Extended Abstract

Risk and Vulnerability of Slum Women During Pregnancy in Bangladesh: A Cross-sectional Study from Dhaka City

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The level of tobacco consumption is high and increasing in the developing world. Among the smokers, the majority are from developing world. Tobacco is responsible for more deaths than any other risk factors than high blood pressure. Tobacco undermines the well being of populations. Given its high ranking in terms of causes of disease and death, tobacco weighs heavily on the health care systems of countries (WHO, 2004).

Tobacco exposes to substances like nicotine and carbon monoxide, is associated with a number of serious complications during pregnancy. So, Women and smoking deserve special attention basically because of the negative and serious health impacts. In is found that deaths from all causes was found to be much higher among women who smoked and this was already apparent by the age of 35 –44 years. (WHO, 2005) There is a set of negative impacts of tobacco consumption on pregnancy as found in studies across countries. There are confirmed findings in various studies that the low birth weight of baby is linked to tobacco consumption/ smoking during pregnancy (Cowperthwaite, B. et al., 2007; S.E.Vieiwerth et al., 2007, Sadja G.C.1979; Secker, RH et al., 20033). In fact, nicotine reduces the blood flow to the fetus and that resulted the slower growth of the child during pregnancy.

Smoking during pregnancy increases the risk of miscarriage or episode of bleeding (Okamoto, K et al, 2005); premature delivery or shortened gestational age (Raatikainen, K. et al., 2007); and Venous thromboembolism (Larden TL et al, 2007).

Other adverse effects of nicotine for women are fetal deaths (Raatikainen, K. et al., 2007), congenital abnormalities (Sadja G.C.1979) etc. Tobacco consumption affects not only during pregnancy but also at the postnatal stage (Garcia, RE et al., 2007). Even maternal smoking has significant effect on offspring smoking behaviour (Munafo, M.R., 2006) and maternal depression (Kiernan, K. et al, 2006).

Alike other South Asian countries, Bangladeshi women are usually consuming tobacco items with the betel leaf. But few female also smoke bidi or cigarette. In fact, smoking by woman is not socially acceptable in the semi-traditional and religious society like Bangladesh. Tobacco items consumed by women with betel leaf are as harmful as smoking. Few studies have been conducted to see the prevalence of tobacco consumption

and consequent health hazards (BBS, 1995). This study focuses, however, only on pregnant women.

The paper aims to focus on the social groups (women) to whom priority based health intervention may be suggested for the cessation of tobacco consumption to reduce hazards during pregnancy and childbirth. In addition, it is also attempted to identify the risk factors and burden of maternal health due to tobacco consumption.

Methods and Materials

The survey was conducted in Dhaka district in Bangladesh in 2005. Households were the basic sample units in this study. To get the sample households from the study area, Integrated Multipurpose Sample (IMPS) design was used. This is a national level sample design that has been used by the Bangladesh Bureau of Statistics (BBS) for the State Level Surveys. Dhaka city contains 22 primary sampling units . Each sample unit contains around 250 households. Seventeen sampling units are selected from thirty-four sampling units on the random basis for the present study.

Forty households from each of the 17 sampling units were selected on random basis based on the criterion that each household should have at least one woman who gave birth during the last three years or presently should be pregnant. Total 385 households are covered for this study.

The target population consists of all women in the sample households (549 women) who had delivered birth during the last three years at the time of interview in 2005. The information collected was on illness relating to pregnancy and delivery on the one hand, and, on the other, tobacco consumption habit. It is observed that, in Bangladesh, women are usually consuming tobacco items with betel leaf in the form of *zarda, ala-pata* (raw tobacco) or smoking through *bidi* (indigenous cigarette). During the household level interview, women were asked if they had consumed tobacco during last pregnancy or had habit to consume tobacco. The prevalence of tobacco consumption thus includes women who had consumed tobacco during pregnancy or/ as well, who had common habit of tobacco consumption.

In order to find the differentials and the burden of tobacco, the bivariate distributions of complications during pregnancy, delivery and post-partum period is presented. Chi-square tests have been used to see the statistical differences among the factors and these were selected as covariates in logistic regression analyses. To find the significant risk factors of tobacco consumption, multivariate logistic regression has been employed. Hence 10 percent level was allowed to accept the statistically significant variables. Earlier all independent variables were categorized as follows.

Fig-1 : Definition of variables for binary Logistic Regression.

Variables	Definitions
1.Dependent variables Tobacco Consumption Habit	**Dichotomous variable:** Yes=1, No =0
2.Covariates	
Place of Residence	Rural =1 , Urban =2
Household Type [2]	Slum=1, Non-Slum=2
Age of Women	15-24 Years=1, 25-34 Years=2, 35 Years and more=3
Level of education	No education=1, Less than H.S.C=2, Graduate and More=3
Occupation	Non-working=1, Working=2
Standard of Living	Low=1, Medium=2, High=3
Parity	One=1, two- three=2, Four or more=3
Received Care	Only ANC=1, Preconception and ANC=2, No Care=3
Decision Making Autonomy	No Decision=1, Take decision in Household=2
Family Pattern	Nuclear =1, Joint=2
Pre-existing diseases	No=1, Yes=2
Hemorrhage during childbirth	No=1, Yes=2
Retained Placenta	No=1, Yes=2

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[2] **Slum:** Settlements, which are with poor housing, poor environmental services and very low Socioeconomic status. These are may be squatter settlements on public land.