Contraceptive use among Bolivian women

Introduction

With a Gross Domestic Product of less than US$ 3000 and a Human Developing Index of 0.69, Bolivia is one of the poorest countries in the world. Despite important investments made in the country, Bolivia still shows very poor indicators of social development, particularly when compared to other countries of Latin America. In 2003, infant mortality rate was 54 per thousand live births and maternal mortality rate was 229 per 100000 women.

Among married women of reproductive age, the total fertility rate declined from 5.6 to 3.8 children between 1989 and 2003, which is still at a high level, particularly when we take into account that an expressive proportion of these children were not desired, either because they were not planned or because those women did not want any additional children at the moment they were conceived.

Despite the great effort by the government to broaden the access to family planning programs in order to respond the demand of the Bolivian women to control their fertility, fundamental barriers still exist, worsening the access to quality health services. There is evidence that cultural barriers impede the spread of modern contraceptive methods. It is also of concern the fact that physicians, most of them descendents from Europeans, show strong resistance to cultural values of a predominant indigenous population.

Therefore, despite the investments and advances in the area of reproductive health, the prevalence of contraceptive methods, one of the main proximate determinants of the fertility decline in Bolivia, has been increasing slowly: from 45% in 1994 to 58%, in 2003. In addition, according to the 2003 DHS, about 40%

of all married women rely on traditional methods. Among the modern methods, IUD is the most prevalent (10.2%) followed by injections, the method whose prevalence increased substantially in recent years, from 1% in 1998 to 8% in 2003.   In spite of being an instigating case, very few studies on contraceptive dynamics have focused on the Bolivian context.

Therefore, the objective of the present study is to identify factors associated with the use of contraceptive methods in Bolivia. We believe that the results of this study could be of great importance for implementation of women's health policy.

Material and methods

The data come from the 2003 Demographic and Health Survey carried out in Bolivia. A total of 17654 women 15-49 years of age were interviewed of whom 10568 were married at the time of the interview. The analysis of the choice of reversible methods is undertaken separately from sterilization because the difference in decision making processes between the choice of a reversible method and that of an irreversible one.

The analysis of reversible method is done in two stages. At the first stage, a multilevel logistic model is used, where the dependent variable is the log-odds that a woman I in cluster j uses a contraceptive method. At the second stage, only women using a reversible method are considered and a multilevel multinomial model is used where the dependent variable is the log-odds that a woman I in the cluster j chooses a method s (hormonal, IUD, condom and traditional).

A multilevel discrete-time is used to identify the factors associated with the use of sterilization. We looked at each year between 1997 and 2002 and observed whether a woman was sterilized or not. In this case a woman may contribute up to five observations, depending on the year the sterilization was performed. For example, if a woman was sterilized during the third year, then three observations

were created. In the first two, the dependent variable takes the value zero indicating that the woman remained nonsterilized. In the last observation, the dependent variable takes the value one. If, in a given year, a woman was not married, she was considered not exposed and the respective year was excluded from the analysis. Given that the chance of a woman under 20 years of age being sterilized is very low as well as the chance of a woman who has no child, all years when the woman's age was under 20 or the woman had no child were also excluded. In order to estimate the parameters of the discrete-time hazards model we used the complementary lo-log model.

Preliminary Results

Based on results from preliminary analysis, we call attention to the high proportion of Bolivian women using traditional methods, independently of their socioeconomic profile. Among the variables included in the models, the women level of education and the region where they reside stand out as the most important. The higher the woman's level of education the higher her chance of using condom, IUD and sterilization. Even controlling by socio-demographic factors, at the individual level, the random effect associated with the community is statistically significant in relation to the use of contraceptive methods.