International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Impact Factor (2012): 3.358

Does Male Out-Migration and Household Structure Matter in Maternal Health Services Utilization in India?

Amit Kumar

Research Scholar, International Institute for Population Sciences, Mumbai, India

Abstract: ***Male out-migration leads to modification in the structure of family life and also transforms women's social and economic position. A significant effect of migration on the family is the conjugal separation. The need for assistance with child care also may motivate a restructuring of household composition. Data Source: National Family Health Survey (NFHS)-3 (2005-2006). Objective: The broad objective of the study is to understand the household structure of left behind women and use of maternal health services in the place of origin due to male out-migration. Bivariate analysis shows that who left behind women age group 25 to 44 years mostly, lived in nuclear family. Follow by Place of residence, women education, marital duration and caste religion. That's why Place of residence, women education, marital duration and caste religion likely in use of all three maternal services in the non-nuclear compared nuclear family. Regression analysis revealed that mostly socio-demographic indicators highly significantly associated with the use of maternal health services. Male out migration and non-nuclear family positively and highly significantly associated with the use of ANC, institutional delivery and PNC. This may be explained on the basis of the fact that the economic status of women in non-nuclear households is better than their counterparts. May be due to a low standard of living, the affordability for health care among women in nuclear households is overshadowed.***

Keywords: Male out migration, Left behind, Household structure, Nuclear, Maternal health

1. Introduction

Research on the determinants of health care service utilization suggests that health-seeking behavior is a complex social phenomenon affected not only by service availability and cost, but also by the interplay between individual characteristics, social structure, and health beliefs [1-2]. In contexts where the use of formal prenatal and delivery services is relatively new, and knowledge about the costs and benefits of these services is not widespread, social networks and wider patterns of social interaction may represent important conduits of information and influence that facilitate or impede service use [1,3].

Migration as a social process has the potential to reduce both the financial and cultural barriers to health-care service utilization. Migration improves the material conditions of rural households and communities through the infusion of remittances, and it can alter ideational systems and cultural practices through the diffusion of new ideas, attitudes, and behaviors. One of the most noticeable changes associated with migration is the economic benefits and subsequent improvement in living standards, as people typically migrate to attain better economic conditions. Such changes are usually conducive to health status [4].

Kinship linkages and family residence patterns influence the households' adaptation to migration [5]. Families have to make adjustments in their lifestyles and shoulder greater responsibilities as a consequence of the migration of a male member [6]. A significant effect of migration on the family is the conjugal separation. Normally, the wife and the children are not left alone. In most cases, the wife is left with in-laws or with parents and other relatives [7]. It is rare that woman is left behind by herself and with children to look after the home [7]. Other study also observed the tendency among the emigrant household to get together not only to meet the obligations arising in consequence of the worker's migration abroad but also for the purpose of living [8]. Where the wife and children were living separately with the migrant worker before his departure, the tendency is for the wife to move in with the husband's parents or her own parents along with her children.

The need for assistance with maternal care also may motivate a restructuring of household composition. Particularly if children are very young, a mother may prefer to sacrifice the independence of her household in the interest of assistance with responsibilities of childbearing [9]. However, the noticeable tendency is the preference among younger women to stay either with their parents-in-law or with their own parents. The women who are comparatively older and more matured decide to stay independently, thereby retaining their freedom [10]. An important factor in the family's adaptation to migration is whether an extended family and kinship structure exists to allow other male family members to fill roles normally assigned to the absent male [11-12]. This depends on the living arrangements of wives left behind.

Majority of research studies have viewed migrants in isolation of the family and community context from which they come and majority of empirical research on impact of migration has focused on utilization of remittances. Remittances have made families able to live a better and relatively financially secure life, free of heavy and cumulative indebtedness [13-15]. How exactly the left behind experience and cope with absence, loss and missing household or community members – the very nature of being left behind - has not been sufficiently addressed. Indeed, given the focus on migrants and the narrow ways in which migration processes have been defined, the migration

literature can be said to have thus far 'left behind' the 'left behind' [16-17]. Hence the main objective of the paper is to study the lives of left behind wives after their husbands' out-migration in terms of decision making power and health. In addition to it, an attempt has also been made to study the trickledown effect of male out-migration on left behind women about fertility preference and imparting sex education among children. However, the analyses have been done from the perspective of household structure and which these left behind women lives due to male out migration in use of maternal health services.

2. Data

National Family Health Survey-3 (NFHS-3) conducted in the year 2005-2006 has been used for the analysis. The data do not give details about left behind women due to male out-migration directly. In order to identify these women certain control variables have been used namely, currently married women in rural areas who have married once and husbands have no other wives. Further, question has been asked: "Are you living with your husband now or he is staying elsewhere?" [18]. Here, there are two categories of women, one staying with husband (stay-put) and other not staying with husband. The latter category has been taken as the left behind women (with the help of above mentioned control variables). In order to see the impact of male out-migration, women not staying with their husband for less than one year have been excluded. This has been done to remove the effect of seasonal or any other short term migration from the analysis. The question asked in this regard is "For how long have you and your husband not been living together?" [18]. The interviewer's manual of NFHS-3 clearly states for this question that it is not related to know when her husband last visited her but for how long they have not been living together. For example, if the respondent says that her husband visited her 6 months ago but has been living in the Gulf for three and a half years, this means that they have not been living together since three and half years [19]. The unit of analysis is women and for that purpose individual file (women file) has been used. All the cases in the analysis are weighted.

The household structure is defined as whether women live in nuclear or non-nuclear household. Nuclear households are households comprised of a married couple or a man or a woman living alone or with unmarried children (biological, adopted, or fostered) with or without unrelated individuals (IIPS and MI, 2007a) [20]. Accordingly, the total sample size is 3718 with 1453 living in the nuclear household and 2265 in the non-nuclear household.

2.1 Outcome Variable

The childbearing among women in India is prevalent in wedlock, and since most of the reproductive and child health indicators refer to ever-married women in the reproductive age of 15–49, the NFHS target the sample of ever-married women to canvass the required information. Adolescent maternity care was measured using progress through three vital maternal healthcare indicators: full antenatal care (Full ANC), Full antenatal care includes those women who had had a minimum of three antenatal visits, at least two tetanus toxoid injections during pregnancy or received one tetanus toxoid injection during pregnancy and at least one in the three years prior to the pregnancy, and received iron and folic acid tablets for 90 days or more. The institutional delivery includes which delivery conducted in public or private hospital/health centre/clinic. We consider a postnatal check-up within 42 days or 6 weeks after child birth as an indicator for postnatal care

2.2 Predictor Variables

We use a range of socio-demographic variables in the analysis that have been found to be significantly associated with full antenatal (ANC), institutional delivery and post-natal (PNC) care in India and elsewhere. These variables are—as a demographic indicators included respondent's age (five years of age-interval), birth order and interval (first birth order, birth order 2+ and interval <24 months, 24-47 and >48) and duration of marriage in years (four years duration interval).The women's education indicator was based on information related to the attainment of a particular level of education or no education. This was categorized as: illiterate/no education, primary and secondary and above. The social group variable includes the following categories: Scheduled Caste—SC; Other Backward Castes— OBC; others. The wealth index (quintile) was computed for other rounds of the survey separately using the methodology followed in the third round of NFHS. A detailed description on the methodology adopted to construct the wealth index in NFHS dataset is provided in the NFHS-3 national report. Other social variables were also used as covariates in the multivariate models, which include place of residence (urban; rural), religion (Hindu; Muslim; other), and mother's exposure to media (yes; no).

3. Statistical Analysis

Bivariate analysis was carried out to distribution of left behind women according different sate of Indian. Further, examine the distribution of left behind women according to relation to socio-demographic indicators. Moreover, use of maternal health services among left behind women due to male out migration by socio-demographic background for both nuclear and non-nuclear family. In the present study, maternal health services indicators (ANC, Institutional delivery and PNC) was a binary outcome (respondents with yes were coded "1" and no were coded "0"), therefore, the binary logistic regression was used. The exposure variables were tested for possible multi co-linearity using the means of variance inflation factors (VIFs) as a post-estimation procedure following the regression analysis. A small VIF (1.44) suggested absence of any significant co-linearity between explanatory variables in the regression model. The regression analysis was performed only on most recent dataset i.e. NFHS-3. The result obtained from the regression analysis was presented in the form of odds ratios with 95% confidence interval. The analyses were carried out with the help of statistical software Stata 12 SE (Stata, 2011).

4. Results

4.1 Distribution of left behind women due to male out-migration in India

Women were living and not living with their husbands i.e. women whose husbands have not out-migrated, and those whose husbands have out-migrated have depicted in Table 1. The classification of states into regions has done as per the classification done in NFHS (2005-2006). It is clear from the table that eastern region comprising of Bihar, Jharkhand, Orissa and West Bengal has the highest percentage of left behind women (19 percent) followed by central region (14 percent) comprising of Madhya Pradesh, Chhattisgarh and Uttar Pradesh. Other regions have percentage of left behind women below the national average i.e. 12 percent. State wise pattern shows that Bihar has the highest percentage of left behind women i.e. 33 percent followed by Uttar Pradesh (20 percent) and Kerala (20 percent).

4.2 Relationship to the head of the household and age of women based on household structure

Left behind women living in the nuclear household are mostly the head of the household (99 percent) whereas those living in non-nuclear household mostly reside with their in-laws (59 percent). A small number of left behind women live with their parents (8 percent) or sister (7 percent) (Table 2). Another important finding show that those women are younger as well as older age tends to live in non-nuclear household (Figure 1). The reasons for both these extremities may be different in India. The reason behind that the younger women living in non-nuclear household may be that they require support of their family to cope up for the absence of their husbands. While mostly depend on support mechanism from the family whereas the older women living in non-nuclear household may be because their children get married resulting into joint household. With the increase in age of women, the tendency to reside in nuclear household increases drastically to the extent that in middle age group (30-40 years), women living in nuclear household are higher than those in non-nuclear household. Subsequently, there is a decline in nuclear household.

Table 2: Percentage distribution of left behind women according to relation to household head, India, NFHS (2005-2006)

Background characteristics	*Household Structure*	
	Nuclear	*Non-nuclear*
Head	98.55	21.69
Daughter	0.21	7.99
Daughter-in-law	0	58.61
Grandchild	0	0.35
Parent	0	0.13
Sister	0	0.27
Other relative	0	2.56
Sister-in-law	0	7.38
Niece	0	0.22

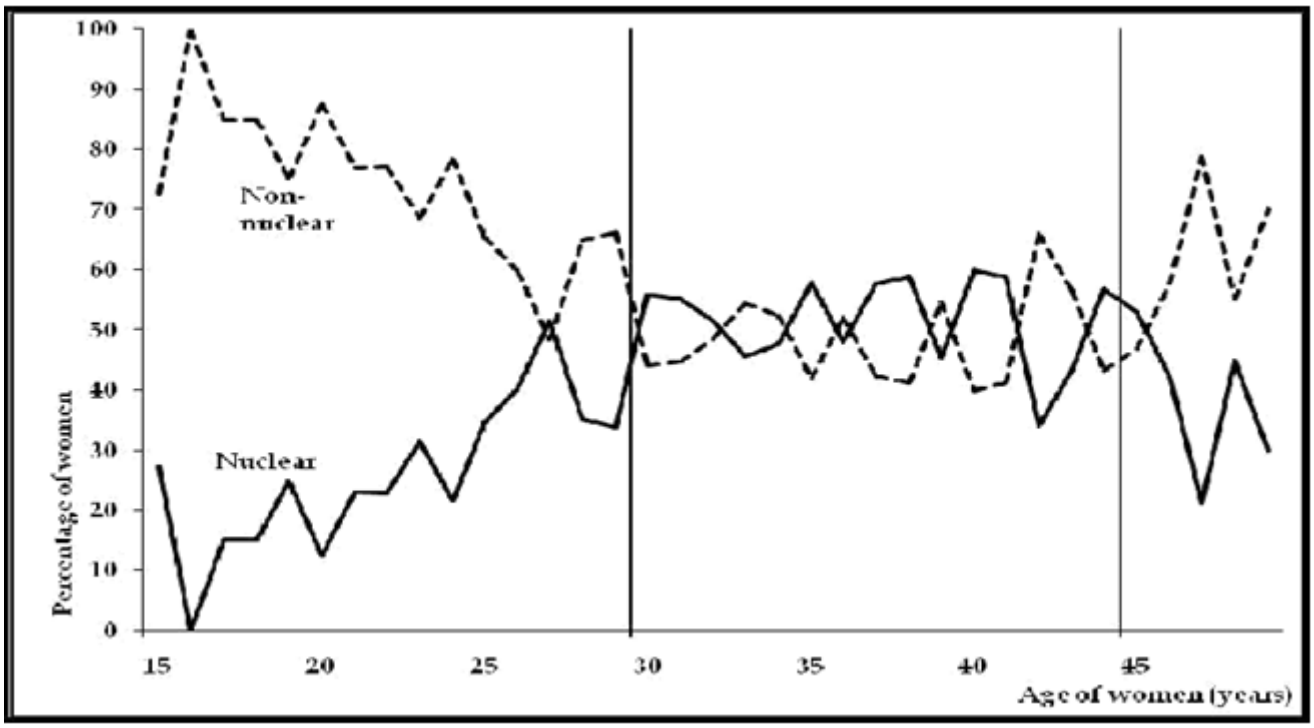

Figure 1: Percentage distribution of left behind women according to their age, India, NFHS (2005-2006)

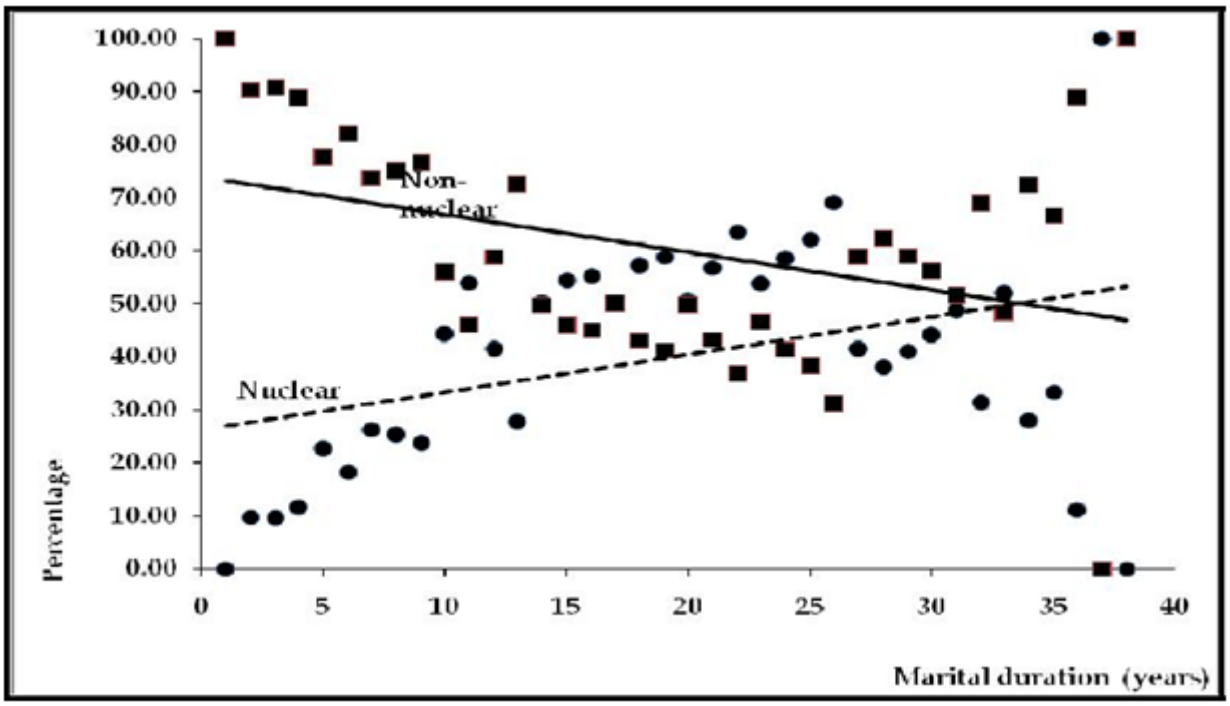

Figure 2: Percentage distribution of left behind women according to marital duration, India, NFHS (2005-200

5. Social and Economic Characteristics

Most of the women belong to Hindu religion and to other castes (excluding scheduled caste and scheduled tribe) irrespective to household structure. It can also see that women in the non-nuclear households have the higher level of educational attainment (Figure 3). Further, it can be observed that 58, 28 and 14 percent women in nuclear household belong to low, medium and high standard of living respectively whereas those in non-nuclear household it is 22, 43 and 53 percent respectively (Figure 4)

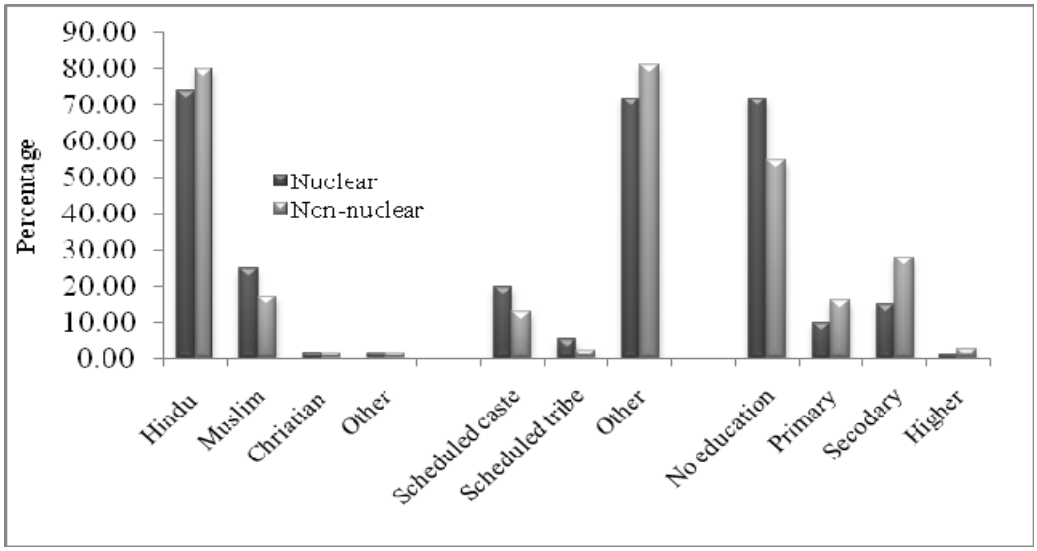

Figure 3: Percentage distribution of left behind women according to social background, India, NFHS (2005-2006)

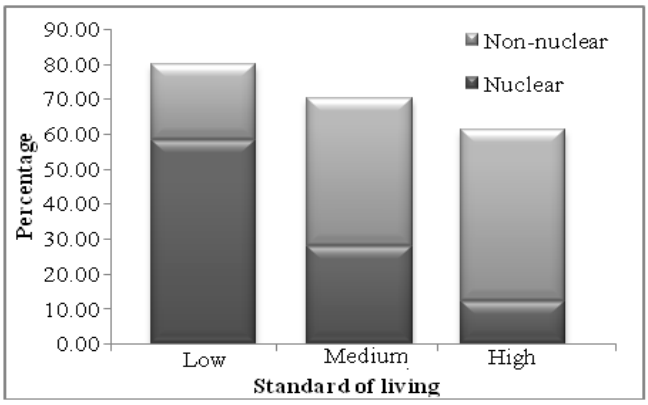

Figure 4: Percentage distribution of left behind women according to economic background, India, NFHS (2005-2006)

6. Decision Making Power

The flow of remittances along with the diffusion of secular ideas are expected to enhance the standard of living of left behind women and provide greater access to resources that subsequently enable them to change their position [16]. The adjustment process depends upon several factors such as their relationship with migrants, the length of stay of migrants abroad and the socio-cultural context in which they live [21]. However, women are capable of adapting to the new situation and managing household chores in their husband's absence [12]. The change of women's position may result in greater mobility, reduced dependence on traditional patrons and increased self-confidence [21]. On the other hand, it is quite possible that the presumed change of women's role is only temporary and a reflection of the changed conditions in which they are forced to live [16].

Affordability of medical help for self reveals that higher percentage of women in nuclear household (81 percent) has no problem in getting permission compared to women in non-nuclear household (74 percent). Women in non-nuclear households are in a better situation in having no problem in getting money needed for treatment or to go alone than their counterparts. Decision on spending money is taken mainly by self in both categories. Final say on health care is mostly taken by self (69 percent) or are taken collectively by self and husband (19 percent) in the former and self or someone else (39 percent) in the latter category. Decisions on large household purchases are done mainly by self (35 percent), husband (19 percent) or collectively (44 percent) among women in the nuclear family whereas by someone else (53 percent) among women in non-nuclear household. Similarly, decisions on making household purchases for daily needs or visit family or relatives are mainly taken by self or collectively in former whereas by someone else in the latter category. Decision on spending money earned by husband is done mostly collectively by husband and wife in both categories. Having bank account or savings do not make the difference between the two categories (Table 3).

7. Bivariate and Multivariate Analysis

Bivariate analysis (Table 4) shows that maternal health services utilization with socio-demographic characteristic and family structure (nuclear and non-nuclear) among left behind women due to male out-migration. those women belong to age group 25-29 are higher antenatal care utilization compare other age group but there indicate that nuclear family more utilized antenatal care (ANC) than non-nuclear family. Further which women's marital duration between 5-9 years, these are higher utilization of antenatal care, in this group, antennal care of utilization is higher than the nuclear family. Interesting finding indicate that, in the birth order 2nd and 3rd, nuclear family more likely use of in use of antenatal care compare non-nuclear family. Furthermore antenatal use increases with birth interval, while according the birth interval utilization of antenatal care is more in non-nuclear family than the nuclear family. Those women belong to the rural area, which are more use of compare counterpart. In both rural and urban are higher ANC in non-nuclear than the nuclear family. Moreover, use of ANC increased with education qualification. According education, use of ANC is more likely non-nuclear family than the nuclear family. OBC and other castes more utilized of ANC in non-nuclear family than counterpart. Interestingly Hindu nuclear family more utilized ANC services compare non-nuclear family and Muslim non-nuclear family marginal high in used of ANC services compare of the nuclear family. It could be one of the reason that In Muslim, most of living in non-nuclear family. Moreover, exposure group having more utilization in non-nuclear family compare their counterpart. Now move on wealth quintile, poorer and middle group having high utilization of ANC in the nuclear family than non-nuclear, while richer group used more ANC services in non-nuclear family. Behind such type of result, it could be reason that most of nuclear middle class family in the urban area that's why use of ANC high in the nuclear family.

Now we tend to utilization of institutional delivery, also there, which woman belong age group 25-29 years, these women go to institutional delivery as well as this group has used more institutional delivery in non-nuclear family than the nuclear family. Similarly, result found in marital duration 5-9 years. According birth order, I found that higher utilization of institute delivery in non-nuclear family. Place of residence interestingly finding that institution delivery has more utilized in the rural area than urban, it could be one of the reason behind this that urban women amore aware about delivery precaution. Other hands we can say that rural women not much aware about delivery that's why maybe they faced complication is more than urban women and habitually complicated delivery go to institutional delivery. As well as government programme also focuses in especially in the rural area. But in the rural area, institutional delivery has more in non-nuclear family than the nuclear family. Further, all education groups have more intuitional delivery more likely in non-nuclear family. Similarly, result shows that in caste group and religion group. Moreover, one more interesting result we found that in mass media exposure, institutional delivery high in the nuclear family than non-nuclear family. Similar result found that wealth quintile.

Now move on postnatal check-up (PNC), also there, woman's age 25-29 better formations in use of PNC in non-nuclear family. We also found that similar results in place of residence, women education, marital duration and caste

religion. Moreover, birth order, birth interval, mass media, and wealth quintile shows that use of PNC has more in the nuclear family than non-nuclear family.

Logistic regression (Table 5) revealed that mostly socio-demographic indicators highly significantly associated with the use of maternal health services. Male out-migration and non-nuclear family positively and highly significantly associated with the use of ANC, institutional delivery and PNC. It can explain on the basis of the fact that the economic status of women in non-nuclear households is better than their counterparts. May be due to a low standard of living, the affordability for health care among women in nuclear households is overshadowed.

8. Summary And Conclusion

Who left behind woman's age group 25 to 44 years mostly, lived in the nuclear family. Mostly women age group 25-29 lived in the non-nuclear family while woman's age group 40-44 lowest almost less likely lived in a nuclear family thereby retaining their independence. Older women of preferred lived in non-nuclear family their by the social support and remain supremacy in the family. Follow by Place of residence, women education, marital duration and caste religion. That's why Place of residence, women education, marital duration and caste religion likely in use of all three maternal services in the non-nuclear family compared nuclear family. Moreover, the young and newly married left behind women (15-19) preferred to the nuclear family, because Indian newly married women want more privacy, it could be reasoned to prefer to the nuclear family. Follow by the birth order, birth interval, mass media, and wealth quintile. That's why birth order, birth interval, mass media, and wealth quintile likely in use of three maternal services in the nuclear family compared non-nuclear family. Apart from this, mostly background characteristics show that the non-nuclear family more likely used of maternal services than the nuclear family. Male out-migration and non-nuclear family positively and highly significantly associated with the use of ANC, institutional delivery and PNC. It can explain on the basis of the fact that the economic status of women in non-nuclear households is better than their counterparts.

The lives of left behind women differ widely depending on the type of household structure in which they live. The young and older women are mostly in non-nuclear household whereas the women in 30-40 year's age group prefer living in nuclear household thereby retaining their independence. However, women in non-nuclear household do not have much decision-making power as it has the decisions about health care, large household purchases, household purchases for daily needs, visit to family or relatives mostly taken by someone else in the household. On the other hand, women in nuclear household mostly take their decisions or are taken collectively with their husband's. Left behind women due to male out-migration in non-nuclear households has better in use of maternal health services condition compared to those in nuclear households. It can explain on the basis of the fact that the economic status of women in non-nuclear households is better than their counterparts. Due to the low standard of living, the affordability for health care among women in nuclear households is overshadowed.

The trickledown effect is subjected to certain anomalies when fertility preference is the question. It can see that most of the women in nuclear households prefer up to four children while women in non-nuclear households prefer up to three children. When sex of the child is considered, preference to have male child is strong among women in the former category. However in general it can be concluded that women desire at least two male children and at least one female child irrespective of household structure. The present analysis portrays the general scenario of lives of left behind women. There are certain queries that remain unanswered like why women of non-nuclear households prefer batter heath care utilization more than women in nuclear households in spite of the fact that the latter category has more decision-making power than the former. Since, this is only quantitative study, in order to get these queries answered; one has to undertake qualitative survey. It could be one of the limitations of the paper that one can get the answer of "what" but not of "why."

References

[1] Andersen, R. M. Revisiting the behavioural model and access to medical care: does it matter? *Journal of Health and Social Behaviour*, 36: 1-10. 1995.
[2] Kroeger, A. Anthropological and Socio-Medical Health Care Research In Developing Countries." *Social Science and Medicine*, 17(3): 147 – 161,1983.
[3] Pescosolido, B.A.. "Beyond Rational Choice: The Social Dynamics of How People Seek Help." *American Journal of Sociology* 97:1096-1138 1992.
[4] Lu, Yao. Rural-urban Migration and Health: Evidence from Longitudinal Data in Indonesia. *Social Science and Medicine* 70(3): 412-419 2010.
[5] United Nations, Migration and the Family, Occasional papers series No. 12, United Nations, Vienna 1994.
[6] Gulati, L. In the Absence of their Men: The Impact of Male Migration on Women, *Sage Publication*, New Delhi/Thousand Oaks/ London 1993.
[7] Parasuraman, S. Migration and its Effect on the Family. Indian Journal of Social Work 47(1): 1-14 1986.
[8] Gulati, L. Male Migrants to Middle East and the Impact on the Family. Economic and Political Weekly 18(52 and 53): 2217-2226, 1983.
[9] Findley, S.E., & Williams, L. Women Who Go and Women Who Stay: Reflections of family Migration Processes in a Changing World. Population and Labour Policies Programme, Working Paper No. 176, ILO, Geneva 1991.
[10] Sekher, T.V. Migration and Social Change, *Rawat Publication*, Jaipur and New Delhi 1997.
[11] Hugo, G. Effects of International Migration on the Family in Indonesia. *Asia and Pacific Migration Journal* 11(1): 13 46, 2002.
[12] Gordon, E. An Analysis of the Impact of Labour Migration on the Lives of Women in Lesotho. *The Journal of Development Studies* 17(3): 59-76, 1981.
[13] Deshingkar et al. The Role of Migration and

Remittances in Promoting Livelihoods in Bihar. Overseas Development Institute, London. Available at (Accessed on 29th July, 2008).
[14] Zachariah, K.C., Mathew, E.T., & Rajan Irudaya S. Migration in Kerala State, India: Dimensions, Determinants and Consequences, Centre for Development Studies, Thiruvananthapuram, Working Paper No. II, 2000.
[15] Gulati, L. Coping with Male Migration. *Economic and Political Weekly* 22 (44): WS41-WS46 1987.
[16] Toyota M, Yeoh Brenda SA and Nguyen L. Bringing the Left behind Back into View in Asia: a Framework for Understanding the Migration-Left behind Nexus, *Population, Space and Place* 13(3): 157-161, 2007.
[17] Roy, A. Impact of Male Out-Migration on Left Behind Women and Families: A Case Study of Bihar. Published dissertation for the doctoral degree, International Institute for Population Sciences, Mumbai 2003.
[18] International Institute for Population Sciences and Macro International. 2007b National Family Health Survey, Volume II, 2005-2006: India, IIPS, Mumbai.
[19] International Institute for Population Sciences (IIPS). (2006). National Family Health Survey, 2005-2006 (NFHS-3), India, Interviewer's Manual, International Institute for Population Sciences, Mumbai
[20] International Institute for Population Sciences and Macro International. 2007a National Family Health Survey, Volume I, 2005-2006: India, IIPS, Mumbai.
[21] Hugo, G. Migration and Female Empowerment. Paper presented at the seminar on Female Empowerment and Demographic Processes: Moving Beyond Cairo, IUSSP, Lund, Sweden, 21-24 April 1997.

Table 1: Percentage distribution of women living and not living with their husband, India, (NFHS 2005-2006)

State	Women living with husband	Women not living with husband	Total number of women
India	**88.28**	**11.72**	**61751**
North	**90.93**	**9.07**	**7890**
Delhi	98.73	1.27	79
Haryana	91.81	8.19	1221
Himachal Pradesh	86.64	13.36	479
Jammu & Kashmir	93.55	6.45	512
Punjab	93.69	6.31	1378
Rajasthan	90.3	9.7	3732
Uttarakhand	85.71	14.29	490
Central	86.23	13.77	15909
Chhattisgarh	98.2	1.8	1442
Madhya Pradesh	97.69	2.31	4024
Uttar Pradesh	80.17	19.83	10443
East	**81.84**	**18.52**	**16408**
Bihar	66.6	33.4	6380
Jharkhand	87.44	12.56	1792
Orissa	90.69	9.31	2761
West Bengal	92.24	7.76	5474
North East	**93.7**	**6.3**	**2493**
Arunachal Pradesh	96.43	3.57	56
Assam	92.96	7.04	1817
Manipur	92.23	7.77	103
Meghalaya	97.56	2.44	123
Mizoram	96.3	3.7	27
Nagaland	95.31	4.69	64
Sikkim	94.44	5.56	36
Tripura	96.08	3.02	265
West	**96.1**	**3.9**	**6968**
Goa	90	10	50
Gujarat	95.51	4.49	2560
Maharashtra	94.49	3.51	4359
South	**92.87**	**7.13**	**12083**
Andhra Pradesh	94.91	5.09	4771
Karnataka	97.49	2.51	3106
Kerala	80.17	19.83	1659
Tamil Nadu	92.87	7.13	12083

Table: 3 Percentage of decision making power of left behind women, India, NFHS (2005-2006)

Contents of autonomy	*Nuclear*	*Non-*
No problem in getting permission to go	81.16	73.88
No problem in getting money needed for treatment	52.65	60.08
No problem to go alone	54.23	56.08
Who decides how to spend money		
Respondent alone	65.87	57.76
Respondent and husband	30.07	18.63
Husband alone	4.06	5.9
Someone else	0	17.7
Final say on own health care		
Respondent alone	69.05	39.13
Respondent and husband	19.19	13.38
Husband alone	8.39	8.57
Someone else	3.37	38.91
Final say on making large household purchases		
Respondent alone	34.53	12.98
Respondent and husband	43.88	20.04
Husband alone	18.71	14.61
Someone else	2.89	52.36
Final say on making household purchases for daily needs		
Respondent alone	75.17	31.01
Respondent and husband	14.86	8.7
Husband alone	6.95	5.12
Someone else	3.03	55.17
Final say on visits to family or relatives		
Respondent alone	40.19	16.07
Respondent and husband	38.47	21.72
Husband alone	18.44	9.49
Someone else	2.89	52.72
Final say on deciding what to do with money husband earns		
Respondent alone	26.64	13.43
Respondent and husband	56.47	37.09
Husband alone	16.06	20.64
Someone else	0.83	28.84
Have bank or savings acct	17.34	16.34

Table: 4 Percentage distribution of left behind women for use of maternal services according to background characteristics among nuclear and non-nuclear family, India, NFHS (2005-2006)

Background characteristics	*Antenatal check-up*		*Institutional delivery*		*Postnatal check-up*	
	Nuclear	*Non-nuclear*	*Nuclear*	*Non-nuclear*	*Nuclear*	*Non-nuclear*
Women age						
15-19	12.9	6.7	7.3	8.3	5.6	10.3
20-24	14.3	34.4	25.4	35.3	21.4	34.8
25-29	38.6	36.4	29.4	36.6	26.2	34.5
30-34	20	19.6	24.9	16.2	30.2	16.9
35-39	14.3	1.4	13	3.1	12.7	2.8

40-44	0	1.4	0	0.5	1.6	0.6
45-49	0	0.6	0	0.4	2.4	0
Marital duration						
0-4 years	12.9	22.9	16.9	31.4	15.7	38.6
5-9 years	41.4	56.2	33.9	46.1	22.8	40.8
10-14 years	27.1	14.3	29.4	14.4	38.6	12.5
15 & above years	18.6	6.7	19.8	8.1	22.8	8.2
Birth order						
1	14.1	43.3	23.3	47.9	15	47.5
2	36.6	35.2	40.9	31.2	39.4	41.1
3+	49.3	21.4	35.8	20.9	25.7	21.4
Birth interval						
<24	16.7	20.2	19.1	18.6	11.7	18.4
24-47	45	52.1	35.9	48.9	44.7	50.9
>48	38.3	39.7	45	46.5	29.7	30.7
Place of residence						
Rural	86.6	87.6	79.1	81.3	76.2	78.6
Urban	11.4	12.4	20.9	18.7	23.8	24.4
Women education						
No education	17	19	19.3	21.4	52	19.2
Primary	25.4	29.5	10.7	13.9	15.7	10.1
Secondary+	36.6	61.4	39	64.7	32.3	70.8
Caste						
SC & ST	26.8	12.4	28.2	10.6	15.4	16.7
OBC	38	50	34.5	44	37.6	37.7
Others	35.2	37.6	37.3	45.3	31	45.6
Religion						
Hindu	75.4	71	71.6	67.6	61.7	64.2
Muslims	24.6	24.8	27.3	28.3	26.8	30.2
Other religion	0	4.3	1.1	4.1	1.6	5.7
Mass media exposure						
No exposure	47.9	18.1	35.2	16.4	32.3	12.2
Exposure	52.1	81.9	64.8	83.6	67.7	87.8
Wealth index						
Poorest	19.7	5.3	26.7	2.7	22	5
Poorer	32.4	18.7	20.5	15.5	16.5	13.5
Middle	28.2	19.6	19.3	18.6	25.2	17.6
Richer	11.3	34	17.6	36.2	19.7	31.7
Richest	8.5	22.5	15.9	27	16.5	32.3

45-49	1.211	2.751***	0.849
Marital duration			
0-4 years			
5-9 years	2.536***	2.641***	3.543***
10-14 years	1.845***	1.934***	1.932***
15 & above years	1.332***	1.244***	1.302***
Birth interval			
<24			
24-47	0.556***	0.534***	0.495***
>48	0.752***	0.603***	0.652***
Place of residence			
Rural			
Urban	1.198***	2.312***	1.632***
Women education			
No education			
Primary	0.429***	0.374***	0.413***
Secondary+	0.848***	0.613***	0.628***
Caste			
SC & ST			
OBC	1.014	0.717**	0.849*
Others	0.974	0.964	0.947
Religion			
Hindu			
Muslims	1.118	0.914	0.937
Other religion	0.907	0.668	0.692***
Mass media exposure			
No exposure			
Exposure	1.611***	1.428***	1.362***
Wealth index			
Poorest			
Poorer	0.443***	0.144***	0.207***
Middle	0.508***	0.238***	0.288***
Richer	0.757***	0.370***	0.444***
Richest	0.802***	0.494***	0.532***
Constant	0.215***	0.942	2.498***

Note: *** <1%; **<5%; *<10% level of significance

Table: 5 Determinates maternal and child health care utilization (Odds Ratio from Logistic Regression)

Socio-demographic indicators	**Antenatal check-up**	**Institutional delivery**	**Postnatal check-up**
	Exp(B)	**Exp(B)**	**Exp(B)**
Migration status			
Non-migrate			
Migrate	0.787***	0.66	0.526
Family structure			
Nuclear			
Non-nuclear	0.864***	0.915	0.842
Women age			
15-19			
20-24	0.898	1.649	0.451***
25-29	0.991	2.074**	0.505***
30-34	1.063	2.429**	0.603**
35-39	1.083	2.997***	0.692
40-44	1.138	2.812***	0.746