealth index	Poor / Poorer / Middle / Richer / Richest
	Religion	Hindu / Muslim / Christian / Others
Household Characteristics (Model 2)	Sex of household head	Male / Female
	No. of household members	less than 3 / 4 to 8 / above 8
	Age of household head	less than 40 / 40 to 60 / above 60
Marriage and Fertility Characteristics (Model 3)	Age at marriage	Less than 18 / 1 to 29 / 30 and above
	Age at first birth	Less than 20 / 20 to 29 / 30 and above
	Children ever born	3 and less / 4 to 6 / above 6
	Contraceptive usage	No method / Traditional / Modern
Occupational Characteristics (Model 4)	Occupation	not working / Government or Private / Agricultural / Manual
	Works for	For family member / Someone else / Self employed
	Work place	At home / Away
	Employment duration	All year / Seasonal / Occasional
	Mode of payment	Not paid / Cash only / Cash and kind / Kind only
Autonomy and Awareness Characteristics (Model 5)	Media exposure	Not exposed / Exposed
	Mobility	Not allowed / Allowed
	Decision making	No / Yes
States (Model 6)	States	Uttar Pradesh / Bihar

Data for the study is taken from the NFHS (National Family Health Survey) which is the DHS (Demographic Health Survey) for India. The NFHS is a large-scale, cross-sectional, multi-round survey which provides information on marriage, fertility, health, nutrition, etc. The study will thus use data from the third round (2005-06) of the survey which covers as large as 2,30,000 women, aged 13-49 years.

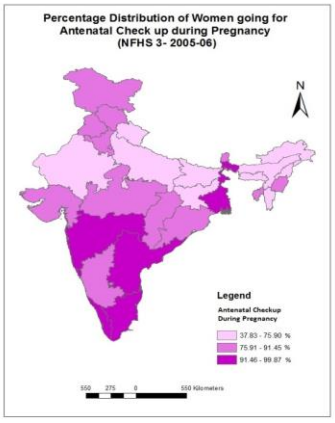
Simple frequency distribution through maps and tables along with bivariate analyses with Chi Square tests have been done to study spatial patterns and background characteristics. To study the socio-economic determinants of the reproductive health care indicators a model has been made using binary logistic regression for each dependent variable. This model runs regression for each dependent variable with different set of blocks or groups of background variables added each time to it. This model firstly has been used to run the regression on the set of "*basic individual characteristics*" which includes place of residence, level of education, wealth index and religion. The second regression is computed on the first set including "*household characteristics*" which comprises of the sex of household head, number of household members and age of household head. The third regression is computed on the second set including "*marriage and fertility characteristics"* which comprises of age at marriage, age at first birth, children ever born and contraceptive usage. The fourth regression is computed on the third set including "*occupational characteristics*" which comprises of occupation type, working for, work place, work period and mode of payment. The fifth regression is computed on the fourth set including "*autonomy and awareness characteristics*" which comprises of media exposure, mobility autonomy and decision making autonomy. The sixth or the final regression is computed on the fifth set including "*states*".

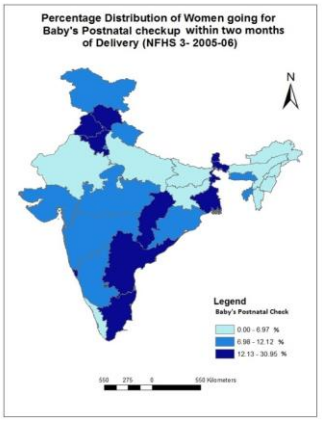
The rationale for adapting this methodology was to capture the change in the influence of independent variables on the dependent variables when a set of special characteristics are added to the regression each time. Also this model helps to understand the importance and usage of each reproductive health care separately.

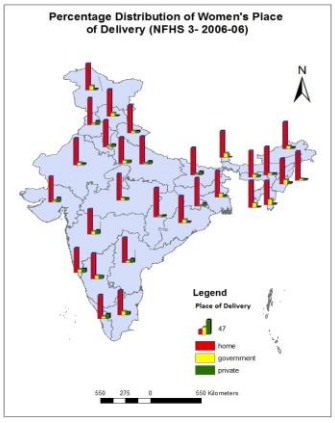
1.3 Results and Discussion:

1.3.1 Spatial Trend in the country:

Women in Bihar and Uttar Pradesh practice the least antenatal care visits during pregnancy in the country while Andhra Pradesh and Karnataka fall in the category of states with high antenatal visits in the country. Almost all the states have shown least practice of baby's postnatal check within two months of delivery, out of which Andhra Pradesh and Karnataka fall among the high practiced ones. However, all states in India show majority of the deliveries at home.







Source: Computed from NFHS 3 (2005-06)

1.3.2 Bivariate Analysis with Chi Square tests:

Most of the background characteristics in all the states have significant influence in deciding the place of delivery even though majority of the deliveries take place at home. In terms of post-natal check-ups, most women avoid it irrespective of any background characteristic. However, significant proportion of women goes for antenatal check up's during pregnancy across all the states. Sex of the household head has an influence on place of delivery in most of the states. However in Bihar it is seen a household headed by a male has more influence towards government or private places of deliveries rather than at home. Aged females in a household tend to have less say in family matters and also cling more to traditional norms than males who having more exposure and have idea of health care needs. This can be the reason for women from households headed by males going for better reproductive health care facilities in institutions. Also, women from families having less household members tend to go more for government or private places for deliveries and also undertake post-natal check-ups after two months of delivery. This can be cited to the affordability factor that sometimes it gets difficult for families to afford government or private places or to undertake post-natal check-ups for every baby born (if more than 3 in the household) and the family tends to take it casually unless some major health problems appear. Age at first birth and children ever born to a woman has considerable influence over reproductive health care needs by women across all states. Women having higher age at first birth and lesser number of children born tend to avail more reproductive health care facilities. Also, it is seen that women who either do not work or work at home are the ones availing more reproductive health care facilities. This can be cited to the time factor as working women have less time to devote towards health care. Lastly, Bihar is the only state that does not have any influence of women empowerment like that of mobility autonomy or decision making autonomy over reproductive health care.

1.3.3. Model for Socio-economic Determinants:

The study shows, antenatal care practices are more prevalent than postnatal care practices in all the states among which the northern states practice the least while the southern states practice more. Majority of the deliveries in all the states take place at home. It can be said that most women believe that the phase from pregnancy to delivery is important and needs to be taken care of. Therefore the period after delivery, i.e., the postnatal period is seen to be less important in all the states as seen by the low prevalence of postnatal check-ups within two months of delivery. The small number going for postnatal check-ups seem to be the ones who are suffering from some kind of illness like fever, low BMI, anaemia and others. Basic background characteristics influence antenatal care the most in both the group of states. With higher education and high on wealth index women tend to go more for antenatal care practices. Marriage and fertility characteristics influence the northern states more than the southern states. With increasing age at marriage and first birth, less number of children born and modern contraceptive usage among women, antenatal visits increase in the northern states while only women with less number of children tend to go for antenatal care in southern states. Occupational characteristics like women who are self-employed or work for someone else go less for antenatal care in both groups, women who work seasonally or occasionally tend go more for antenatal care in northern states while less in southern states, women who work for cash go more for antenatal care than women who work for kinds in both the groups of states. Only the southern states show moderate influence of media exposure on antenatal visit practices. Bihar and Karnataka show less prevalence of antenatal

visits during pregnancy within their groups. Postnatal checks are very less prevalent in both the groups of states. However, educational background and occupational characteristics show moderate influence on postnatal checks in both the groups. The influence of education in the northern states come at a later level, i.e., after the inclusion of autonomy and awareness characteristics. Women working away from home tend to go for postnatal checks more than women in southern states while vice versa in the northern states. Similarly, women who get paid in cash and kind go for postnatal checks in southern states while vice versa for the northern states. Women working seasonally go less for postnatal checks than others in southern states. Within the southern group of states Karnataka show lower instances than Andhra Pradesh in terms of postnatal check-ups. Basic background characteristics affect place of delivery to a large extent in both the groups. While education affects both northern and southern states, wealth index and religion affect the place of delivery largely in the southern states. Household characteristics too affect place of delivery in both the groups largely. The influence of female household heads diminishes with the inclusion of autonomy and awareness characteristics among women. Lower age of household heads and lesser number of household members influence selection of government or private places of deliveries in northern states while higher age of household head and larger number of household members influence selection of government or private places of deliveries in southern states. The cause for this can be cited through the diffusion factor where there is sharing of ideas among family members and similar practices are followed among. Marriage and fertility characteristics like higher age at first birth and lesser number of children influence selection of government or private places of deliveries in both the groups of states. While modern usage of contraceptives influence selection of government or private places of deliveries in the southern states. Both the group of states show significant influence in the choice of government or private places of deliveries by women who work in home and who work seasonally or occasionally.

1.4 Conclusion:

The provisional findings have been stated as above. This paper has scope to analyse the idea including some advanced techniques. Therefore, I intend to study the effect while segregating control and intermediate variables from independent variables. Also this paper studies the three dependent variables separately. I intend to combine the variables into one score variable and then study the differential usage pattern among the states and make a better comparative analysis.