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Rural-urban Differential in Utilization of Maternal Healthcare Services in India: A Decomposition Analysis

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Abstract

India has made significant progress in reducing maternal mortality ratio (MMR). However, this average achievement masks the enormous rural-urban disparity in maternal health outcome. Using the third round of the National Family Health Survey, 2005-06, this study quantifies the contribution of selected predictors explaining the average rural-urban gap in use of full antenatal care, medical assistance at delivery, and post-natal care in India. Descriptive analysis and non-linear decomposition (Fairlie's decomposition) technique are used to quantify the contribution of factors explaining the average gap. Result shows that there is a large gap in the use of the services between rural and urban areas with lower coverage of the services in rural areas. Economic status of the household is the largest contributor to the rural-urban gap in the use of the services followed by women's education and exposure to media. Current working status of mother and religion are the factors which are minimising the rural-urban gap in the use of the healthcare services.

Key words: Full antenatal care, medical assistance at delivery, post-natal care, Fairlie's decomposition, India.

I. Introduction

Use of maternal healthcare services during and after pregnancy is crucial for survival and well-being of the mothers as well as new-borns. The risk of maternal and infant deaths can be reduced substantially through regular and proper antenatal check-up during pregnancy and delivering the baby under medical assistance and hygienic conditions (Moller et al., 1989; Joseph, 1989; Rahman et al., 2009). About 80 per cent of the maternal deaths occur due to haemorrhage, sepsis, hypertensive disorder of pregnancy, unsafe induced abortion and obstructed labour worldwide which all could be prevented by timely use of pre-natal care and institutional delivery (WHO, 2005; Adam et al., 2005; MCcaw-Binns et al., 1995). Among the eight United Nations Millennium Development Goals (MDGs), the special focus on reducing under-five mortality by two-thirds and maternal mortality ratio by three-quarters (MDG 4 & 5 respectively) between 1990 and 2015 exemplified the importance of these indicators in global efforts towards human development (MCcaw-Binns et al., 2007; Freedman et al., 2007). Ensuring healthy life and wellbeing for all at all ages by the year 2030 is one of the seventeen Sustainable Development Goals (SDG-3) adopted by the United Nations in 2015 (United Nations General Assembly, 2015). The first target of SDG-3 is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births and second target is to end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births by the year 2030 (UN, 2015). It also underlines the important linkage between improvement in maternal health and development process, as poor maternal health may affect child health negatively, reduce

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women's productive capacity, lower participation in economic activities and sabotage the poverty alleviation programmes (Rosenfield et al., 2006).

Although maternal mortality is declining significantly at the global level, it is still very high. The MMR fell by nearly 44 per cent over the past 25 years to an estimated 216 maternal deaths per 100 000 live births in 2015 from 385 in 1990. Ninety-nine per cent of these deaths occur in developing countries. India alone contributed about 15 per cent of global maternal deaths worldwide in 2015, with approximately 45,000 maternal deaths (WHO & UNICEF, 2015). Such a high level of maternal mortality exists in spite of notable economic growth and remarkable progress in the fields of technology, medical science, food and agriculture. India's maternal mortality ratio was 174, which was seven times higher than that of Russia, six times that of China and about four times that of Brazil in 2015 (World Bank, 2015). This situation is regrettable and suggests that India's progress towards reducing maternal mortality will be crucial in the global achievement of SDG-3. But low use of maternal healthcare services coupled with enormous rural-urban and regional disparities, and severe social-economic and cultural constraints require a significant shift in priorities to increase service coverage and convenience to all sections of the population (*Human Rights Watch 2009*; Pallikadavath, 2004; Navaneetham & Dharmalingam 2002; Jejeebhoy, 1997).

Government of India launched the National Rural Health Mission (NRHM) in 2005 with special focus on 18 high focus states for the improvement of health system performance and health status of people in rural areas. The main objective of the NRHM was to reduce maternal and child mortality by providing universal access to equitable, affordable, accountable and effective primary healthcare services to the rural population of the country (Kumar, 2004). Furthermore, *Janani Suraksha Yojana* (JSY) – a conditional cash transfer scheme – was launched under the umbrella of the NRHM to promote institutional delivery among rural women. It is expected that the promotion of institutional delivery will reduce maternal and neonatal mortality among pregnant women of rural areas with special attention to women of poor socio-economic status (Lim et al., 2010).

After the launch of the JSY under the umbrella of NRHM, a significant number of institutional deliveries have increased. However, almost 20 to 25 per cent pregnant women are still not going to the health facilities for delivery. Those who have chosen the institutional delivery are not willing to stay for 48 hours in the institutions. The first 48 hours after birth are vital for identification and management of complications in both mother and child. So in line with this, Janani Shishu Suraksha Karyakarm (JSSK) was launched on 1st June, 2011 as an initiative to provide cashless services to pregnant women and sick neonate accessing public health institutions. The scheme envisages free and cashless services to pregnant women throughout pregnancy and also the treatment of sick newborns up to 30 days after birth at all levels of government institutions in both rural and urban areas (MoH & FW, 2011).

For understanding the importance of equity in use of maternal healthcare use, previous studies from India have examined the level, trends and socio-economic inequality in the use of maternal healthcare services (Becker et al., 1993; Collin et al., 2007; Houweling et al., 2007; Sekhar & Jayachandran 2005). Evidences from India show that individual education, household economic status, healthcare programmes and high cost of healthcare services have a significant impact on the use of maternal healthcare services (Pathak et al., 2010; Fillippi et al., 2006; Sunil et al., 2006; Gage & Calixte 2006; Ram & Singh 2006; Singh et al., 2012). However, very few studies have documented disparity in the use of maternal healthcare services across rural-urban population (Saikia & Singh 2009; Verma et al., 2001; Mistry et al., 2009). Moreover, these studies only examine the rural-urban gap in the use of healthcare services and find that women in rural India have lower use of maternal healthcare services than their urban counterparts. But none of these studies explain the factors contributing to the gap in the use of maternal healthcare services between rural and urban areas.

The present study, therefore, aims to identify the factors responsible for lower use of healthcare services in rural areas as well as to quantify the contribution of the factors in explaining the average rural-urban gap in the use of full antenatal care, medical assistance at delivery and post-natal care using cross-sectional data of the National Family Health Survey-3 conducted during 2005–06. For the purpose, we used the non-linear decomposition (Fairlie's) analysis which is helpful in explaining the gap in outcome between the two population groups (Fairlie, 1999, 2005).

II. Data and Methods

Data

This study uses data from the third round of the National Family Health Survey (NFHS–3) conducted during 2005–06. It was an extensive survey conducted on the basis of representative samples of households across the states and the union territories. It provides national and sub-national estimates of fertility, infant and childhood mortality, family planning, and utilization of maternal and child healthcare services. It adopted multistage sampling design – a two-stage sampling design in most of the rural areas and three-stage in most of the urban areas. The NFHS–3 collected information using different interview schedules – household schedule, women/individual schedule and men's schedule from the sampled households. The household response rate was 98 per cent and the individual response rate 95 per cent. Details of the sampling design, sample size estimation and response rate are given in the report of third round of NFHS-3(http://rchiips.org/nfhs/nfhs3_national_report.shtml).

Outcome variables

In the present study, full antenatal care, medical assistance at delivery and post-natal care within 48 hours of delivery are considered as outcomes variables. *Full antenatal care* is defined as women who had received a minimum of three antenatal check-ups, at least two tetanus toxoid injections during pregnancy and consumed iron and folic acids tablets for 90 or more days. *Medical assistance at delivery* is defined as delivery conducted either in a medical institution or home delivery assisted by a doctor/nurse/LHV/ANM/other health professional. *Post-Natal Care* is defined as services provided at the community level including counselling on family planning, breastfeeding practices, nutrition, management of neonatal hypothermia, early detection of postpartum complications and referral for such problems within 48 hours after the delivery. To make the estimates uniform and to minimize the recall bias, we have focused on most recent births of women in five-year period prior to the survey.

Predictor variables

A number of demographic and socio-economic predictors such as mother's age at birth of the new born (<20 years; 20-24 years, 25-29 years; 30 years and above), birth order and birth interval (first birth order; higher birth order and interval <24 months; higher birth order and interval ≥24 months), individual's and husband's education (no education; primary; secondary; secondary and above), wealth index (poorest; poor; middle; rich; richest), caste (Schedule Caste/Schedule Tribe; Other Backward Caste and Others), religion (Hindu; Muslim; Others), current working status of mother (not working; working), exposure to mass media (no exposure; exposure), freedom of movement (no; yes), household type (nuclear; non-nuclear), wanted last child (wanted; unwanted), and region (north, central, northeast, west and south) are considered as predictors in the study.

Methods

Bivariate analysis is used to examine the differences in the use of the full antenatal care, medical assistance at delivery and post-natal check-ups between rural and urban population. We applied chi–square test to understand the association between the outcomes and predictors.

Blinder-Oaxaca decomposition technique is a commonly used approach to identify and quantify the factors associated with inter-group differences in mean level of outcome (Oaxaca & Ransom, 1994). In the present study, this reveals how differences in the use of the maternal healthcare services between the rural and urban population can be explained by differences in socio-economic status between the groups. This technique, however is not appropriate if the outcome is binary (as in our case) in nature (Fairlie, 2006). Hence, we used the Blinder–Oaxaca decomposition technique modified for binary outcomes to decompose the gap between social groups in use of maternal healthcare services (Fairlie, 2006). For the decomposition analysis we used the *'fairlie'* command available in Stata 10.

The procedure computes the difference in the probability of an outcome between two groups and quantifies the contribution of group differences (e.g., black/white; male/female; north/south; rural/urban) in the independent variables to the outcome differential.

The non-linear decomposition technique is used to see difference in the probability of an outcome between two groups and quantifies the contribution of group differences.
Following, the decomposition for a non-linear equation of the type Y= F(x β), can be expressed as,

$$\bar{y}^U - \bar{y}^R = \left[\sum_{i=1}^{N^U} \frac{F(x_i^U \beta^U)}{N^U} - \sum_{i=1}^{N^R} \frac{F(x_i^R \beta^U)}{N^R}\right] + \left[\sum_{i=1}^{N^R} \frac{F(x_i^R \beta^U)}{N^R} - \sum_{i=1}^{N^R} \frac{F(x_i^R \beta^R)}{N^R}\right] \quad \ldots\ldots 1$$

Where, $\bar{y}^j$ is the average probability of a specific outcome in group j (j=U, R urban and rural, respectively), x^j is the set of average value of the independent variable in group j, β is the coefficient estimates for the group j, F is the cumulative distribution function from a standard normal or logistic distribution and N^j refers to the sample size in each group. The first term in the brackets shows the part of the group differences that is due to group differences in the distribution of the characteristics of the independent variable, also known as 'the explained part' whereas the second term represent the proportion of the group differences due to differences in the coefficient or 'returns' to the exogenous covariates but it also captures differences in immeasurable or unobserved endowments.
Similarly, the non-linear decomposition can be written as,

$$\bar{y}^U - \bar{y}^R = \left[\sum_{i=1}^{N^U} \frac{F(x_i^U \beta^R)}{N^U} - \sum_{i=1}^{N^R} \frac{F(x_i^R \beta^R)}{N^R}\right] + \left[\sum_{i=1}^{N^U} \frac{F(x_i^U \beta^U)}{N^U} - \sum_{i=1}^{N^U} \frac{F(x_i^U \beta^R)}{N^U}\right] \quad \ldots\ldots 2$$

In this case the estimated coefficients for rural, β^R, are used as weights to calculate the first term of the decomposition, and the urban distribution of average characteristics is employed as weights for the second term. Since the decompositions of Equations (1) and (2) provide different estimates, to avoid this familiar index problem in our calculations we used the coefficient estimates (β^*) from a pooled sample over all cases to weight the explained part of the decomposition (Fairlie, 1999).

According to Fairlie (2005), while Equations (1) and (2) provide an estimate of the contribution of the explained and unexplained part to the total difference, the calculation of the separate contributions of the individual independent variables (or groups of covariates) is not direct. If one assumes that $N^U = N^R$ and β^* is the probit coefficient estimates for a pooled sample, the individual contribution of regressor x^k to the urban rural Maternal and Child Health care services difference can be expressed as,

$$\frac{1}{N^R}\sum_{i=1}^{N^R} F(\widehat{\propto^*} + x_{ki}^U \hat{\beta}_k^* + \sum_{m \neq k} x_{mi}^U \hat{\beta}_m^*) - F(\widehat{\propto^*} + x_{ki}^R \hat{\beta}_k^* + \sum_{m \neq k} x_{mi}^U \hat{\beta}_m^*) \quad \ldots\ldots 3$$

This means that the contribution of a particular variable to the gap is calculated by holding constant the contribution of the other variables. Notice that the computation of Equation (3) involves a one-to one matching of cases between the two groups (urban/rural) and as they typically

differ in size (in our case $N^R > N^U$), then a large number of random sub-samples from the larger group are drawn. Each of these random sub-samples of the rural sample is then matched to the urban sample and finally separate decomposition estimates are calculated. The mean value of estimates from the separate decompositions is calculated and employed to derive the results for the entire rural sample. Analysis presented in the subsequent sections was carried out in STATA 10.0.

III. Results

Table 1 shows the sample characteristics of the women across rural and urban areas of the country. Rural women are deprived in most of the characteristics than their urban counterparts. For instance, 44 per cent of the urban women compared with 6 per cent of the rural women belonged to the richest wealth quintile; 26 per cent of the urban women are highly educated (more than secondary level) compared with 6 per cent of the rural women. Exposure to media is higher among urban (82 per cent) than rural (46 per cent) women. Similarly, freedom of movement is higher among urban women (55 per cent) than the rural women (42 per cent).

Table 2 shows the differences in the use of full antenatal care, medical assistance at delivery and post-natal care between urban and rural women by selected background characteristics. Use of the maternal healthcare services was higher among urban than rural women: about 27 per cent of the urban women compared with 11 per cent of the rural women received full antenatal care during their last pregnancy. Medical assistance at delivery was 76 per cent among urban women compared with 40 per cent among rural women. Likewise, post-natal care was 61 per cent among urban women compared with 29 per cent among rural women.

Table 2 further reveals that age of the mothers is associated with the use of maternal healthcare services in both urban and rural areas. Use of the services is higher among younger women than their older counterparts. A consistent adverse association is observed between parity of the women and use of the maternal healthcare services across the rural and urban residences. Individual and husband's education has positive influence on the use of services in both urban and rural areas. Utilisation of the healthcare services increases with improving household economic status. For instance, in urban areas use of full antenatal care was 41 per cent among women belonging to the richest wealth quintile compared with 6 per cent among women of the poorest wealth quintile. Similarly, in rural areas the coverage was 37 per cent vs. 3 per cent among the richest and poorest wealth quintiles respectively. A similar result is observed for medical assistance at delivery and post-natal care. Use of all the three services was higher among women of other caste groups in both urban as well as rural areas. In urban area, women with exposure to media make a greater use of full antenatal care (31 per cent) compared with those who were not exposed to any form of media (9 per cent). A similar pattern is observed in rural area. Freedom of movement (going to the market and visiting relatives and friends) is positively associated with the use of healthcare service.

Table 3 presents results of the multivariate (logistic regression) analysis showing determinants of the use of full antenatal care, medical assistance at delivery and post-natal care among urban as well as rural women. Results show that education of women and husbands, economic status of households, birth order and interval, and region of residence are significant determinants of the use of maternal healthcare services among urban and rural women. In urban areas, women with higher parity and lower birth interval are less likely to use full antenatal care (OR=0.60; CI: 0.52– 0.68) than women with lower parity. Household economic status has a significant positive effect on the use of full antenatal care among rural women. Women from the richer wealth quintile (OR=1.91; CI =1.20–3.06) and richest wealth quintiles (OR=3.0; CI: 1.87–4.83) are significantly more likely to use full antenatal care compared with women from the poorest wealth quintile. Similarly, educated women are more likely to use full antenatal care. For instance, in urban areas, odds ratios of full antenatal care among women with secondary education and above are 2.04 (CI: 1.73 – 2.41) and 3.19 (CI: 2.64–3.85) respectively. Similar result is found in rural areas – the odds ratio is 2.33 (CI: 1.99–2.72) among women with secondary education and

3.36 (CI = 2.75–4.09) among women with more education. Husband's education influences the use of full antenatal care in a similar direction. Utilization of full antenatal care was found to be less likely in all regions of India compared with the southern region (OR= 2.37, CI= 2.05-2.74) in both urban and rural areas. The lowest odds of full antenatal care use were evident in the central region (OR = 0.79, CI = 0.68-0.91), followed by the north-eastern region (OR = 0.65, CI = 0.55-0.77) and eastern region (OR = 1.25, CI =1.07-1.47) in urban area. A similar result is observed in rural area.

In the case of medical assistance at delivery, mothers aged 25- 29 years are more likely to use the service compared with mothers of other age groups across urban and rural areas. Women with higher birth order children and <=24 months of birth interval were less likely to have medically assisted delivery than women who had childbirth for the first time. Women from the richer and richest wealth quintiles were nearly four times (OR=4.20, CI= 3.21-5.50) and seven times (OR= 7.32, CI= 5.47-9.79) more likely to receive medical assistance at delivery respectively compared with women from the poorest wealth quintile in urban area. Similar result is also found in the case of rural areas. Women with a better educated spouse (secondary and higher) are significantly more likely to use medical assistance at delivery in both urban and rural areas. Freedom of movement and non-nuclear family has higher chance to go for safe delivery in both the areas. Those women who did not want their last child were less likely to have medically assisted delivery compared with those who wanted their last child. Findings show significant regional variation in the use of medical assistance at delivery. Safe delivery was more likely in southern region compared with other regions. The lowest odds of receiving safe delivery among women were evident in the central and western regions in both the rural and urban areas.

In the case of post-natal care, mothers aged 30 years and above appear to be significant and positive determinant in both urban (OR=1.37, CI=1.17-1.62) and rural (OR=1.32, CI=1.15-1.52) areas. Women with higher birth orders and ≥24 months of birth interval were more likely to utilize post-natal care than women who experienced childbirth for the first time. Urban and rural women from the richest wealth quintiles were about four times (OR=3.94, CI= 2.96-5.24 and OR=4.22, and CI=3.55-5.02 for urban and rural areas respectively) more likely to use post-natal care compared with poorest women. Women of 'Other' castes are more likely to use post-natal care compared with Scheduled Caste/Tribes women. Freedom of movement has a positive and significant influence on receiving post-natal care in urban and rural areas. Use of post-natal care was significantly higher in southern and western regions compared with northern region in both urban and rural areas.

A summary of the decomposition analysis for rural-urban gap in the use of full antenatal care, medical assistance at delivery, and post-natal care within 48 hours is given in the Table 4. The mean differences in use of the services between urban and rural are 0.157 for full antenatal care,0.341 for medical assistance at delivery and 0.307 for post-natal care. The mean differences were significant ($p<0.05$) for all the three services.

Table 5 shows how the differences in the distribution of the selected determinants contributed to the average rural-urban gap in the use of maternal healthcare services. A negative contribution indicates that the particular determinant was narrowing the gap in the use of the services between urban and rural areas and vice-versa. In general, more than 70 per cent of the average urban-rural gap was explained by the contributors considered in the analysis. Household wealth, education of both men and women, exposure to media and region of the country were important contributors to the average gap in the use of all the three healthcare services between urban and rural areas. For instance, in the case of the average urban-rural gap in the use of full antenatal care, the contribution of household wealth was 45 per cent, woman's education 26 per cent, husband's education 7 per cent, exposure to media 7 per cent, region of residence 6 per cent and caste 5 per cent. Similarly, in the case of medical assistance at delivery, household wealth contributed 46 per cent, woman's education 31 per cent, husband's education 5 per cent, exposure to media 8 per cent, region 7 per cent and caste 3 per cent to the average urban-rural gap. In the case of post-natal care, household wealth contributed 49 per cent, woman's education 25 per cent,

exposure to media 10 per cent, region of the residence 7 per cent and caste 5 per cent in the average urban-rural gap.

IV. Discussion and Conclusion

Our findings show large urban-rural gap in the use of maternal healthcare services in India. Their use is higher among women of urban area than rural area. The pattern remains consistent across the selected background characteristics and regions of the country. These findings are similar to that of international (Rahman et al., 2009; Afful-Mensah, 2014; Anwar et al., 2015), national (Navaneetham and Dharmalingam, 2002), and sub-national evidences (Prusty et al., 2015). The high urban-rural gap in the use of the maternal healthcare services might be associated, with differing socio-economic and demographic characteristic in urban and rural areas in India (Rahman et al., 2008; Pathak et al., 2010; Chauhan & Rai, 2015).

Their lower utilization by rural population may be due to several barriers like cost of transportation, cost of care and low awareness about health-promoting behaviour (Chimankar & Sahoo, 2011; Rai & Chauhan, 2014). Furthermore, health services in rural India suffer from skewed spatial supply, lack of health workers, poor infrastructural facilities, excess of work load and a weak referral system (Malhotra & Do, 2012). Lack of motivation among health providers and poor communication between healthcare providers and patients is also among the important hurdles in the utilization of these services in rural areas (Singh et al., 2012.).

The result of the decomposition analysis reveals that the average urban-rural gap in their use is also attributable to differences in the distribution in the determinants. The main predictors that contributed to the average gap in their use are household wealth status, followed by women's and husbands' education and women's exposure to media. The greatest contribution of the household wealth to the average urban-rural gap could be understood by the fact of greater income-related disparity between urban and rural areas. According to the 66th round of National Sample Survey Office, the average per capita expenditure in urban areas was almost 88 per cent higher compared with the rural areas (National Sample Survey Office 2011). Given the fact that 31 per cent of rural women belong to the poorest of the poor economic group, it is not surprising that household economic status turns out to be the largest contributor widening the rural-urban gap in the use of the healthcare services. This is well documented (Pathak and Mohanty 2010; Pathak et al., 2010). It is argued that poor rural households do not have enough resources to pay for healthcare expenses. In contrast, the urban population is relatively wealthier and better educated, may have a more modern view of life, has greater acquaintance with the modern healthcare system, and greater confidence in dealing with maternal health, all of which may facilitate the higher use of maternal health care.

The higher contribution of a woman's and husband's education in the average urban-rural gap in all the three indicators could be understood through association of education with its lower income generation potential as rural women are mostly engaged in the agricultural sector where employment is often irregular and income is poor. Such economic status results in the underuse of healthcare services and their less awareness, which are detrimental to their use. Low levels of maternal education in rural areas may limit women's health promoting behaviour through limited knowledge and autonomy within households which has an impact on the use of healthcare services.

The other contributor to the urban-rural gap is birth order and interval, and caste. In the Indian context, mostly higher birth order is a symbol of the presence of more children within a family and rural areas have bigger families than urban areas. The significant contribution of caste may be attributed to a higher concentration of deprived caste groups (SC/STs) in rural areas and in poor living environment as compared with the urban population. Caste may be considered as a proxy for socio-economic status and poverty. STs, which are considered a socially and geographically disadvantaged group, have a higher probability of living under adverse conditions (Nayar, 2007). Our interesting result is that working status of the mother reduces the average gap

in utilization of full antenatal care, medical assistance at delivery and post-natal care among the women in urban and rural areas. This may be explained by the fact that these factors are associated with relatively better household wealth and educational status, both of which are favourable for a better use of healthcare services.

To conclude, persistence of considerable rural–urban differentials in the utilization of maternal health care services suggests the failure of social and health policies to ensure sustainable health progress for all population groups. In addition to strengthening maternal and child health care programmes in rural areas, substantial efforts must be made to improve the education and economic status of women.

Limitations of the Study

The study has some limitations which need to be considered when interpreting the results. Owing to data limitation, some of the maternal and child health care utilization related factors have not been taken into account in the study. For example, distance to health facility from residence, availability of health facility within the locality of residence and availability of health personal could have influenced the utilization of maternal and child health care services.

References

Adam, T., Lim, S. S., Mehta, S., Bhutta, Z. A., Fogstad, H., Mathai, M., & Darmstadt, G. L. (2005). Cost effectiveness analysis of strategies for maternal and neonatal health in developing countries. *British Medical Journal*, *331*(7525), 1107.

Afful-Mensah, G., Nketiah-Amponsah, E., & Boakye-Yiadom, L. (2014). Rural-urban differences in the utilization of maternal healthcare in Ghana: The case of antenatal and delivery services. *African Social Science Review*, 6(1), 4.

Anwar, I., Nababan, H. Y., Mostari, S., Rahman, A., & Khan, J. A. (2015). Trends and Inequities in Use of Maternal Health Care Services in Bangladesh, 1991-2011. *PloS one*, 10(3), e0120309.

Becker, S., Peters, D. H., Gray, R. H., Gultiano, C., & Black, R. E. (1993). The determinants of use of maternal and child health services in Metro Cebu, the Philippines. *Health Transition Review*, 77-89.

Chauhan, B. G., & Rai, A. K. (2015). Skilled birth attendance across geographical regions in India: Rural-urban differentials, 1992-2006. *Social Science Spectrum*, 1(2), 114-126.

Chimankar, D. A., & Sahoo, H. (2011). Factors influencing the utilization of maternal health care services in Uttarakhand. *Ethno Medicine*, 5(3): 209-216.

Collin S. M., Iqbal A. and Carine Ronsmans (2007). A decade of inequality in maternity care: Antenatal care, professional attendance at delivery, and caesarean section in Bangladesh (1991–2004). *International Journal for Equity in Health*.http://www.equityhealthj.com/content/6/1/9

Fairlie, R. W. (1999). The absence of the African-American owned business: An analysis of the dynamics of self-employment. *Journal of Labor Economics*,*17*(1), 80-108.

Fairlie, R. W. (2006). An extension of the Blinder-Oaxaca decomposition technique to logit and probit models. *Yale University Economic Growth Center Discussion Paper*, (873).

Freedman, L. P., Graham, W. J., Brazier, E., Smith, J. M., Ensor, T., Fauveau, V., ... & Agarwal, K. (2007). Practical lessons from global safe motherhood initiatives: Time for a new focus on implementation. *The Lancet*, *370*(9595), 1383-1391.

Gage, A. J., & Guirlène Calixte, M. (2006). Effects of the physical accessibility of maternal health services on their use in rural Haiti. *Population studies*, *60*(3), 271-288.

Houweling, T. A., Ronsmans, C., Campbell, O. M., & Kunst, A. E. (2007). Huge poor-rich inequalities in maternity care: An international comparative study of maternity and child care in developing countries. *Bulletin of the World Health Organization*, 85(10), 745-754.

Human Rights Watch (HRW) (2009). *No tally of the anguish: Accountability in maternal health care in India*. Available: http://www.hrw.org/en/reports/2009/10/08/no-tally-anguish-0.

International Institute for Population Sciences (IIPS) & ORC Macro (2007) *National Family Health Survey (NFHS-3), 2005-06*: *India*. Mumbai: International Institute for Population Sciences.

Jejeebhoy, S. J. (1997). Maternal mortality and morbidity in India: Priorities for social science research. *Journal of Family Welfare*, *43*(2), 31-52.

Joseph, C. L. (1989). Identification of factors associated with delayed antenatal care. *Journal of the National Medical Association*, *81*(1), 57.

Kumar, S. (2004). Challenges of maternal mortality reduction and opportunities under National Rural Health Mission— A critical appraisal. *Indian journal of public health*, *49*(3), 163-167.

Lim, S. S., Dandona, L., Hoisington, J. A., James, S. L., Hogan, M. C., & Gakidou, E. (2010). India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: An impact evaluation. *The Lancet*, *375*(9730), 2009-2023.

Malhotra, C., & Do, Y. K. (2012). Socio-economic disparities in health system responsiveness in India. *Health Policy and Planning*, czs051.

McCaw-Binns, A., La Grenade, J., & Ashley, D. (1995). Under-users of antenatal care: A comparison of non-attenders and late attenders for antenatal care, with early attenders. *Social science & medicine*, *40*(7), 1003-1012.

Ministry of Health and Family Welfare (2011). *Guidelines for Janani Shishu Suraksha Karyakram (JSSK)*, Maternal Health Division, Ministry of Health and Family Welfare, Government of India,http://jknrhm.com/guidelines_for_jssk.pdf.

Mistry, R., Galal, O., & Lu, M. (2009). Women's autonomy and pregnancy care in rural India: A contextual analysis. *Social science & medicine*, *69*(6), 926-933.

Moller, B., Lushino, O., Meirik, O., Gebre-Medhin, M., & Lindmark, G. (1989). A study of antenatal care at village level in rural Tanzania. *International Journal of Gynecology & Obstetrics*, *30*(2), 123-131.

National Family Health Survey (NFHS-3), 2005–06: India. Volume I. IIPS, Mumbai. http://rchiips.org/nfhs/nfhs3_national_report.shtml

National Sample Survey Office (2011). *Key indicators of household expenditure in India 2009-2010*. Paper presented at the NSS 66th Round, July 2009-June 2010.

Navaneetham, K., & Dharmalingam, A. (2002). Utilization of maternal health care services in Southern India. *Social science & medicine*, 55(10), 1849-1869.

Nayar, K. R. (2007). Social exclusion, caste & health: A review based on the social determinants framework. *Indian Journal of Medical Research,* 126(4), 355.

Oaxaca, R. L., & Ransom, M. R. (1994). On discrimination and the decomposition of wage differentials. *Journal of Econometrics*, 61(1), 5-21.

Pallikadavath, S., Foss, M., & Stones, R. W. (2004). Antenatal care: Provision and inequality in rural north India. *Social science & medicine*, *59*(6), 1147-1158.

Pathak, P. K., & Mohanty, S. K. (2010). Does the safe-motherhood programme reach the poor in Uttar Pradesh, India? *Asian Population Studies*, *6*(2), 173-191.

Pathak, P. K., Singh, A., & Subramanian, S. V. (2010). Economic inequalities in maternal health care: Prenatal care and skilled birth attendance in India, 1992–2006. *PloSone*, *5*(10), e13593.

Prusty, R. K., Gouda, J., & Pradhan, M. R. (2015). Inequality in the Utilization of Maternal Healthcare Services in Odisha, India. *International Journal of Population Research*, 2015.

Rahman, M. M., Islam, M. R., & Islam, A. Z. (2009). *Rural-urban differentials of utilization of ante-natal health-care services in Bangladesh.*

Rai, A. K., & Chauhan B. G. (2014). Inequality in Utilization of Maternal Health Care Services among teenage married women in Uttar Pradesh: Evidences form NFHS-3. *Global Journal of Multidisciplinary Studies*, 3(10).

Ram, F., & Singh, A. (2006). Is antenatal care effective in improving maternal health in rural Uttar Pradesh? Evidence from a district level household survey. *Journal of Biosocial Science*, *38*(4), 433-448.

Rosenfield, A., Maine, D., & Freedman, L. (2006). Meeting MDG-5: An impossible dream? *The Lancet*, *368*(9542), 1133-1135.

Saikia, N., & Singh, A. (2009). Does type of household affect maternal health? Evidence from India. *Journal of biosocial science*, *41*(03), 329-353.

Sekhar, C., & Jayachandran, V. (2005). Immunization coverage in India, 1991-2001: Multiple indicator surveys vis-à-vis focused surveys. *Human Rights and Social Policies for Children and Women: The Multiple Indicator Cluster Surveys (MICS) in Practice*, 87-95.

Singh, A., Pallikadavath, S., Ram, F., & Ogollah, R. (2012). *Inequalities in advice provided by public health workers to women during antenatal sessions in rural India*.

Singh, L., Rai, R. K., & Singh, P. K. (2012). Assessing the utilization of maternal and child health care among married adolescent women: Evidence from India. *Journal of biosocial science*, 44(01), 1-26.

Sunil, T. S., Rajaram, S., & Zottarelli, L. K. (2006). Do individual and program factors matter in the utilization of maternal care services in rural India? A theoretical approach. *Social science & medicine*, *62*(8), 1943-1957.

Verma, K., Thomas, A., Sharma, A., Dhar, A., & Bhambri, V. (2001). Maternal mortality in rural India: A hospital based, 10 year retrospective analysis. *Journal of Obstetrics and Gynaecology Research*, 27(4), 183-187.

United Nations General Assembly (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. New York: United Nations.

World Bank (2015). *World Development Indicator*. http://data.worldbank.org/indicator/SH.STA.MMRT.

World Health Organization, & UNICEF. (2015). Trends in maternal mortality: 1990 to 2015: Estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division.

World Health Organization. *World Health Report.* Geneva, 2005: WHO.

Table 1: Distribution of women having at least one live birth during five years preceding the survey by background characteristic in urban and rural India, 2005-06 (%)

Covariates	Urban		Rural	
	Per cent	n	Per cent	N
Mother's age at child birth				
<20 years	12.9	1679	19.0	3645
20-24 years	41.4	5645	39.4	8446
25-29 years	30.4	4590	24.9	5967
≥30 years	15.3	2613	16.7	4265
Birth order and interval				
First order birth	32.3	4810	24.2	5584
Higher birth order and interval <24months	14.0	2789	13.3	4731
Higher birth order and interval ≥24 months	35.3	6877	31.0	11964
Household wealth status				
Poorest	4.1	425	31.4	5729
Poor	7.6	954	26.8	5514
Middle	15.4	2181	21.1	5237
Rich	29.2	4311	14.3	3825
Richest	43.7	6656	6.3	2018
Individual's education				
No education	25.7	3370	55.5	10772
Primary	11.9	1679	14.6	3524
Secondary	36.4	5328	23.9	6218
>Secondary	26.0	4150	6.1	1808
Husband's education				
No education	14.7	1918	32.7	6356
Primary	11.7	1596	16.1	3650
Secondary	51.2	7551	44.0	10353
>Secondary	21.6	3333	7.2	1674
Caste				
SCs/STs	21.1	3672	33.4	8429
OBCs	37.9	4571	42.7	7457
Others	39.3	5818	23.9	5531
Religion				
Hindu	74.1	9862	80.6	15944
Muslim	20.2	2836	15.0	3015
Others	5.7	1829	4.4	3364
Current working status of mother				
Not working	81.2	11562	65.8	14335
Working	18.6	2935	34.2	7937
Exposure to media				
Unexposed	17.9	2216	53.7	10690
Exposed	82.1	12311	46.3	11633
Freedom to movement				
No	42.8	5386	57.6	10934
Yes	55.9	8879	42.4	10946
Household type				
Nuclear	48.4	6993	46.1	10476
Non-nuclear	51.6	7534	53.9	11847
Wanted last child				
Wanted	79.3	11512	77.5	17285
Unwanted	20.6	3009	22.5	5026
Region				
North	14.4	2401	12.2	4156
Central	22.3	2841	30.1	5034
East	15.8	1927	28.8	3920
Northeast	2.4	2423	4.7	4542
West	21.4	2339	9.8	1839
South	23.7	2596	14.4	2832
Total	**26.8**	**14527**	**73.2**	**22323**

Note- All 'n' are unweighted. Total may not be equal due to some missing cases.

Table 2: Women having at least one live birth during five years preceding the survey by pattern of maternity care services by background characteristics in urban and rural India, 2005-06 (%)

Covariates	Full antenatal care		Medical assistance at delivery		Postnatal care	
	Urban	Rural	Urban	Rural	Urban	Rural
Mother age at child birth	(54.19)***	(116.84)***	(50.79)***	(417.67)***	(57.84)***	(231.04)***
<20years	20.5	9.2	72.1	44.8	53.8	29.9
20-24 years	26.5	12.3	77.3	44.1	60.3	31.9
25-29 years	30.9	11.3	79.5	37.6	65.2	27.4
≥30 years	26.9	7.0	72.0	28.5	58.7	20.4
Birth order and interval	(296.74)***	(458.8)***	(415.44)***	(1556.36)***	(221.37)***	(786.32)***
First order	37.2	17.9	88.0	60.0	70.3	41.6
Higher birth order & interval <24months	17.6	7.8	66.0	33.9	51.8	24.5
Higher birth order &interval >24months	24.0	8.6	72.8	33.4	57.7	24.1
Household wealth status	(924.26)***	(2673.56)***	(1782.74)***	(4666.06)***	(1133.71)***	(3481.54)***
Poorest	5.7	3.3	32.0	20.1	22.6	13.9
Poor	8.5	5.8	44.2	32.1	31.5	21.7
Middle	14.4	11.6	61.1	48.6	47.5	33.6
Rich	20.4	22.0	76.3	65.2	58.0	47.2
Richest	41.4	37.4	91.9	86.8	75.9	70.0
Individual's education	(1385.09)***	(2907.55)***	(2157.51)***	(4512.55)***	(1560.80)***	(3400.52)***
No education	7.2	3.5	46.9	24.6	33.9	16.4
Primary	15.8	10.9	69.7	42.6	48.1	30.3
Secondary	28.3	19.6	85.0	63.1	67.9	45.9
>Secondary	50.3	38.6	96.9	83.1	82.9	65.6
Husband's education	(971.65)***	(1245.19)***	(1310.09)***	(2315.20)***	(950.88)***	(1266.15)***
No education	8.3	3.7	46.8	23.9	33.0	17.3
Primary	14.6	7.7	65.8	34.7	50.4	26.1
Secondary	26.1	14.3	80.2	49.2	63.0	34.4
>Secondary	49.7	26.6	94.6	70.6	80.6	49.9
Caste	(166.91)***	(276.94)***	(219.15)***	(661.22)***	(180.52)***	(412.61)***
SCs/STs	17.5	7.0	67.0	31.3	51.5	23.6
OBCs	26.5	10.7	74.9	40.8	58.1	27.4
Others	32.6	15.2	83.1	51.4	67.9	38.0
Religion	(122.55)***	(53.44)***	(220.53)***	(282.27)***	(90.37)***	(216.64)***
Hindu	28.9	10.7	78.5	41.3	61.4	29.2
Muslim	18.2	8.4	65.4	29.6	54.2	20.9
Others	35.7	15.4	89.3	51.4	74.8	40.3
Working status of mother	(.622)ns	(43.61)***	(30.83)***	(128.19)***	(4.79)**	(29.68)***
Not working	27.0	11.4	77.6	42.3	61.2	29.5
Working	27.9	8.9	71.7	35.5	58.6	26.5
Exposure to media	(390.02)***	1358.04)***	962.49)***	2342.54)***	639.45)***	2087.73)***
Unexposed	8.9	4.4	49.1	27.1	35.0	17.2
Exposed	31.1	17.7	82.4	55.0	66.3	41.5
Freedom to movement	(36.21)***	(50.82)***	(41.62)***	(22.05)***	(64.79)***	(48.39)***
No	24.2	9.4	73.5	38.9	56.3	26.9
Yes	29.5	12.1	78.8	41.6	64.1	30.6
Household type	(41.17)***	(102.28)***	(100.80)***	(317.00)***	(32.47)***	(112.92)***
Nuclear	24.3	8.6	72.2	34.5	57.9	25.4
Non-nuclear	29.8	12.3	80.5	44.7	63.3	31.1
Wanted last child	(69.96)***	(69.51)***	(150.15)***	(150.93)***	(144.82)***	(168.39)***
Wanted	29.0	11.4	79.1	41.9	63.6	30.3
Unwanted	20.1	7.8	66.6	33.5	49.5	22.1
Region	(504.34)***	(2567.60)***	(968.83)***	(3600.95)***	(954.73)***	(4731.69)***
North	27.3	8.3	74.0	43.2	60.5	33.9
Central	13.0	3.3	57.1	24.7	40.4	11.8
East	24.2	7.0	71.0	32.6	51.5	21.2
Northeast	20.1	7.4	71.1	31.6	43.3	14.8
West	29.4	18.5	87.2	57.0	69.9	48.5
South	41.0	30.4	90.8	75.2	79.5	64.0
Total	**27.1**	**10.5**	**76.5**	**40.0**	**60.7**	**28.5.**

Note: figures in parentheses are Chi- square values; Level of significance: *p<0.10, **p<0.05, ***p<0.01. ns: not significant.

Table 3: Binary Logistic regression showing odds ratio and 95 per cent confidential interval (CI) for receiving full antenatal care among women having at least one live birth during five years preceding the survey in urban and rural India, 2005-06

Covariates	Full antenatal care		Medical assistance at delivery		Postnatal care	
	Urban	Rural	Urban	Rural	Urban	Rural
Mother age at child birth						
<20 years®						
20-24 years	1.21(1.04-1.42)a	1.37(1.18-1.60)a	1.23(1.05-1.45)a	1.13(1.02-1.26)b	1.17(1.03-1.33)a	1.15(1.04-1.28)a
25-29 years	1.43(1.21-169)a	1.75(1.48-2.07)a	1.56(1.31-1.86)a	1.20(1.07-1.35)a	1.36(1.18-1.57)a	1.21(1.07-1.37)a
≥30 years	1.39(1.15-168)a	1.64(1.35-2.00)a	1.72(1.41-2.09)a	1.32(1.16-1.50)a	1.37(1.17-1.62)a	1.32(1.15-1.52)a
Birth order & interval						
First order birth®						
Higher birth order & interval <24months	0.60(0.52-0.68)a	0.53(0.46-0.61)a	0.42(0.36-0.49)a	0.37(0.34-0.42)a	0.68(0.61-0.77)a	0.56(0.51-0.63)a
Higher birth order & interval ≥24months	0.73(0.66-0.81)a	0.56(0.50-0.64)a	0.49(0.43-0.57)a	0.39(0.36-0.43)a	0.77(0.70-0.86)a	0.57(0.52-0.63)a
Household wealth status						
Poorest®						
Poor	1.40(0.84-2.33)	1.07(0.88-1.31)	1.79(1.35-2.38)a	1.28(1.16-1.42)a	1.49(1.11-2.00)a	1.26(1.13-1.41)a
Middle	1.55(0.96-2.49)	1.39(1.14-1.69)a	2.70(2.06-3.53)a	1.97(1.77-2.19)a	2.33(1.77-3.07)a	1.69(1.50-1.90)a
Rich	1.91(1.20-3.06)a	1.92(1.56-2.36)a	4.20(3.21-5.50)a	3.22(2.84-3.66)a	2.75(2.09-3.62)a	2.46(2.15-2.81)a
Richest	3.00(1.87-4.83)a	3.19(2.52-4.05)a	7.32(5.47-9.79)a	7.46(6.19-8.98)a	3.94(2.96-5.24)a	4.22(3.55-5.02)a
Individual's education						
No education®						
Primary	1.46(1.20-1.78)a	1.87(1.58-2.21)a	1.69(1.46-1.95)a	1.41(1.28-1.56)a	1.32(1.15-1.51)a	1.49(1.34-1.65)a
Secondary	2.04(1.73-2.41)a	2.33(1.99-2.72)a	2.47(2.17-2.81)a	1.86(1.70-2.04)a	1.88(1.67-2.11)a	1.84(1.66-2.03)a
>Secondary	3.19(2.64-3.85)a	3.36(2.75-4.09)a	7.56(6.00-9.54)a	2.84(2.39-3.37)a	2.89(2.47-3.38)a	2.51(2.15-2.94)a
Husband's education						
No education®						
Primary	1.19(0.95-1.50)	1.61(1.33-1.95)a	1.26(1.07-1.48)a	1.26(1.14-1.40)a	1.26(1.08-1.47)b	1.24(1.11-1.40)a
Secondary	1.28(1.05-1.57)b	1.58(1.33-1.88)a	1.28(1.11-1.48)a	1.34(1.22-1.47)a	1.20(1.05-1.37)b	1.11(1.00-1.23)b
>Secondary	1.83(1.46-2.29)a	1.67(1.33-2.09)a	1.48(1.18-1.86)a	1.59(1.34-1.87)a	1.43(1.20-1.71)	1.24(1.05-1.46)a
Caste						
SCs/STs®						
OBCs	1.16(1.02-1.32)b	1.20(1.06-1.37)b	1.08(0.95-1.23)	1.22(1.12-1.33)a	0.93(0.84-1.04)	0.96(0.84-1.04)
Others	1.32(1.16-1.49)b	1.19(1.04-1.36)b	1.48(1.29-1.69)a	1.36(1.24-1.50)a	1.27(1.14-1.42)a	1.15(1.14-1.42)a
Religion						
Hindu®						
Muslim	0.81(0.72-0.92)a	0.88(0.73-1.04)	0.72(0.64-0.82)a	0.72(0.64-0.80)a	0.95(0.86-1.06)	0.80(0.86-1.06)a
Others	0.83(0.71-0.96)a	0.72(0.60-0.85)a	0.88(0.73-1.05)	0.87(0.77-0.98)b	0.98(0.85-1.13)	0.90(0.85-1.13)c
Working status of mothers						
Not working®						
Working	1.23(1.10-1.37)a	0.92(0.82-1.02)	1.08(0.95-1.22)	0.89(0.83-0.96)a	1.11(1.00-1.23)c	0.92(1.00-1.23)b
Exposure to media						
Unexposed®						
Exposed	1.58(1.33-1.88)a	1.45(1.28-1.65)a	1.38(1.22-1.56)a	1.32(1.22-1.42)a	1.44(1.28-1.62)a	1.36(1.28-1.62)a
Freedom of movement						
No®						
Yes	1.14(1.04-1.25)a	1.24(1.12-1.37)a	1.05(0.95-1.16)	1.19(1.11-1.27)a	1.15(1.06-1.25)a	1.14(1.06-1.25)a
Household type						
Nuclear®						
Non-nuclear	1.08(0.99-1.18)	1.06(0.95-1.17)	1.09(0.99-1.21)	0.92(0.86-0.99)c	1.02(0.94-1.10)	0.91(0.94-1.10)a
Wanted last child						
Wanted ®						
Unwanted	0.74(0.66-0.83)a	0.88(0.78-1.00)c	0.89(0.80-1.00)c	0.86(0.84-1.05)a	0.83(0.75-0.91)a	0.80(0.75-0.91)a
Region						
North®						
Central	0.79(0.68-0.91)a	0.69(0.57-0.84)a	1.04(0.90-1.21)	0.94(1.26-1.59)	1.19(1.05-1.35)a	0.45(1.05-1.35)a
East	1.25(1.07-1.47)b	1.54(1.29-1.84)a	2.04(1.72-2.43)a	1.41(1.26-1.59)a	1.11(0.96-1.28)	0.87(0.96-1.28)a
Northeast	0.65(0.55-0.77)a	0.83(0.69-1.00)c	1.55(1.29-1.85)a	0.88(0.78-0.99)b	0.80(0.69-0.92)a	0.47(0.69-0.92)a
West	1.26(1.10-1.46)a	2.53(2.14-2.99)a	3.10(2.59-3.72)a	2.61(2.27-2.99)a	1.67(1.46-1.91)a	2.01(1.46-1.91)a
South	2.37(2.05-2.74)a	4.61(3.95-5.38)a	8.72(7.11-10.69)a	5.77(5.06-6.58)a	4.33(3.73-5.03)a	3.70(3.73-5.03)a

Note- ®: Reference category; a= P<0.01; b= P<0.05; c = P<0.1.

Table 4: Decomposition analysis for antenatal care, safe delivery and post-natal care in India, 2005-06

	Full antenatal care	Medical assistance at delivery	Post-natal care
Mean urban	0.274	0.765	0.618
Mean rural	0.118	0.424	0.311
Mean differences (urban-rural)	0.157	0.341	0.307
Explained	0.148	0.260	0.225
Per cent explained	94.3	76.2	73.2
Per cent unexplained	5.7	23.8	26.8

Mean differences were significant at p<0.05.

Table 5: Contribution of each factor in urban-rural differences in utilization of maternal and child health care services (antenatal care, medical assistance at delivery and post-natal care) in India, 2005-06

Covariates	Full antenatal care		Medical assistance at delivery		Post-natal care	
	Coefficients	% Contribution	Coefficient	% Contribution	Coefficients	% Contribution
Mother's age at child birth	0.002***	1.5	0.000	0.0	0.001***	0.3
Birth order and interval	0.003***	2.1	0.005***	2.0	0.003**	1.1
Caste	0.008***	5.3	0.009***	3.4	0.010***	4.5
Religion	-0.002***	-1.1	0.000	0.0	0.000***	-0.1
Household wealth	0.066***	45.0	0.120***	46.1	0.111***	49.3
Mother's education	0.040***	26.9	0.080***	30.9	0.056***	25.0
Father's education	0.011***	7.2	0.012***	4.6	0.007**	3.0
Work status of mother	-0.002***	-1.3	-0.003	-1.3	-0.004***	-1.6
Exposure to media	0.010***	6.5	0.020***	7.6	0.023***	10.0
Wanted last child	0.003***	1.7	0.001***	0.2	0.001***	0.6
Freedom of mobility	0.001	0.6	0.000	-0.1	0.001	0.6
Household type	0.000	-0.2	0.000	0.0	0.000	0.0
Region	0.009***	5.9	0.017***	6.5	0.016***	7.2
Total	0.147	100.0	0.260	100.0	0.225	100.0

Level of significance: *p, 0.10; **p, 0.05; ***p, 0.01.