

## Authors

Esther Duflo  
Massachusetts Institute of Technology

Pascaline Dupas  
Princeton University

Michael Kremer  
The University of Chicago

Samuel Sinei

WPS4024

BACKGROUND PAPER TO THE 2007 WORLD DEVELOPMENT REPORT

### Education and HIV/AIDS Prevention:

Evidence from a randomized evaluation in Western Kenya

Esther Duflo<sup>\*</sup>  
Pascaline Dupas<sup>\*\*</sup>  
Michael Kremer<sup>\*\*\*</sup>  
Samuel Sinei<sup>\*\*\*\*</sup>

We report results from a randomized evaluation comparing three school-based HIV/AIDS interventions in Kenya: 1) training teachers in the Kenyan Government's HIV/AIDS education curriculum; 2) encouraging students to debate the role of condoms and to write essays on how to protect themselves against HIV/AIDS; and 3) reducing the cost of education. Our primary measure of the effectiveness of these interventions is teenage childbearing, which is associated with unprotected sex. We also collected measures of knowledge, attitudes, and behavior regarding HIV/AIDS. After two years, girls in schools where teachers had been trained were more likely to be married in the event of a pregnancy. The program had little other impact on students' knowledge, attitudes, and behavior, or on the incidence of teen childbearing. The condom debates and essays increased practical knowledge and self-reported use of condoms without increasing self-reported sexual activity. Reducing the cost of education by paying for school uniforms reduced dropout rates, teen marriage, and childbearing.

**Key words:** HIV/AIDS prevention; school; Africa; Kenya; Youth; developing countries

World Bank Policy Research Working Paper 4024, October 2006

*The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent. Policy Research Working Papers are available online at <http://econ.worldbank.org>.*

<sup>\*</sup> Department of Economics and Poverty Action Lab, MIT.

<sup>\*\*</sup> Paris-Jordan Science Economiques.

<sup>\*\*\*</sup> Department of Economics, Harvard University; Brookings Institution; NBER; Poverty Action Lab, MIT.

<sup>\*\*\*\*</sup> Jomo Kenyatta University of Agriculture and Technology, Kenya.

The authors thank ICS Africa, the Kenya National AIDS Control Council, the Kenya Institute of Education and the Kenya Ministry of Education, Science and Technology for their cooperation in all stages of the project, and would especially like to acknowledge the contributions of Chip Bary, Robert Ngunya, Lillian Bureya, Carol Nkera, Grace Mukana and her staff, Willa Friedman, Jessica Leino, Jessica Morgan, Ian Tomb and Paul Wang, without whom the project would not have been possible. Gratitude is also extended to the teachers and school children of Bungoma, Bureya-Muriani and Bureya districts for participating in the study. Maita Chiranga provided excellent research assistance. We are grateful for financial support from the Partnership for Child Development and the World Bank.

# Education and HIV/AIDS Prevention

The authors report results from a randomized evaluation comparing three school-based HIV/AIDS interventions in Kenya: (1) training teachers in the Kenyan Government's HIV/AIDS education curriculum; (2) encouraging students to debate the role of condoms and to write essays on how to protect themselves against HIV/AIDS; and (3) reducing the cost of education. Their primary measure of the effectiveness of these interventions is teenage childbearing, which is associated with unprotected sex. The authors also collected measures of knowledge, attitudes, and behavior regarding HIV/AIDS. After two years, girls in schools where teachers had been trained were more likely to be married in the event of a pregnancy.

The program had little other impact on students' knowledge, attitudes, and behavior, or on the incidence of teen childbearing. The condom debates and essays increased practical knowledge and self-reported use of condoms without increasing self-reported sexual activity. Reducing the cost of education by paying for school uniforms reduced dropout rates, teen marriage, and childbearing.

October 01, 2006