Results: The induced abortion ratio increased over the study period, while miscarriage and still-birth ratios did not change. Induced abortion increased with the number of surviving children but decreased with maternal age and pregnancy interval. Abortion ratios were higher among the educated, better off, and Hindu women. Abortion ratios were also higher among the contraceptive users, particularly condom and pill users, than among the non-users, whereas injectable users had abortion ratios similar to those of the non-users.

Conclusions: The findings of the study suggest that abortion is common among women who want to limit or space childbearing. The small family is becoming a norm, and family planning programmes are fully committed to help couples achieve their reproductive goal. There may be unplanned pregnancies due to failure of methods used and inaccessibility to services, and it is expected that many abortions may occur in the developing stage of the family planning programme. To help couples achieve their desired reproductive goal and reduce maternity-related deaths, MCH-FP programmes should provide safe abortion services and management of abortion-related complications.

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Trends in Contraception and Gender Composition of Surviving Children: Examples from Two Rural Areas of Bangladesh

ABM Khorshed Sarkar Alam Mozumder, Dewan Mizanur Rahman, and Afzal Hossain

Objective: Describe contraceptive use over the last ten years and its relationship to the gender composition of living children in a family, and investigate whether gender composition could inhibit a further decline in fertility.

Methods: The MCH-FP Extension Project of ICDDR,B has experiment sites at Sirajgonj and Abhoynagar in Bangladesh. Working within the government system, the Project conducts operations research to improve health and family planning service-delivery in these two sites. Data obtained from the Sample Registration System which conducted interviews at 90 days interval since 1982 of a sample of villagers residing in 10,000 households were used. Using data from 1982 through 1992, descriptive results are presented, followed by multivariate analysis.

Results: Contraceptive prevalence rates (CPR) in both areas increased. Sirajgonj being a more remote and traditional area, CPR rose from 11 in 1982 to 39 in 1992. At Abhoynagar, CPR rose from 22 in 1982 to 47 in 1992. By comparison, the national CPR was 19 in 1983 and 40 in 1991. Gender composition of a couple's living children appeared to be important factor determining their contraceptive use. Women having at least one boy and one girl had a higher CPR over the period compared to women having only boys or only girls. However, even when all children were girls, the couple's contraceptive use had increased over time.

Conclusions: These findings suggest that preference for sons persists in Bangladesh, and that couples also desire a daughter. The fact that couples who have only girls are also inclined to contraceptive use indicates that the use of family planning practices, and desires for having smaller families are becoming behavioural norms.

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Influence of Bari Characteristics on Contraceptive Use Among Mothers in Matlab

Lutfun Nahar and Mizanur Rahman

Objective: Examine whether there are any characteristics of *bari,* the smallest rural community in Bangladesh, which affect contraceptive acceptance and cost-effectiveness of services.

Methods: Data for this study came from the ICDDR,B's Demographic Surveillance System which records all vital events in Matlab, a rural area of Bangladesh. Data on contraceptive use came from service statistics collected by the Maternal and Child Health-Family Planning (MCH-FP) Project. The cohort of women who gave birth in 1981-1982 in the MCH-FP area was followed up for five years to record their contraceptive acceptance pattern. *Bari* and individual-level information was matched with demographic and reproductive events. Logistic regression was used in estimating the net effect of selected independent variables in relation to individual and *bari* characteristics.

Results: Results of the study showed that education of a woman influenced the acceptance of contraception by herself as well as by other women living in the same *bari*, even if they were not educated. Demographic variables of individuals (maternal age and number of surviving children) and socioeconomic variables (maternal and household education) had significant influence on contraceptive acceptance. The findings were in the expected direction.

Conclusions: The door-step delivery of family planning, and maternal and child health services has been a key factor for success of the national programme in Bangladesh. This may not be the most cost-effective service-delivery system. Therefore, as an alternative, contraceptives and some health care supplies can be provided at the community level. This study indicates that *bari* characteristics which affect individual fertility behaviour can be used by programme managers. For example, they could identify women who can be used as links between family planning and health workers and their clients to deliver services in a less expensive manner, or to enhance accessibility of services.

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The Patterns and Determinants of Contraceptive Acceptance and Continuation in Matlab

Indrani Haque and Mizanur Rahman

Objective: Examine changes in the timing of contraceptive use after a birth and its impact on fertility.

Methods: Data from the ICDDR,B's Demographic Surveillance System which records all vital events in Matlab, a rural area of Bangladesh, were used in this analysis. Data on contraceptive use were collected by the Maternal and Child Health-Family Planning (MCH-FP) Project. Over 6,000 women who gave birth during 1981-1982 and 1986-1987 were followed up for five years for recording their contraceptive acceptance and continuation, reproduction status, and migration. Life-table techniques were applied to study the acceptance and continuation of contraception.

Results: For the cohorts of 1982 and 1987, the median waiting time to accept contraception following the birth of a child were approximately 23 and 15 months respectively. The duration of contraceptive use was 21 months for the 1982 cohort and 32 months for the 1987 cohort. Although the duration of contraceptive use has increased by about 11 months, actual protection against the risk of pregnancy has increased only by about 4 months. This is mainly because the waiting time to accept contraception has decreased by about 8 months, although women were partially protected during this period due to post-partum amenorrhoea resulting from breast-feeding. Determinants of acceptance and continuation were similar for both cohorts, as expected. For example, educated women were found to start using contraceptives earlier and also to use for a longer period than others. Younger women start earlier than older women, but the latter use contraception for longer period than younger ones.

Conclusions: These results indicate that a rise in the contraceptive prevalence rate does not necessarily lead to a corresponding decline in fertility. Since post-partum amenorrhoea is prolonged in Bangladesh because of long breast-feeding duration, contraceptive use during the early post-partum period is probably unnecessary and wasteful. These findings, particularly on the reduction of waiting time for acceptance of contraception, have strong policy implications. Programmes should consider cultural practices, such as breast-feeding duration that lead to low fertility. Promotion of contraceptive supply without these considerations may lead to wastage of resources.

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