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Do socio-demographic factors still predict the choice of place of delivery: A cross-sectional study in rural North India

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Abstract Improving maternal health is one of the goals to be achieved under the Millennium Development Goal (MDG), especially MDG-5. One of the predictors of maternal health is place of child birth. This study was carried out to determine the prevalence of home delivery and different socio-demographic factors associated with them. This study was a community-based cross-sectional study. Women who delivered a baby in the past 1 year were included in this study. A total of 300 women responded (93.2%) and gave consent to participate in the study. Prevalence of home delivery was 37.7%. Bivariate analysis showed that religion, caste, education of women and their partners, occupation of the spouse, monthly family income and socioeconomic status had a significant association with the choice of place of delivery. But multivariate regression analysis showed only religion, caste, education of spouse and monthly income to be significant factors in determining place of delivery. The findings of this study suggest that individual countries have to formulate interventions which will target marginalized or vulnerable populations with reference to caste, religion and wealth. A significant improvement in reaching the 5th MDG can be achieved if the first three MDG goals are focused on, i.e., eradication of poverty, achieving universal education and women empowerment.

1. Introduction

Improving maternal health is one of the goals to be achieved under Millennium Development Goals

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(MDG), specifically MDG-5. The deadline set for this aspiration is just around the corner. Two of the targets set under this goal were reducing maternal mortality by 75% and universalizing access (100%) to reproductive health care. Although some progress has been made, there is still an estimated 289,000 maternal deaths that occurred around the globe in 2013. There exists a large disparity among rich and poor nations as the maternal mortality ratio was 14 times higher in developing nations than in the developed nations. Regional estimates showed that developing countries were the major contributors to global maternal mortality (286,000 out of 289,000 maternal deaths, i.e., 99%), with 10—15 million more women annually who suffered from severe obstetric complications. Births attended by healthcare professionals increased only 2 percentage points from 31% to 33% in a span of 12 years (2000—2012). Rural and urban inequality was evident as over 32 million of the 40 million births not attended by skilled health personnel in 2012 occurred in rural areas [1,2]. Looking at the pace of progress, improving maternal health still stands as a challenge in front of policy makers [3]. As a developing nation, India contributes the highest (50,000 maternal deaths) to global maternal mortality among all countries. Lifetime risk of maternal death among Indian women was 1 in 190, which stands as one of the highest among Asian countries. The maternal mortality ratio in India was 178, which is far away from the MDG-5 target for India (109 maternal deaths per 100,000 live births) [2,4].

Provision of trained and well-equipped healthcare professionals during childbirth is necessary to avoid obstetric complications and maternal mortality. The health facility is the place where such provisions are found, and evidence suggests that institutional delivery is one of the critical interventions needed to reduce maternal morbidity and mortality [5,6]. Although India has recognized the importance of institutional delivery, it still has not materialized at the grass-roots level. Home as a preferred place of delivery is still prevalent in India where skilled attendants are mostly absent. According to an estimate, with current fertility rates and the percentage of annual change of skilled birth attendants of India, national births that are not attended by a skilled health worker are expected to reach 69 million between 2011 and 2015 [7,8].

Utilization of a health facility by women with respect to delivery is a complex phenomenon and is influenced by many factors. In the past, various studies worldwide [9,10] and in India [11,12] found inadequate availability of healthcare, large socioeconomic differences, geographic regions, social factors, education levels, etc., are related to maternal healthcare utilization. In response to such situation, India has taken some steps to eliminate barriers for maternal health utilization, such as a conditional cash transfer system, strengthening of health facilities, infrastructural development, etc. [13]. Despite all the progress and implementation of promotional programs, India is still lagging behind. Whether all these factors still predict the utilization of a health facility as a preferred place of delivery is still questionable. The present study was carried out to determine the prevalence of home delivery and the different associated socio-demographic factors.

2. Methodology

The present study is a community-based cross-sectional study conducted in two nearby villages, namely, Barwala and Pooth Khurd, situated in the northwest district of Delhi. There are two rural health training centers (RHTCs), one in each of the two villages, which are attached to the Department of Community Medicine, Maulana Azad Medical College (MAMC), New Delhi. RHTCs undertake surveys from time to time to update the demographic profile of the population served by it. According to a recent survey (2011), both villages jointly cater to a population of nearly 19,000. There are two government hospitals present nearby the study area apart from RHTCs. The present study was carried out for 1 year from January to December 2012. The study population consisted of all the women residing in the study area who had delivered a live baby in the previous 1 year.

The study was carried out by a house-to-house visit in the study area, and those women who satisfied the inclusion criteria were included in the study. In the beginning, the purpose of the study was explained to the subjects in their local language. The interviews of all eligible participants were undertaken by investigators after receiving written informed consent from them. A total of 322 women fulfilled the inclusion criteria, but only 300 women responded (93.2%) and gave consent to participate in the study.

The study participants were interviewed through the pre-designed, pre-coded and semi-structured questionnaire. The study questionnaire was pretested on 28 women (nearly 10% of the total sample size) from another village nearby the study area and the necessary modifications were made beforehand. No leading or suggestive questions