

Women's Empowerment, Educational Attainment, and Contraceptive Use in Latin American/Caribbean Countries

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Abstract

Mass education plays an important role in health and fertility outcomes. The Latin American/Caribbean region has experienced educational development but with uneven access across locations and is facing challenges in reproductive health. With these understandings and concerns, this study uses a structural equation modeling strategy to analyze a pooled sample of three Latin American/Caribbean countries from Demographic and Health Survey (DHS) to consider the pathway from education to empowerment to contraceptive use. The findings in this research support the claim that there is a positive gradient between education and contraceptive use, and that educationally enhanced empowerment is a major pathway between them. These findings add to a growing understanding of how education, through its impact on psychological capacities, influences reproductive health and family planning.

Introduction

In reflecting on women's empowerment and its relationship to education a review of research concludes: "educating girls is one of the most powerful tools for women's empowerment as it provides them with the knowledge, skills and self-confidence they need to seek out opportunities" (Subramaniam 2011). This hypothesis is applied here to determine if empowerment is one efficacious pathway between education and women's use of contraceptive use in three low-income nations. The findings in this research confirm that there is a positive gradient between education and contraceptive use, and that educationally enhanced empowerment is a major pathway between them. These findings add to a growing understanding of how education, through its impact on psychological capacities, influences reproductive health and family planning.

Mass education is well established as a key causal factor in contraception use, family planning, and lower fertility, particularly among low-income national populations (e.g. Caldwell, 1980; Lotter, 1975). For example, in a recent review of this relationship Peters (2014) finds that more than 75% of studies report least one of positive gradient between empowerment and contraceptive use. At the same time there is an abundance of research indicating a positive gradient between education attainment and contraceptive use. For example in the region examined here, Martin & Juarez (1995) show wide gaps in contraceptive use and fertility between the educational levels of women in nine Latin American countries, and find that along with cognitive, economic pathways from education, educationally transformed attitudinal assets mediate the influence of schooling on reproductive behavior. Although earlier research suggested that education influence on empowerment is a main pathway to reproductive health, the full chain of effects have not been made fully clear (Jejeebhoy 1995). Relatedly, there has not been much study of this hypothesis in regions outside Africa, and it is difficult to generalize from effects on reproductive behavior across cultural diverse settings (Wellings et al., 2006).

The Latin American/Caribbean region has experienced educational development but with uneven access across locations inside countries. It is also a region facing challenges in reproductive health. Morris (1988) in a study of eight Latin American and Caribbean countries finds that the majority of females with premarital sex did not use contraceptives, a majority of these also had unintended pregnancies (see also Ali & Cleland 2005). These make it a fruitful and important setting for this analysis. This study therefore addresses the following research questions: Does education have associations with women's empowerment and contraceptive use? Is empowerment a significant pathway between education and use of contraceptives? What are the implications of these findings in the Latin American/Caribbean context?

Theoretical Framework

The theoretical understanding at work in this paper is that formal schooling transforms individuals in several ways (Baker 2014). This argument posits that the three primary ways educational attainment changes the individual is that it increases wealth, cognitive processes, and psychological development. In particular, the framing of this article is informed by the importance schooling has on the latter two of these phases. Schooling both increases the capacity

for decision-making and shifts the beliefs of what an individual finds as valuable behavior. The framework suggests that educated people would, for example, have certain experiences that promote empowered individuals, which in turn impacts their ability to decide on effective reproductive behavior. This leads to the hypotheses that education has an effect on women's contraceptive use through its impact on empowerment.

Data and Methods

Data

The research conducted here uses a pooled sample including three Latin American/Caribbean countries (Bolivia, Haiti and Nicaragua) from Demographic and Health Survey (DHS). Each national dataset in DHS has large sample sizes ranging from 5,000 to 30,000 households collecting variables about population, health, and nutrition (Rutstein and Roja 2003). In addition, DHS provides additional information related to women's empowerment as a special issue in 23 developing countries including those three countries during the period 1999 and 2004 (Kishor and Subaiya 2008). The target population is married women who have a husband or partner, in order to observe the power hierarchy and attitude in decision-making of controlling sex. The pooled sample across three countries includes 14,725 mothers.

Variables

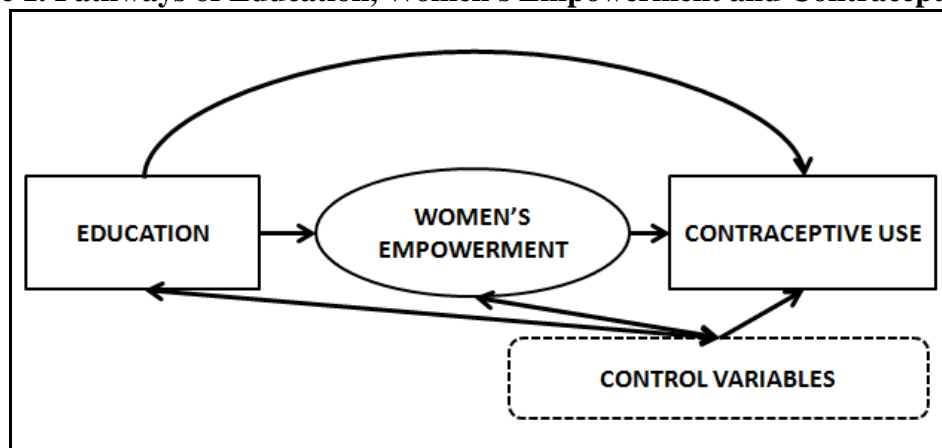
The dependent variable in this study is whether the individual currently uses contraception to control for having children. This was asked as a survey question, "Are you currently doing something or using any method to delay or avoid getting pregnant?" If the respondent answered yes, they are coded as 1 and otherwise coded as 0.

The two main independent variables in the study are educational attainment measured as years of schooling completed by the mother; and women's empowerment measured as a latent variable constructed from women's responses to the questions on whether they agree with refusing to have sex for the following reasons: her husband has a sexually transmitted disease, her husband has sex with other women, she has recently given birth, and she is tired or not in the mood. Control variables are household wealth, mother's age, mother's employment, urbanicity, and country dummies.

Analytic Strategy

To address the complicated pathways of education impact on contraceptive use via women's empowerment, structural equation modeling (hereafter SEM) is used to estimate the pathways from educational attainment to the probability of using contraception among reproductive mothers in the pooled sample, after holding constant of control variables. In addition, the analysis details the role of education in contraceptive use through decomposing the direct effect and indirect effect mediated by women's empowerment. Shown in the Figure 1 are the hypothetical pathways from educational attainment, women's empowerment, and contraceptive use that will be estimated in SEM models.

Figure 1. Pathways of Education, Women's Empowerment and Contraceptive Use



Preliminary Findings

Among 14,725 women, 7,425 (50.42%) used contraception to avoid unexpected pregnancy at the surveyed time. The average years of schooling for women in three countries 5.46 years, which means that they completed primary education on average. As the proxy level of empowerment, women agreed to refuse sex with a husband because of her husband's sexually transmitted disease (94.29%), her husband's other sex partners (90.63%), recent birth (93.32%), and tiredness or bad mood (86.50%).

To examine the significance of each path in the SEM, ordinary least squares (OLS) regression (education -> level of empowerment) and logistic regression (education, level of empowerment -> contraceptive use) were used. The preliminary analyses showed that more education attainment increased the level of empowerment ($p < .001$) and, more importantly, both education (OR = 1.06; $p < .001$) and empowerment (OR = 1.02; $p < .05$) had positive impacts on increasing the probability of using contraception.

On the basis of the preliminary results, it is expected that the hypotheses will be confirmed by SEM analysis through explaining the significant and positive relationship among education, empowerment, and the probability of contraceptive use as a health outcome. In other words, this study will detail the impact of formal education on contraceptive use with the introduction of women's empowerment to the pathways.

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