

Differentials in the Knowledge of Antenatal Health Care among Migrant and Non-Migrant Households in Rural Bihar

Amit Kumar

Ph.D. Scholar, International Institute for Population Sciences, Mumbai, MS, India

Abstract

Several states have achieved the MDGs 5 or closing to this goals but Bihar far from these goals due to the lack of knowledge and awareness, low utilization of Maternal Health services and socioeconomic backwardness. Migration as a social process has the potential to reduce the lack of knowledge and awareness of maternal health care through diffusion to increase healthcare service utilization. Bihar was known as a highest out-migrated state in India due to socially and economically backwardness. After above the argument, the study tried to examine the migration matters in the knowledge of maternal health services in Bihar.

The main finding of the study is that women from migrant households generally have more knowledge about different components of antenatal care (Knowledge of TT injection, IFA tablets, danger signs during pregnancy, work of ASHA, preparations for delivery, complications during delivery, place for delivery and JBSY) compared to their counterparts from non-migrant households. There is a progressive increase in the knowledge of different aspects of maternal and child health with the increase in the level of education. This applies to both groups of women. There is not much difference across women by their religious affiliation. As for caste, general caste women clearly have more knowledge about a different aspect of maternal and child health. Scheduled caste women are worse than their general counterparts in both migrant and non-migrant group. Women from wealthier households, as expected, have more knowledge compared to poorer women. This applies to both groups of women in the analysis.

Introduction

Evidence from diverse sources suggests that many cases of maternal and neonatal mortality and morbidity are easily preventable with the provision of adequate health care during pregnancy and childbirth (Caldwell, 1996; De Brouwere *et al.*, 1998; Hogberg, Wall, and Borstrom, 1986). Prenatal care and delivery assistance by formally trained medical professionals reduce the risk of maternal and neonatal mortality through the early detection of potential complications, the identification of modifiable risk factors, and the application of effective interventions in the event of complications during childbirth (Bhatia *et al.*, 1993; Bhatia and Cleland, 1996; den Draak, 2003).

Research on the determinants of health care service utilisation suggests that health-seeking behaviour 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 (Andersen, 1995; Kroeger, 1983). 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 (Andersen, 1995; Pescosolido, 1992).

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 behaviours. A study shows the mechanisms through which migration experiences might affect infant health, including maternal health knowledge. While their estimates indicate that migration increases maternal health knowledge, the children of these women are more likely to be breastfed and to receive vaccinations and other preventive care compared to non-migrants at the place of origin (N. Hildebrandt, and D. J. McKenzie, G. Esquivel, and E. Schargrodsy; 2005).

However, this study, we use primary data from the survey conducted in rural Bihar to explore the influence of migration experiences and social ties in using maternal and child health care services. Our analysis provides a focused and comprehensive assessment of the effects of migration on the knowledge of antenatal health care. Further, this study provides an overview of the current knowledge of women of migrant and non-migrant households regarding a different aspect of maternal and child health – such as antenatal care. First, there has given differentials across the non-migrant and migrant group. Later in the study, an attempt has been made to describe socioeconomic differentials in the knowledge of women from both types of households.

Data and Methodology

Study area and sampling design

The present study has been conducted in the rural parts of district Siwan of Bihar state. The study area has been selected primarily due to two reasons - the high male out-migration, and the lowest sex ratio (male/female). The sex ratio for Siwan is 970 male per 1000 female according to the Census of India 2001. Sex ratio and migration are closely related because if sex ratio is high, it can be said that there are more female than males and used as a basis for identifying areas where males out-migration are high (Bose, 2000; Chinmay Tumble, 2015). On the other hand, the number of left behinds wives is also high in this area. According to the census 2001, there are 19 blocks and 1524 villages in Siwan District. By sex ratio, three high sex ratio blocks for migrant household and three low sex ratio block for non-migrant household selected from all 19 blocks. The smaller villages consisting of less than 200 households have removed from the list obtained from village directory. Two villages selected by high and low sex ratio (female per thousand male) from each selected block. In this study, those household having at least one male member who has migrated in search of employment/livelihood and staying elsewhere at least for the last six months and at least has a migration experience of there the three years have been selected. Those households that have had migration experiences after childbirth has excluded from the sample. The selected non-migrant households are those households in

which there is no male out-migration for employment/livelihood during last five years preceding the survey. A house listing exercise has been carried to identify the eligible households for migrant and non-migrant. From this sampling frame, respondents were selected by using simple random sampling method. Respondents in this study included are those women (15-49 years) who had delivered a child within a reference period of last three years. An equal number of women are selected from migrant and non-migrant households. It must be kept in view that this study does not aim to generate any estimate. Considering the availability of resources and time frame for the study, a sample of 300 respondents from 300 migrant households and 300 non-migrant respondents selected from non-migrant household from 18 villages of 6 blocks. The non-migrant group in the study has been considered as the reference group against which we can examine the effect of migration on the use of health care service and various other issues related.

Tools and Techniques of Data Collection

Data for the present study were collected during September - December 2013 using both quantitative and qualitative survey tools. Quantitative information collected through the semi-structured schedule and qualitative information was collected through in-depth interviews. Three schedules were used to collect quantitative information from the respondents. The household schedule was used to collect information about the head of households, household members, marital status, employment status housing characteristics, household durables and other household details. The women's schedule included information on various domains of maternal and child health care. The migration schedule included information regarding the different domain of migration and remittances.

Data compilation and data analysis

The data entry was performed using CPro 5.0 version software package. The quantitative data analysis carried out in STATA 13.0 version. Study meet the objectives of the study, appropriate univariate, and bivariate techniques used. The principal component analysis was used to compute household wealth status.

Apart from percentage distribution, the mean is calculated as per the requirement. The study used Z test; an attempt has been made to determine whether the difference between two proportions (Migrant and No-migrant) is significant. The Chi-square test analysis has been used to explore the statistical significance of the association between two and more than two categorical variables.

Respondent Profile

The figure 1, Illustrated that the age group proportion there no much differences in the age group of migrants and no-migrants in the study area. In early ages (15-24 years) have slightly higher reporting of migration (7%) than non-migrants while in middle ages (25-34 years) the proportion was similar. After the age of 34 years, migration has drastically reduced and only about 7% male reposted under migration status while 14% were under non-migrants.

Figure:- 1, Percentage distribution of respondents by age group.

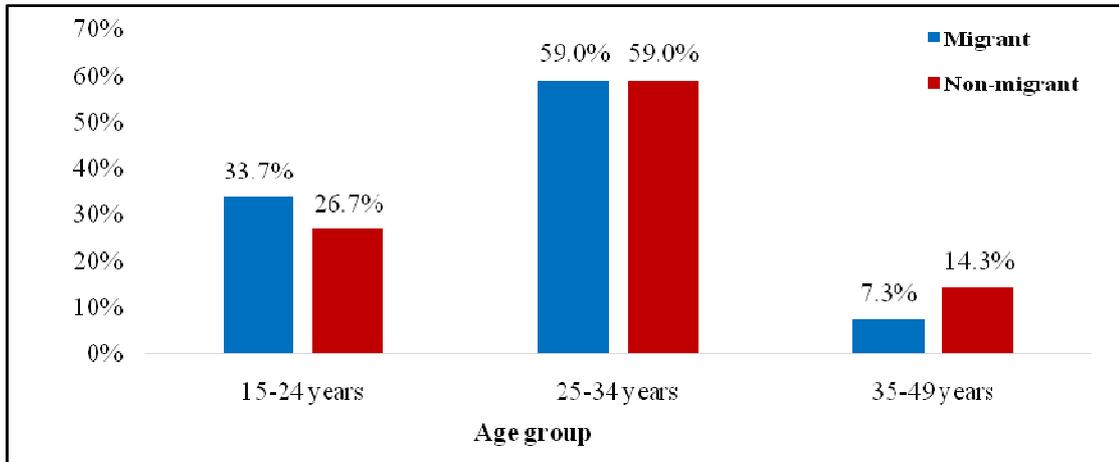


Figure 2 has shown the status of migration by religious composition in the study area. In both the communities, Hindu as well as Muslims, the proportion of migrants and non-migrants was almost similar as per their proportion sample survey

Figure 3 represented the status of migration by their social status. In scheduled castes, the proportion of migration was about 10% less than the proportion of non-migrants. In Other castes, there is no difference in the proportion of migrants and non-migrants and migrants were a little lower than the non-migrants. While within backward classes about to 12% higher migrants were reported than non-migrants.

Figure:- 2, Percentage distribution of respondents by religion.

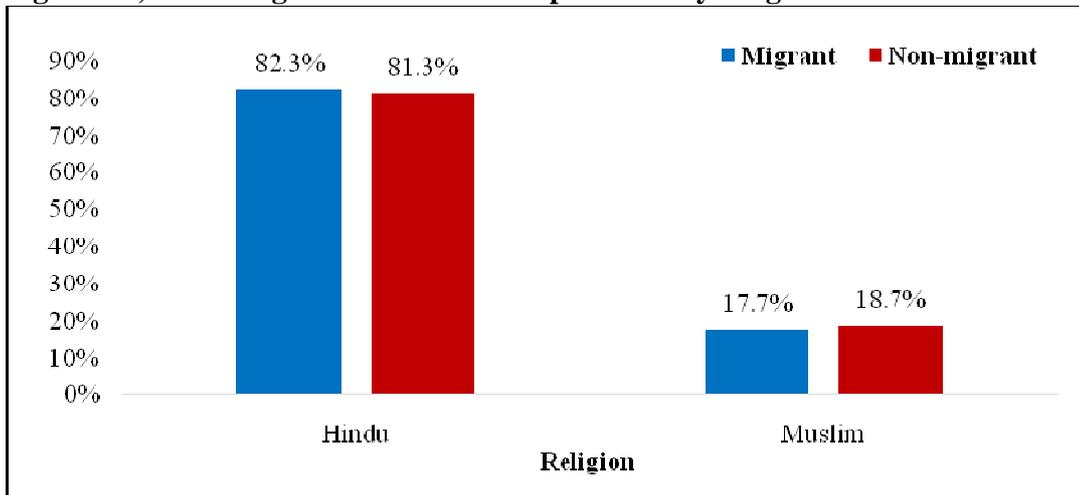
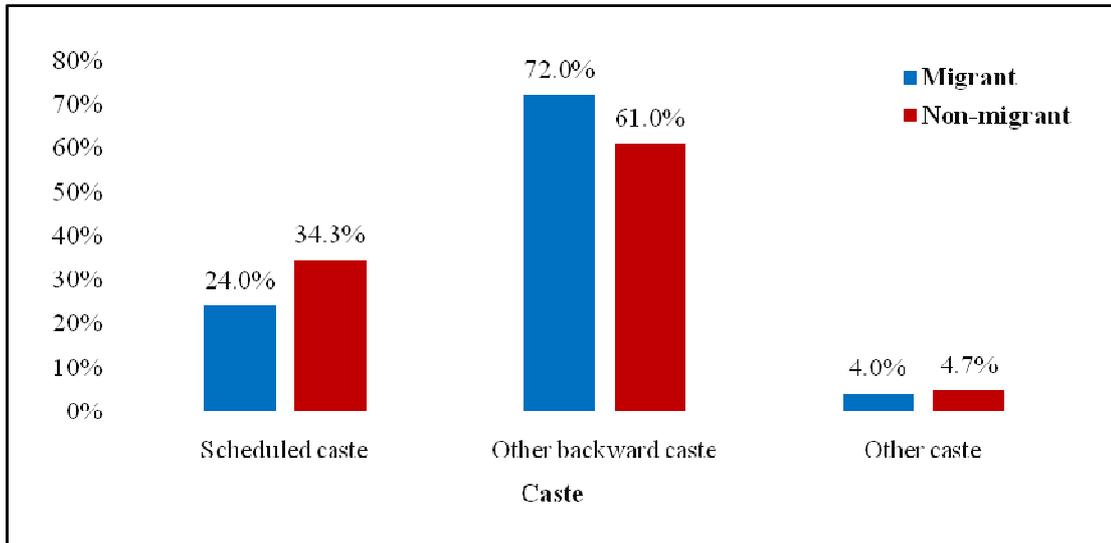


Figure:- 3, Percentage distribution of respondents by caste.



The figure 4 reveals that distribution of respondent by education level. Overall, respondents are distributed more and less equal among migrant and non-migrant households. For instance, only 10% difference in the distribution of respondent between migrant and non-migrant households by secondary level education. Respondents of high school and above are slightly higher in migrant households compared to non-migrant households. About 39% respondents belong to migrant households, and about 58% respondent belongs to non-migrant households.

Figure:- 4, Percentage distribution of respondents by education level.

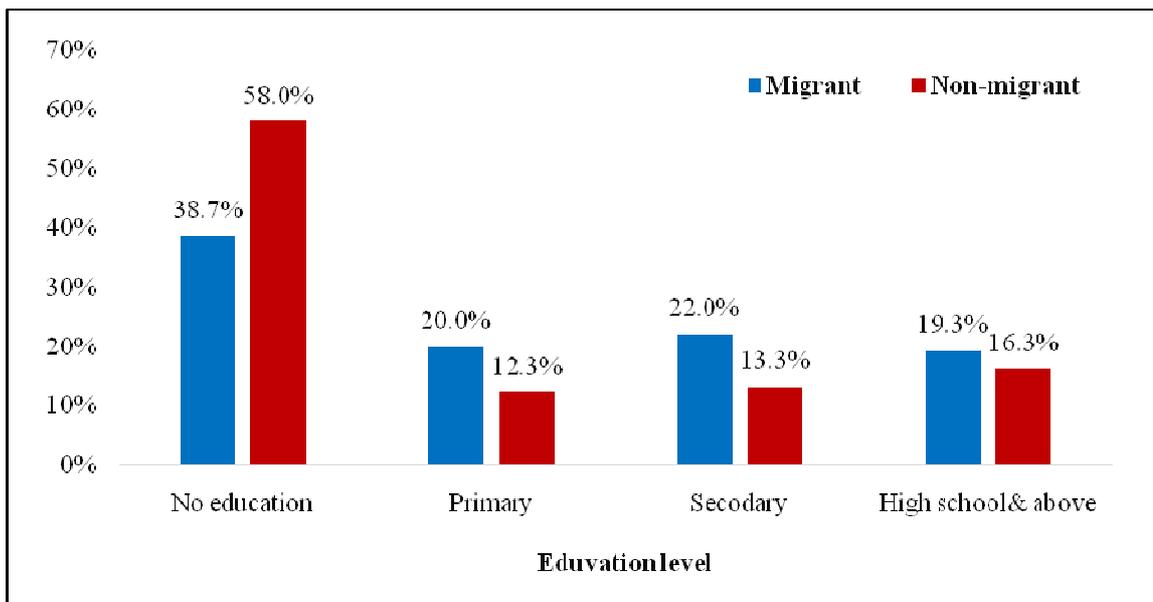


Figure:- 5 Percentage distribution of respondents by type of family.

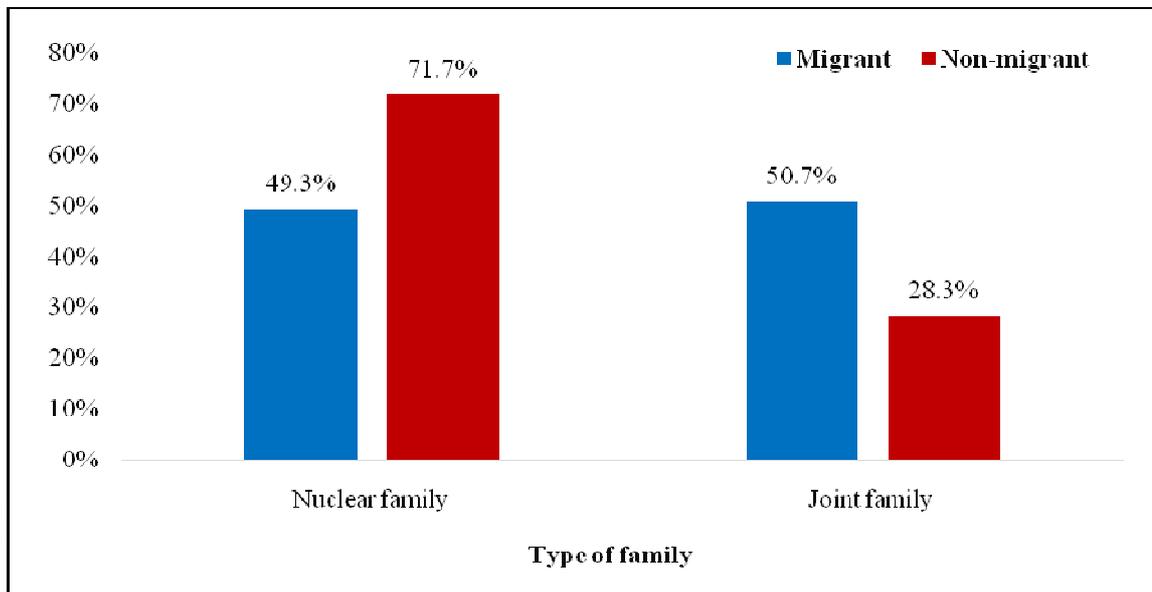


Figure 5 illustrated the type family and their migration status. The result clearly showed that most the migration came from joint family and the difference was almost of double in their proportions of migrants and non-migrants. While in migrants, only about 49% of the male of the nuclear family was reported to compare to 72% of in non-migrants. Overall the higher proportion of migration has recorded from the joint family with contrast to that of the nuclear family.

The differential in the Knowledge Different Components of Antenatal Care

Table 1 show that differentials in the knowledge of different components of antenatal care in women among migrant and non-migrant households. Overall migrant household's women have significantly higher knowledge of antenatal care comparison to non-migrant household's women. For instance, about 91% women of migrant households knew about antenatal care while the proportion of such households among non-migrant households was only 78%. Only about 31% migrant households felt that more than three ANC visits are required for better antenatal care while only 23% non-migrant households thought so. There was a wide disparity in the knowledge of required TT injections as well. The proportion of those who thought appropriate TT injection was necessary during pregnancy among migrant households (91%) was much higher than those who felt the same among non-migrant households (72%). IFA knowledge, a great majority of households in the had knowledge of dose of IFA should be. The proportion of women in migrant households was 89%, while only 38% households among non-migrants knew that a pregnant woman should take appropriate doses of IFA tablets/syrup.

Table:-1, Percentage of women in the knowledge of antenatal care (ANC) and delivery preparation among migrant and non-migrant households, Rural Bihar

Knowledge of different component of ANC	Migrant households	Non-migrant households	Z test
Knowledge of antenatal care	91.0	78.0	Z=-4.7***
Knowledge of TT injection	94.7	72.0	Z=-6.5***
Knowledge of IFA tablets/syrup	89.7	38.7	Z=7.4***
Knowledge of danger signs during pregnancy	74.0	47.3	Z=-3.5***
Knowledge of work of ASHA	98.7	78.3	Z=-2.6**
Knowledge of preparations for delivery	98.7	83.7	Z=-2.6**
Knowledge of complications during delivery	93.3	84.3	Z=-3.5***
Knowledge of an appropriate place for delivery	99.7	81.3	Z=-7.6***
Do you know of JBSY	89.3	75.0	Z=-4.6***
Total (Sample)	300	300	

Note: Level of Significant: *p < 0.050, **p < 0.010, ***p < 0.001

The proportion of those households, who knew about the danger signs during pregnancy was higher among migrant households (74%) compared with non-migrant households (47%). The proportion of households among migrant households who knew about ASHA's work was slightly higher than the proportion of such households among non-migrant households. The proportion of migrant households who reported having knowledge about complications during delivery (93%) was much higher than the proportion of such households among non-migrant households (84%). Similar results found regarding the knowledge about any preparation for delivery. More migrant households reported having such knowledge (99%) compared to non-migrant households. When asked about the appropriate place for delivery almost all migrant households felt that hospital is the best place for delivery while the proportion of such households was only about 81%. Only about 75% non-migrant households knew about the Janani Aam Bal Suraksha Yojana (JBSY), an ambitious scheme launched under the National Rural Health Mission (NRHM), the Government of India's flagship health programme. The proportion of such households among migrant households was slightly higher (89%) institutional delivery.

The differential in the Knowledge of Antenatal Care by Background Characteristics

Table: 2 show the differentials in the awareness about danger signs during pregnancy by background characteristics of the women. Results show that among migrant women, there is a progressive increase in the proportion of women who knew about the danger signs with the increase in the age while the opposite is true for women of non-migrant households.

Table:-2, Percentage of women in the knowledge of danger signs during pregnancy among migrant and non-migrant households by background characteristics, Rural Bihar

Background characteristics	Knowledge about danger signs during pregnancy	
	Migrant households	Non-migrant households
Women age group	$\chi^2=3.7$	$\chi^2=0.4$
15-24	80.2	45.0
25-34	71.8	47.5
35-49	63.6	51.2
Women education	$\chi^2=16.1^{**}$	$\chi^2=1.8^*$
No education	62.9	44.3
Primary	73.3	48.6
Secondary	80.3	55.0
High school & above	89.7	51.0
Religion	$\chi^2=0.3$	$\chi^2=0.6$
Hindu	73.3	46.7
Muslim	77.4	50.0
Caste	$\chi^2=5.5$	$\chi^2=1.02$
Scheduled caste	68.1	49.5
Other backward caste	74.5	45.4
Other caste	100.0	57.1
Wealth index	$\chi^2=4.4$	$\chi^2=5.8$
Poor	68.0	39.0
Middle	73.0	56.0
Rich	81.0	47.0
Total	88.8	79.3
(Total Sample)	300	300

Note: Level of Significant: *p < 0.050, **p < 0.010, ***p < 0.001

The knowledge increases with education level as well. For instance, among migrant households, only 63% women with no education were aware of dangers while the proportion of such women among those who were high school or above educated was close to 90%. The same is true for non-migrant as well. There were slight differences in the awareness of religion. Caste wise differential was substantial. While the awareness was universal among general castes, the proportion of women who were aware of danger sign among OBC and SC was 76% and 68% respectively. A similar pattern can be observed in the women from non-migrant households as well. There is a progressive increase in the awareness with respect to increasing wealth. For instance, among migrant households, while only 68% women in poorest quintile were aware of the danger signs, the proportion of such women among richest quintile was much higher - about 81%. Overall, it turns about that the level of knowledge about danger signs during pregnancy are higher among women from migrant households compared to women from non-migrant households.

Table:- 3, Percentage of women in the knowledge about Janani avam Bal Suraksha Yojana (JBSY) among migrant and non-migrant households by background characteristics, Rural Bihar

Background characteristics	Knowledge about JBSY	
	Migrant households	Non-migrant households
Women age group	$\chi^2=31.6^{***}$	$\chi^2=52.0^{***}$
15-24	99.0	93.8
25-34	87.6	76.3
35-49	59.1	34.9
Women education	$\chi^2=40.7^{***}$	$\chi^2=47.0^{***}$
No education	75.0	60.9
Primary	98.3	83.8
Secondary	98.5	97.5
High school & above	98.3	100.0
Religion	$\chi^2=0.6$	$\chi^2=4.2^*$
Hindu	88.7	72.5
Muslim	92.5	85.7
Caste	$\chi^2=25.0^{***}$	$\chi^2=23.6^{***}$
Scheduled caste	73.6	58.3
Other backward caste	94.0	84.2
Other caste	100.0	78.6
Wealth index	$\chi^2=26.5^{***}$	$\chi^2=50.6^{***}$
Poor	77.0	50.0
Middle	92.0	85.0
Rich	99.0	90.0
Total	89.3	75.0
Total (Sample)	300	300

Note: Level of Significant: *p < 0.050, **p < 0.010, ***p < 0.001

Table 3 shows the differential in awareness about Janani Bal Suraksha Yojana (JBSY) among women from migrant and non-migrant households. The proportion of women who had knowledge of this scheme among migrant households was much higher than that of women from non-migrant households. It is interesting to note that the knowledge of this scheme among younger women (15-24 years) was universal. Among uneducated women in migrant households, only 75% women knew about this scheme while the proportion of such women in other educational categories was close to 98%. A similar pattern was noticed among non-migrant households as well. Fewer SC women among migrant households were aware of this scheme compared with such women in general castes. There was progressive in an increase in the proportion of such women with the increase in the household wealth.

Conclusion

The main finding of this chapter can be summarized as follows. Women from migrant households generally have more knowledge about different components of antenatal care compared to their counterparts from non-migrant households. It should be a matter of concern that over 80% women among non-migrant women don't know about the exact amount of IFA pregnant women should take. Knowledge of danger signs during pregnancy was poorer among women from migrant households though compared to women from non-migrant households. Almost all women knew about ASHA. Knowledge of delivery preparation was high among both groups although non-migrant women had a slight edge over non-migrants.

There is a progressive increase in the knowledge of different aspects of maternal and child health with the increase in the level of education. This applies to both groups of women. There is not much difference across women by their religious affiliation. As for caste, general caste women clearly have more knowledge about a different aspect of maternal and child health. Scheduled caste women are worse than their general counterparts in both migrant and non-migrant group. Women from wealthier households, as expected, have more knowledge compared to poorer women. This applies to both groups of women in the analysis.

Policy Implications

The knowledge of maternal and child health care utilization should be strengthened through enhancing the level of education and spreading the awareness through governmental and non-governmental bodies. The findings of the study also indicate that although many governmental programs have been running to enhance the level of maternal and child health care knowledge in the study area, they could not meet the need of people, because there is a significant difference in antenatal care services utilization among migrants and non-migrants family. There is a serious need to rethink and reformat the implementation of such MCH care utilization program in the study region.

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