Internal migration and current use of modern contraception methods among currently married women age group between (15-49) years in India

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Abstract: In India, internal migration has been given very low priority by the government, partly due to a serious knowledge gap on its extent, nature and magnitude. Internal migration plays an important role in social and economic development, especially in developing countries. According to 2011 census, the total population of India is 1.21 billion. Internal migration in India accounts for a large population – 309 million internal migrants or 30% of the total population (Census of India, 2001).This paper is an attempt to explore relationship of internal migration with current use of modern contraception methods among currently married women age group between (15-49) years in India. This paper uses National Family Health Survey-3 (NFHS-3) data of India. Study findings shows that about 48% of non-migrant women were using modern contraception methods than 40.4% of migrant women. Further, current use of modern contraception methods was higher among urban non- migrant (55.1%), urban to urban migrant (51.0%) and rural to urban migrant women (43.2%). These findings can be useful for policy makers and program planners to improve health services in India for migrants. Study findings can also be beneficial for governmental or non-governmental organizations as they design and advocate appropriate interventions related to migration in India.

Keywords: Migration status, migration streams and current use of modern contraception methods.

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Introduction

Urbanization is considered as one of the main social changes of the 20th century. In 2007, it was projected by United Nations that more than half of the world's population (3.3 billion persons worldwide) would be living in urban areas in 2008 (UNFPA, 2007). The conditions of urbanization significantly differ between developed and developing countries. Most of the population of developed countries lives in urban areas, compared with developing countries.

In the future, most of the urban population growth will happen in less developed regions. One of the important trends of urbanization in developing countries that top- heavy urban hierarchy. It is projected that in 2015, 18 out of 22 cities with a population of 10 million or more will be located in developing countries (United Nations, 2005).

India is the world second most populous country. In India, 31 % of population resides in urban areas. Out of total population (1,210 million), 377 million people live in urban areas, scattering in about 8,000 cities and towns (Census, 2011).

In India, internal migration has been given very low priority by the government, partly due to a serious knowledge gap on its extent, nature and magnitude. Internal migration plays an important role in social and economic development, especially in developing countries. According to 2011 census, the total population of India is 1.21 billion. Internal migration in India accounts for a large population – 309 million internal migrants or 30% of the total population (Census of India, 2001) and the recent estimates indicated that 326 million or 28.5 % of internal migrants of total population in India (NSSO, 2007-08).

Internal migration has been an important component of urbanization in India. Although, rural- urban migrants are better represented among the better-off segments of the urban population (educationally and economically), there is still about a half of the migrants falls in the bottom six consumption deciles and work mainly in the informal sector as self-employed or casual wage employed (Bhagat, 2011).

Most of the poor rural migrants live in slum areas, but slums are not entirely result of rural to urban migration and urban poverty is not totally product of rural poverty (Mitra, 2011).

Migrants are mainly less likely to access health care to receive the poor quality of care due to their inferior socioeconomic background, language problem, policy problem in access to health care services, location and social stigma (Derose et al. 2007).

A study conducted in Guatemala shows that rural to urban migration provides better contraceptive knowledge and access to contraception methods through both print media and availability of wide range of family planning services than rural areas. However, it takes time till migrants become aware about their new surrounding and develop their social contacts. The level of use of current contraception method among rural-urban migrants (36%) is almost two times higher than rural non migrants (20%), but less than urban non migrants (42%) (Lindstrom & Hernandez, 2006).

According to a study conducted in Peru, women who have lived in urban areas of Peru all their life's are more likely to seek an institutional source for modern contraception methods, antenatal care and help with child diarrhea or ARI symptoms, compared with women who are migrants, both from urban and rural areas. Among them, women who have migrated from rural areas are less likely to seek support from private or public sources for their reproductive and child health needs. The study also pointed out that most of women who have migrated from rural area have no education or only a primary level of education, have no health insurance or live in households that are in the lowest wealth category compared with urban non-migrants and urban migrants. Further study highlighted that these factors (education, health insurance or wealth category) are significantly associated with women's likelihood of using reproductive health care, but not health care for children's illnesses (Subariya,2007).

Although researchers have studied the influence of rural-urban migration on fertility (Brockerhoff and Yang, 1994; Chattopadhyay et al., 2006; White et al., 2005) and mortality (Islam and Azad, 2007; Stephenson et al., 2003), only few studies focus on the relationship between internal migration and current use of modern contraception

methods. This study is an attempt to explore the relationship of internal migration and current use of modern contraception methods among currently married women age group between (15-49) years in India.

Research Objectives

1. To explore the current use of modern contraception methods among migrants and non-migrants in India.
2. To examine the relationship between different migration streams and current use of modern contraception methods in India.

Research Questions

The study answers two questions as follow:

1. Does the current use of modern contraception methods differ among migrants and non- migrants in India?
2. Do the different types of internal migration affect the current use of modern contraception methods among currently married women in India?

Theory

This study applies *Theory of assimilation* to explain the effect of and link between internal migration and current use of modern contraception methods in India.

Limited numbers of migration theories have explained effect of migration. In 1981, Bach (International Migration Review) has developed *Theory of Assimilation.* When individuals move from place of origin to place of destination, they carry certain set of behaviors, values and status along with them.

Migration often provides opportunity to people to come across with various kind of social, cultural and economic contexts where they have learned new ideas, practices and behaviors. Over period of time, way of thinking, characteristics and behavior get changed as similar to surrounding of the people at place of destination (Ford, 1990). However, this phenomenon of assimilation is selective and happens gradually. The idea of assimilation has already been adopted to elucidate fertility differentials between migrants and non-migrants. (Lindstrom & Giorguli Saucedo, 2002), describing in sexual behavior (Brockerhoff & Biddlecom, 1999), health-seeking behavior (Levy-Storms & Wallace, 2003) and change in breastfeeding practices (Myntti, 1979).

Data and Methods

The National Family Health Surveys (NFHS) are nationwide survey conducted with a representative sample of households throughout the country. The Ministry of Health and Family Welfare (MOHFW), Government of India (GOI), initiated the NFHS surveys to provide high quality data on population and health indicators. The MOHFW designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency for each of the three rounds of NFHS.

The third National Family Health Survey (NFHS-3) was conducted in 2005-06. There were four types of respondents covered in NFHS-3 i.e. 15-49 age groups ever married women & never married women, 15-54 age group male married and never married. In NFHS-3, total interviews were conducted with 124,385 women age group 15-49 and 74,369 men age group 15-54 from all 29 states.

This study uses all India data of NFHS-3 of women segment age group between (15-49) years. In this segment questions were asked related to knowledge and current use family planning methods to currently married women age group between (15-49) years. Those women who were using modern contraception methods (Pill, IUDs, injections, diaphragm, condom, female and male sterilization, implant, foam or jelly and other modern methods) at the time of survey categorized as used and those women who were not using any contraception method or traditional methods categorized as not used.

Internal migration was the main predicator variable in this study. Since NFHS did not have any direct questions on migration so derived migration experience from a question asked to the women: *"how long you have been living continuously on this (current) place of residence?"* Those who answered 'always', were classified as non-migrants, whereas, for those whose answered 'number of years lived at the current place of residence' or 'length of time at the current place of residence', a further question was asked "Just before you moved here, did you live in a city or in a town or in the countryside?"

Considering the objective of current study, i.e. to explore the relationships between migration and current use of modern contraception methods, this study focused on recent migration and defined migrants as women who moved during the last 10 years before the survey and changed place of residence across an administrative boundary. Based on above information, there were six possible categories of migration status: (1) Rural to rural migrants (2) Urban to urban migrants (3) Rural to rural migrants (4) Urban to rural migrants (5) Non- migrants (rural) and (6) Non-migrants (urban).

In this paper, bi-variate (Chi- squared test) analysis was performed to explore the association of migration status and migration streams with current use of modern contraception methods. Further, binary logistic regression analysis was performed to examine the net effect of migration status and migration streams on current use of modern contraception methods after simultaneously controlling for back ground characteristics.

Results

Table 1 described percentages of currently married women aged 15-49 years old by current use of modern contraception methods according to migration status and migration streams. Using Chi- squared test, results show that migration status and migration streams had a significant association with current use of modern contraception methods. About 40.4% of migrant women reported to use of modern contraception methods, compared to 48.4% of non- migrant women.

The level of current use of modern contraception methods among rural-urban migrants (43.2%) was higher than rural non- migrants (42.1%), urban to rural migrants (40.2%) and rural-rural migrants (32.3%), but lower than urban- non migrants (55.1%) and urban-urban migrants (51.0%).

Table 1 Percentage of currently married women aged 15-49 by current use of modern contraception methods according to migration status and migration streams

Characteristics	Current use of modern contraception methods		Total	
	Not used	Used	%	N
Migration status* **				
Non- migrants	51.6	48.4	100.0	19,618
Migrants	59.6	40.4	100.0	34,672
Migration streams* **				
Rural to rural migrants	67.7	32.3	100.0	14,924
Urban to urban migrants	49.0	51.0	100.0	9,863
Rural to urban migrants	56.8	43.2	100.0	6,701
Urban to rural migrants	59.8	40.2	100.0	3184
Non-migrants (rural)	57.9	42.1	100.0	10,084
Non-migrants (urban)	44.9	55.1	100.0	9,534

*Note *** Chi-square test is significant at P<0.01 and P<0.001*

Logistic regression analysis was used to measure the strength of the association between various factors and the probabilities of current use of modern contraception methods. The first model uses the simplest measure of migration, whether or not a woman is a migrant. The second model takes a more informative measure, migration stream. Both models control for other back ground characteristics of women. In the first model after controlling for other back ground characteristics, a woman's migration status had a significant association with current use of modern contraception methods. Non- migrants had a lower odds of current use of current contraception methods (OR=0.91, $p<0.001$) than migrant women. In the second model, net of other factors migration streams had a significant association with current use of modern contraception methods. Urban non-migrants (OR=1.25, $p<0.001$) and urban to urban migrants (OR=1.24, $p<0.001$) had higher odds of current use of modern contraception methods than rural to urban migrants women. However, rural to rural migrants (OR=0.86, $p<0.001$) had a lower odds of current use of modern contraception methods than rural to urban migrants.

Other control variables show significant effects on current use of modern contraception methods. In general, age, education, occupation, number of living children, religion and wealth index were significantly associated with the current use of modern contraception methods. Effects of all control variables in models are primarily similar.

Consistent in both models, compared to women aged 15-24 years old, women aged (25-34) and (35-49) years old had a higher odds of current use of modern contraception methods. Women with some education (either primary, secondary, or higher than secondary of education) had a higher odds of current use of modern contraception methods than women with no education. The higher the education level, the a higher odds of utilizing antenatal care the women had. Regarding the occupation of women, results show that women who worked as professional/technical/manager, clerical/sales/service, skilled & un-skilled manual worker and agri-employee & household domestic had a higher odds of current use of modern contraception methods, compared to women who did not-work. Women with no child or one living children had a lower odds of current use of modern contraception methods, compared to women with four or more living children.

Those women who belong from either Muslim or others religion had a lower odds of current use of modern contraception methods, compared to those women who belong from Hindu religion. In terms of wealth index, women in middle and rich household had a higher odds of current use of modern contraception methods than women in poor category.

Table 2 Odds ratio from Multivariate regression analysis assessing the association between migration status, migration streams and other background characteristics and their current use of modern contraception methods

	Model 1	**Model 2**
	Odds Ratio	**Odds Ratio**
Migration status (Ref. migrants)		
Non-migrants	0.91***	
Migration streams (Ref. rural to urban migrants)		
Rural to rural migrants		0.86***
Urban to urban migrants		1.24***
Urban to rural migrants		1.03
Non-migrants (rural)		0.98
Non-migrants (urban)		1.25***
Age group (Ref. 15-24 years)		
25-34 years	1.65***	1.61***
35-49 years	1.73***	1.67***
Education (Ref. No education)		
Primary	1.34***	1.33***
Secondary	1.34***	1.32***
Higher education	1.66***	1.56***
Occupation (Ref. Not working)		
Professional/ technical/manager/clerical/sales/service	1.26***	1.23***
Skilled & un-skilled manual worker	1.30***	1.30***
Agri- employee & household domestic	1.16***	1.24***

	Model 1	Model 2
	Odds Ratio	**Odds Ratio**
Number of living children (Ref. >=4)		
None	0.04***	0.04***
1	0.25***	0.25***
2	0.99	1.00
3	1.35***	1.35***
Religion (Ref. Hindu)		
Muslim	0.61***	0.59***
Others	0.48***	0.48***
Wealth index (Ref. Poor)		
Middle	1.47***	1.42***
Rich	2.37***	2.12***
Pseudo R2	0.20***	0.21***
Log likelihood	-29483.2	-29414.5
N	54119	54119
*** : P< 0.001 **: P<0.01 *P<0.05		

Discussion

This study is an attempt to explore the association of internal migration with current use of modern contraception methods among currently married women aged 15-49 years old in India.

The bivariate analysis result indicated that migration status and migration streams were significantly associated with current use of modern contraception methods. The multivariate analysis showed a different pattern of migration status with current use of modern contraception methods. In the multivariate analysis, migration status, migration streams, age of women, number of living children, education, occupation, religion and wealth index were found to have statistically significant association with current use of modern contraception methods.

Study finding indicated that about 48% of non-migrants women were using modern contraception methods than 40.4% of migrants women. Further, current use of modern contraception methods was higher among urban non- migrants (55.1%), urban to urban migrants (51.0%) and rural to urban migrants women (43.2%). This study finding is consistent with other studies conducted in Guatemala and Peru (Lindstrom & Hernandez, 2006; Subariya, 2007). Since study was considered only recent migration, therefore only slightly different was observed in use of modern contraception methods. However, study finding supported the *Theory of assimilation*.

Multivariate analysis results did not support finding from bi-variate analysis and indicated that migrants women were significantly more likely to use contraception methods after controlling the back ground characteristics. Urban non- migrants and urban to urban migrants women were significantly more likely to use modern contraception methods than rural to urban migrants, however, more likely to use than rural to rural migrants.

Conclusion

Bivariate and multivariate analyses indicated that currently married women differ in their current use of modern contraception methods. Women who urban non- migrated and urban to urban migrant were more using modern contraception methods than other migration streams and non-migrants rural. Of the three groups (urban non-migrants, urban-to-urban migrants, and rural-to-urban migrants), women who were non- rural migrants were least likely to use modern contraception methods.

The results of multivariate regressions indicated that mainly these factors were significantly associated with women's likelihood of current use of modern contraception methods. That was, age, education, occupation, number of living children, religion and household wealth.

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