

Schooling, Achievement, and Aspirations: Teen Pregnancy in Ethiopia, India, Peru, and Vietnam

Extended Abstract

Adolescence is a critical developmental period for life-course health, economic and social trajectories (Das Gupta et al., 2014; Patton et al., 2016). With 70,000 deaths annually from complications from pregnancy and childbirth, adolescent pregnancy is the leading cause of mortality for girls aged 15-19 years globally (Handa, Seidenfeld, Davis, & Tembo, 2016; Temin & Levine, 2009). Adolescent motherhood is associated with increased adolescent morbidity (e.g. anaemia, fistula) and obesity, lower child birthweight, and negative socioeconomic consequences for girls and their children (Temin & Levin 2009; Handa et al 2016).

While a large literature examines the relation between the event of a pregnancy during adolescence and later educational trajectories for the girl (Field & Ambrus, 2008; Glassman, Silverman, & McQueston, 2012), there are fewer studies investigating the possibly protective role of education on the chances of teenage childbearing. In the context of low- and middle-income countries (LMICs), much of the existing literature on this possibly protective effect is either cross-sectional or focuses on the impact of school-based or social protection interventions on adolescent fertility (for instance: Baird, McIntosh, & Özler, 2017; Duflo, Dupas, & Kremer, 2015, 2017; Handa et al., 2016). Recently, Favara and coauthors (Favara, Lavado, & Sanchez, 2016) and Singh and Revollo (2016) have used longitudinal data from the Young Lives study from Peru and India respectively to investigate adolescent and household factors associated with teen pregnancy and childbirth. They found that both school enrolment and aspirations about education were protective of early childbearing in these two of four Young Lives countries.

In this paper, we aim to investigate the role of schooling, cognitive attainments and aspirations on adolescent fertility using data from the Young Lives study. The Young Lives study, led by the University of Oxford with local partners in Ethiopia, India, Peru, and Vietnam, has collected five rounds of data on pro-poor but diverse samples of two cohorts of children. Rich data on the demographic, social, and economic context within which the Older Cohort matured were collected at ages 8, 12, 15, 19 and 22 years of age (with the first round in 2002 and the fifth round in 2016) and of the Younger Cohort at ages 1, 5, 8, 12, and 15 years.

Descriptive data show that educational attainment and aspirations of adolescents are similar for males and females at age 15 years, but time use already differs by gender. Educational enrollment at age 19 for childless young women exceeds that of males in Ethiopia, Peru and Vietnam, but almost no adolescent mothers were enrolled (less than 5 percent in Ethiopia, India and Vietnam and 9 percent in Peru). Women who later became mothers had lower educational aspirations at age 15, and their parents' aspirations for them were also lower.

We examine the relationships between the key independent variables of schooling and cognitive attainments, adolescent and parental aspirations about completing secondary school, and time spent on school versus caregiving and chores at 15 years with being an adolescent mother (at or before age 19 years) and parental education, controlling for other relevant adolescent and household factors (e.g. socioeconomic status, household composition, etc.). We also distinguish

between early teenage pregnancy (up to age 16 years) and later teenage pregnancy (17-19 years included). In addition, we examine outcomes for the next generation (e.g. the children of the Young Lives cohorts) to investigate whether children born from adolescent mothers are systematically different from their peers born from non-adolescent mothers. Finally, in order to address the possibility that underlying and possibly unobserved factors may be driving both adolescent fertility and schooling, we explore an instrumental variable model using exogenous variation in age at entry in school, which is available only for India and Vietnam, by building on the approach introduced by Singh (2015). Addressing endogeneity is important as unobserved factors such as gender norms or personality characteristics may play roles in driving both schooling and fertility, leading OLS models to underestimate the true relationship between grades completed and adolescent fertility.

We conduct logistic regressions of adolescent fertility on clusters of education-related variables, including highest grade attained and cognitive attainments, parental and child educational aspirations, and time use on schooling and study vs. domestic and caretaking tasks on the Older Cohort up to age 19 years. In the grades attained and cognitive skills model, we find that an additional grade attended is associated with a lower odds of adolescent fertility, and a one standard deviation higher math score is associated with lower odds of adolescent fertility. In the model with parental and child educational aspirations, we find that a parental aspiration for an additional year of child education is associated with 6 percent lower odds, and the adolescent's aspirations at age 15 are associated with lower odds of adolescent fertility. In a model including time use, an additional hour per day spent studying or attending school is associated with lower odds of adolescent fertility, controlling for key covariates of adolescent age, urban residence, wealth index, age of mother, completed grades of parental schooling, relationship with parents ("I always feel loved by my parents"), and country dummies.

This paper, thus, contributes to the literature (including the emerging evidence from Young Lives noted above), in the following way: first, we focus specifically on the protective role of education, which we measure in a multidimensional way (e.g. access; attainment; aspirations; time use); second, we use data from four diverse low- and middle-income countries that include both urban and rural areas to investigate potential differences in the associations of education on adolescent fertility in different contexts. Third, we examine the association of adolescent motherhood with outcomes for the next generation, furthering our understanding of the intergenerational consequences of teenage pregnancy.

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