Timing of Initiation of Contraceptives in Extended Postpartum Period Among Indian Women

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Extended abstract

Context:

Complications associated with pregnancy and childbirth are the leading causes of death, disease, and disability among women in their reproductive period and that is why maternal health issue is one of the prime global concerns. This concern is also well acknowledged in the fifth millennium development goal (MDG) that aims to reduce infant deaths and improve maternal health while providing universal access to sexual and reproductive health services by 2015. The dynamics of contraceptive use among women in extended postpartum period, i.e. one year period after the birth of child, is of interest at the family planning programme level, since delay of use until the return of menstruation might subject women to the risk of unwanted pregnancy. An increase in contraceptive use during the postpartum period substantially reduces the rates of maternal and infant mortality by preventing unplanned and unwanted pregnancies, and spacing new pregnancies to at least two years after the previous birth [1]. Furthermore, the largest proportion of women with an unmet need for contraception is found among those in their first year after childbirth [2]; concentrating efforts to reduce unmet need among these women could have a proportionally bigger impact on increasing contraceptive use than concentrating on any other group. Report of NFHS-III India states that 21 percent of all pregnancies that resulted in live births in the five years preceding the survey (including current pregnancies) were unplanned, 10 percent were wanted later and 11 percent were not wanted at all [3]. An analysis of data from 25 countries collected as part of the Demographic and Health Surveys (DHS) project found that mortality risks are elevated for both the previous child and for the newborn infant if birth intervals are shorter than expected [7] . According to the report of NFHS-III, in India, 11 percent of births occur within 18 months of a previous birth and 28 percent occur within 24 months. More than 60 percent occur within three years of the previous birth and only 28 percent have an optimal birth interval of 36-59 months [3]. Thus in India, the higher proportion of unplanned pregnancies might be due to short birth intervals. In this context, the postpartum period is particularly important for initiating contraception to space births in a healthy manner.

In order to reduce the risk of adverse maternal, perinatal and infant outcomes, WHO (2006) recommended that the interval between a live birth and an attempt to the next pregnancy should be 24 months [6]. Also Demographic and Health Survey (DHS) data analysis from 17 developing countries found that the risk of the newborn and infant dying decreases with increasing birth interval lengths up to 36 months [5]. In addition, short birth intervals (<24 months) also have a potential effect on the increased risk of maternal death and complications of pregnancies [4]. Various research studies have demonstrated that short birth intervals are also associated with infant and child mortality.

Keeping in view the importance of contraceptive use in extended postpartum period and dearth of studies on this topic in India, this research study is mainly inclined towards investigating the patterns and covariates of timing of initiation of contraceptives among Indian women during one year postpartum period. Patterns of postpartum contraceptive use are observed by amenorrheic status of women and also by her abstinence status since non-amenorrheic and non-abstaining women are at higher risk of getting pregnant if they don't use contraception in this period. In addition survival plots are used to assess the time to event, such as resumption of menses and resumption of sexual activities and time to first contraceptive use, by duration postpartum. Cox regression technique is applied to observe the impact of different covariates on postpartum contraceptive use controlling for other covariates. Woman's amenorrheic status, education, number of living children, media exposure and her economic status also affect her motivation towards initiating contraception in postpartum period, thus these covariates are also considered in the regression analysis. The analysis is also done separately for rural and urban women and some comparative results are also presented.

Data Source and method:

The data for present study has been taken from National Family Health Survey III (NFHS-III), Nov. 2005- Aug. 2006, a nationally representative source of data on population, health and nutrition for India and its states. NFHS-III covered all 29 states in India, which comprise more than 99% of India's population. It is designed to provide estimates of key indicators for India as a whole and for all 29 states by urban- rural residence and provides information on fertility, mortality, family planning, HIV- related knowledge and important aspects of nutrition, health and health care.

Present analysis is based on 9433 currently married women who were in reproductive age group (15-49) and had children less than or equal to twelve months of age at the time of interview. Women who were pregnant at the time of interview are excluded from this study as both menstrual status and contraceptive use are affected by pregnancy. Everywhere in the paper contraceptive use is restricted to only modern contraceptives and the focus is strictly on current use. Both bivariate and multivariate techniques are used for the analysis.

Since both complete and incomplete intervals at the time of survey are considered here, (i.e. many women at the time of interview had yet not initiated contraception after birth at the time of survey and other were using them) life table techniques are used to analyze the timing of initiation of postpartum contraceptives among various subgroups. This method makes it possible to include data for those women also who have yet not experienced the event of interest. A life table can be constructed by pooling completed and censored cases of duration variable (Lee, 1993; Sivakami, 2003). The completed observations are those in which women had experienced the event of interest and the exact durations are known. Censored observations are those in which women have still not experienced the event at the time of interview.

Because of the dependence of timing of contraceptive initiation on various factors, the use of only single-decrement life table is not sufficient for the analysis as this will not tell us about how much net effect a covariate has on the dependent variable if all other covariates are held constant. To investigate the partial effects of multiple factors on the dependent variable of interest, Cox proportional hazard model is useful in determining the effect of each covariate independently of effects of other covariates on hazard of initiation of postpartum contraceptives after birth. Cox model combines the merits of both, life table and regression techniques (Cox, 1972). Both these techniques are useful in analyzing the survival data in which an occurrence may be either observed (complete) or unobserved (censored) at the time of survey. From this model we can assess the influence of a set of variables on the hazard of termination.

Results:

Among all women 50% resumed their menses within 6 months of childbirth. Urban women resumed menses about 3 months before their rural counterparts. Probability curves representing sexual resumption show that about 50% of postpartum women resumed sexual relationship within 3 months and 75% resumed it within 5 months after birth. Only about 15% women remained in abstinence at 6 months postpartum. Thus comparison of probability curves representing resumption of menses and sexual resumption clearly show that most of the women resumed sexual relationship before resumption of menses after childbirth. While considerable differences in timing of resumption of menses after childbirth were found between urban and rural women, the timing of resumption of sexual relationship during postpartum period was almost similar for both rural and urban women. Comparison of all three types of survival curves indicate that a large proportion of women were at risk of unwanted pregnancy as most of the women who had resumed menses as well as sexual relationship started use of contraceptives much later. While use of modern contraceptives in the postpartum period was initiated earlier among urban women as compared to rural women, it was much late as was required for a non-amenorrheic and non- abstaining woman to prevent unwanted pregnancy.

Study demonstrated very low use of oral pills in the postpartum period. This may be due to the reason that during this period most of the women were breastfeeding their children and they didn’t prefer to use pills during this period possibly because of the adverse effects of hormones on baby and milk production in mothers. Oral contraceptives contain estrogen and progestin and estrogen- containing birth control pills are not considered compatible with breastfeeding since estrogens suppress milk production. In addition, the use of hormonal contraception in lactating mothers is not considered safe because of their possible unknown effects on children's long-term sexual or reproductive development.

Some amount of awareness about risk of conception prior to first menstruation was observed among postpartum women but it was not satisfactory as such proportion of women was found to be very low.

Here a very important point is that only about one fourth of the total postpartum women were using modern contraceptives regardless of their breastfeeding and menstrual status. Remaining were either not aware of risk of pregnancy in this period or were not getting enough support and motivation for adoption of postpartum contraceptives.

Although family planning programmes for postpartum women need attention in both rural and urban parts of India, rural parts are still lagging behind urban parts with regard to postpartum contraceptive use. Also the need to target poor and less educated women for the success of postpartum family planning programmes in India cannot be denied. Although

resumption of menses was found to be the strong stimulating factor affecting use of contraceptives in postpartum period, remarkably low proportion of women (amenorrheic or menstruating) using contraceptives in extended postpartum period is a matter of concern and must be taken seriously by policy makers. Women who have recently given birth need augmented attention from family planning and reproductive health programs if they are to reduce their numbers of unwanted births and abortions and to lengthen subsequent birth intervals. Prenatal visits, delivery services and subsequent health system contacts are promising avenues for reaching postpartum women with an unmet need for and a desire to use family planning services [2].

While it is essential to device programmes to spread awareness among women to use contraception to limit births, it is also very essential to effectively device and implement postpartum family planning programmes in India by integrating them with maternal and child health services. Potential benefits of integrating postpartum family planning with maternal and child health care services may be various. When postpartum family planning is presented as a part of maternal and child- health services, it will have a broader cultural acceptance. In addition, women who receive counseling during hospital stay for delivery are more likely to use contraceptives in postpartum period. Thus, there is a need to observe more closely the role of family planning policies and health care providers in effectively generating motivation and knowledge among Indian women to use contraceptives in postpartum period.

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