

The Role of Family, Community and Health Status in the Educational Aspirations of
Ethiopian Youth

Optat Tengia¹
David P. Lindstrom¹
Dennis Hogan¹
Craig Hadley²

¹Population Studies and Training Center
Brown University
Providence, RI USA

²Department of Anthropology
Emory University
Atlanta, GA USA

Abstract

In this paper we examine the influence of parental and community resources on youths' educational aspirations in the context of Ethiopia. We expand on models developed to explain educational aspirations in high income countries, by including the potentially important role of individual health status and perceptions of health risks. In low income contexts where under-nutrition, chronic illness, and infectious and debilitating diseases remain widespread, youth may discount the value of education based on perceptions of vulnerability in the future to debilitating health conditions. We use a two-step Heckman selection model to estimate the impact of individual, household and community factors on adolescent educational aspirations, adjusting for in-school status. The paper uses data for 2,083 youth age 13-17 from a longitudinal survey conducted in 18 rural, semi-urban, and urban communities in southwestern Ethiopia. Preliminary results suggest that boys' educational aspirations are more sensitive to perceptions of health risks than girls'.

Extended Abstract

The growing interest in the reduction of acute poverty in the developing world has prompted enormous research in the social sciences on the causes and possible ways of alleviating socio-economic deprivation. Extensive research focuses on health and educational interventions as possible ways through which some of the symptoms of socio-economic deprivation may be addressed. This study focuses on the educational aspirations of adolescents aged 13-17 in southwestern Ethiopia using data from a unique longitudinal survey of families and youth.

Social psychological research indicates that the adolescent years are a crucial formative stage in the development of individual identity, life expectations, and motivations; all of which are key factors in the determination of economic success or failure in adulthood. Because educational attainment has been shown to contribute to increased human development in the developing world, the educational aspirations of youth provide an important indicator of the future prospects for socioeconomic development.

Most studies of adolescent educational expectations focus on high income countries. These studies, especially those on youth in the United States, are motivated by an interest in the consequences of inequality in educational attainment on social mobility and social stratification. For example, the Wisconsin Model, which is based on a longitudinal survey of a cohort of high schools seniors in the state of Wisconsin (USA), delineates the important role of parental occupational status on children's educational aspirations and subsequent intergenerational mobility. In this paper we examine the influence of parental and community resources on youths' educational aspirations in the context of urban, semi-urban and rural communities in southwestern Ethiopia. We expand on models developed to explain educational aspirations in high income countries, by including the potentially important role of individual health status and

perceptions of future health status as well as individual gender values. In low income contexts where under-nutrition, chronic illness, and infectious and debilitating diseases remain widespread, youth may discount the value of education based on current health status and perceptions of vulnerability in the future to severe health conditions. We also incorporate into our model of educational aspirations, adolescent views of gender role relations. In a context of changing gender roles and the emergence of educational and non-traditional occupational opportunities for girls, we expect that attitudes regarding gender roles will play an important role in the formation of educational aspirations, especially for girls.

In Figure 1 we present the basic components of a model of adolescent educational aspirations. Family support factors that contribute to higher educational aspirations include high household SES, father's high occupational status, and household structure and size. Factors at the community or neighborhood level to contribute to higher educational aspirations include the presence of work adults in the community with high occupational status, having a school nearby, and higher levels of economic development. At the individual level, youth, and especially girls, with more egalitarian gender values are likely to place a higher value on education and non-traditional occupations that require an education than youth with very traditional gender values. Finally, we expect that having a disability, a serious illness, or feelings of being very vulnerable to serious illness and health conditions in the future will dampen adolescent educational aspirations.

The data for this paper come from the Jimma Longitudinal Family Survey of Youth (JLFSY) conducted by investigators from the Population Studies and Training Center, Brown University and the School of Public Health, Jimma University. The JLFSY includes 3,716 randomly selected households located in the city of Jimma Town, population 120,000, and in

three nearby towns and surrounding rural communities. Jimma Town is located approximately six to eight hours driving time to the southwest of the capital of Ethiopia, Addis Ababa. The region is semi-tropical with low-lying mountains and hills, and abundant seasonal rainfall. Agriculture is the basis for the economy, with coffee, chat, corn and cattle major sources of income. The rural communities are populated by Oromo, who are predominantly Muslim. The towns and the city of Jimma are ethnically and religiously diverse, and include Orthodox and Protestant Christians.

A household questionnaire was completed with the household head and spouse of the head. Up to two youth age 13-17, one male and one female, were then randomly selected from each household for individual interviews. A total of 2,183 adolescents were interviewed in the first round of the survey conducted between October 2005 and February 2006. The study design includes the re-interview of adolescents every twelve months and households every two years for a period of at least six years. In this paper we use data from the first round of the household and adolescent interviews (see Table 1). The household questionnaire collected background information including migration experience for all current household members and adult children of the household head who have established independent households. The questionnaire also collected information on the residential location of relatives of the head and spouse, participation in exchange networks, and measures of economic assets and well-being. The adolescent questionnaires collected information on schooling, employment, family and occupational aspirations, and perceptions of parental expectations, among other topics.

Table 2 presents the primary variables of interest in our analysis. Our outcome of interest is adolescent educational aspirations measured by a question on the highest grade that youth think they will complete. We will use a two-step Heckman selection model to estimate the

impact of individual, household and community/neighborhood factors on adolescent educational aspirations. The Heckman model estimates in the first stage a probit model for predicting the likelihood of being in school, and then includes the estimated probability of being in school as a covariate in the second stage probit model predicting high educational aspirations among youth who are still in school. The advantage of the Heckman model is that it will produce estimates of the covariate effects on educational aspirations that are not biased by the selective nature of those youth who were still in school at the time of the survey. Approximately ninety percent of the youth in the study were in school at the time of the survey.

Table 3 presents preliminary results from the Heckman selection model predicting school enrollment and high educational aspirations. We first estimated a model for the entire sample, and then estimated models for girls and for boys separately. Having a serious disability is a very significant factor in keeping adolescent girls out of school in the study area, although it does not appear to be a factor among boys. For boys, the local economic development context is an important factor. Boys are less likely to stay in school when they live in less developed communities where the opportunities for employment are less favorable.

Among youth who remain in school, those who view themselves at a high risk of eventually contracting a serious illness tend to have lower educational aspirations than youth who do not see themselves as vulnerable to illness, even after controlling for family resources and the community context. This finding suggests that youth may discount the value of higher education for future health risks that would lower the economic returns on educational investments. To explore this issue further we test for interactions between perceptions of vulnerability to serious illness and proxy measures of self-efficacy. We suspect that in the context of poor employment opportunities that characterizes the study area, the negative impact

health risks on educational aspirations will be greatest among those youth who normally would be in the best position to capitalize on educational investments. Among girls we use beliefs of gender equality as a measure of self-efficacy. The interaction between vulnerability to serious illness and the gender equality index among girls is negative and significant. Girls who hold more egalitarian gender value are more sensitive to perceptions of health risk in setting their educational aspirations than girls who score low on the gender equality index. In the case of boys we use the household wealth index as a measure of self efficacy. Boys who are from financially better-off households are in a better position to use schooling to locate good employment through their parents' social and kinship networks, than boys from poor households. However, in contrast to girls, we find that boys who view themselves as vulnerable to serious illness have lower educational aspirations regardless of their socioeconomic background or other factors. For boys employment is an expected part of the life course, and therefore perceptions of vulnerability to serious illness in the future have a bigger influence on the value placed on education than is the case for girls, most of whom do not expect to be employed outside of the home. In subsequent analyses we will expand our multivariate models to include additional measures of household resources and the community context.

Figure 1. Effects of Individual, Family and Community Factors on Adolescent Educational Aspirations

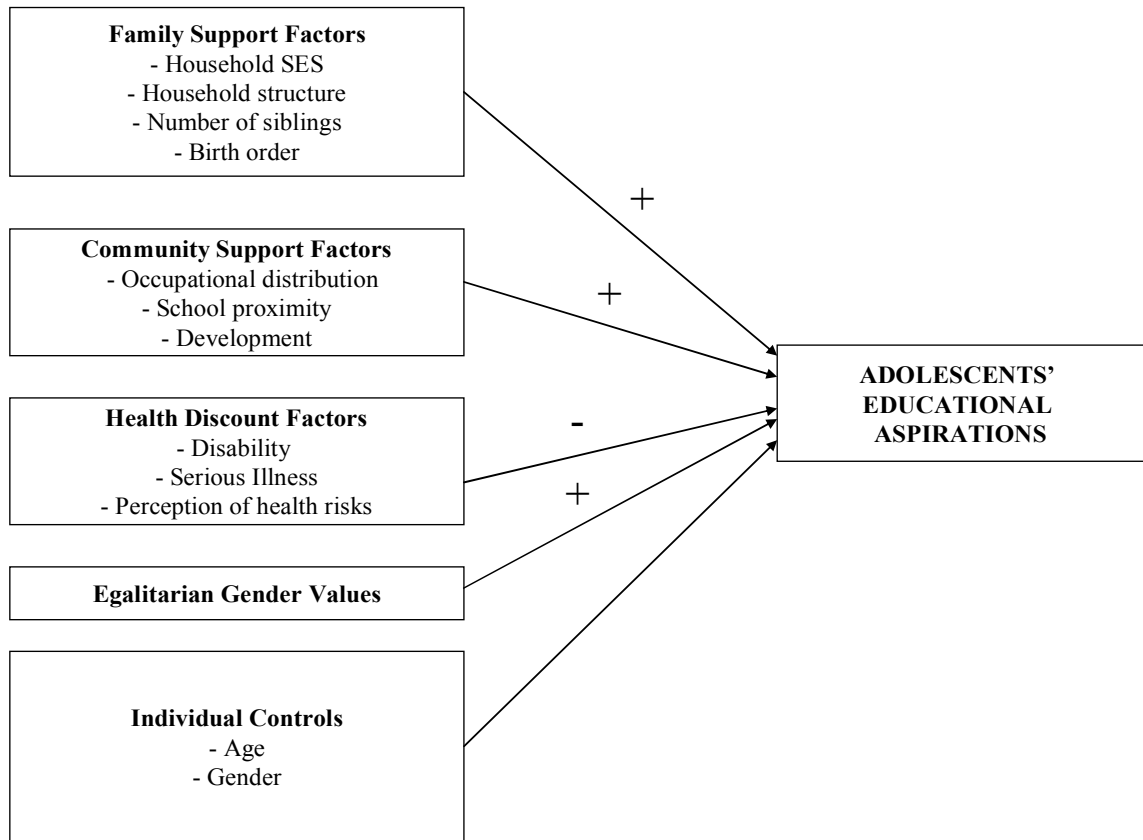


Table 1. Sample Characteristics, Jimma Longitudinal Family Survey of Youth, Ethiopia, 2005-06.

	Population	Sample Size		
		Households	Boys 13-17	Girls 13-17
<u>Urban</u>				
6 neighborhoods	120,000	1,404	357	396
<u>Semi-urban</u>				
3 towns	3,000-5,000	1,061	308	293
<u>Rural</u>				
9 peasant associations	2,000-4,300	1,226	493	336
Total		3,691	1,058	1,025

Table 2. Variable Descriptions, Jimma Longitudinal Family Survey of Youth, Ethiopia, 2005-06.

Variables

Outcome

Educational aspirations: What is the highest grade you think you will complete (1-18 years).

High Educational Aspirations: Top quartile of educational aspirations distribution (17-18 years)

Individual controls variables

Age

Sex

Gender values

Egalitarian gender values: Index created from factor loadings for agreement with six statements (0=Agree, 1=Disagree, 0.5=Don't know) regarding gender roles: a woman should always listen to her husband, normally a man should not have to do housework, marriage by abduction is acceptable, the husband should have the final say in all major family matters, there is nothing a woman can do if her husband wants to have a mistress, and female circumcision is a practice that should continue. Cronbach's Alpha for the six items is 0.58. High values of the index correspond to approval of more egalitarian relationships.

Health Discount Factors

Disability: Has one or more of the following disabilities: hearing problem, vision problem, uses a wheelchair, uses a cane or crutches, has problems walking, has a paralysis, has a mental problem, or has an amputation (range 0-8).

Serious Illness: Has one or more of the following illnesses or conditions: night blindness, HIV/AIDS, tuberculosis, diabetes, malaria, severe injury.

Health vulnerability: Index created from factor loadings for expectations of having in the future or currently has: night blindness, HIV/AIDS, tuberculosis, diabetes, and malaria. Cronbach's Alpha for the five items is 0.71. High values of the index correspond to high sense of vulnerability to serious illness or disease.

*Family Support Factors***Father's occupational prestige score**

Household SES: Index created from factor loadings for ten household items: radio, television, electric stove, bicycle, motorcycle, electricity, protected drinking water, toilet, non-dirt floor, owns home. Cronbach's Alpha for the ten items is 0.56. High values of the index correspond to high economic status.

Household Structure: Female headed family.

Number of Siblings: Number of siblings in household.

Birth order: Adolescent is first child.

Community Support Factors

Occupational Distribution: Occupational prestige score of the top quartile of the occupational distribution in the community/neighborhood (based on Standard International Occupational Prestige Score).

Development index: Composite index created at the community/neighborhood level from factor loadings for mean values of four indices: household socioeconomic status, housing quality, sanitation, and egalitarian relationship index. Cronbach's Alpha for the four mean indices at the community level is 0.81. High values of the index correspond to higher levels of development.

School proximity (school within a 30 minute walk or 1/distance in kilometers).

Table 3. Parameter Estimates from Heckman Probit Model Predicting High Educational Aspirations with a Control for Selection into School. Adolescents Age 13-17, Southwestern Ethiopia, 2005.

First Step Selection Model:	Full Sample		Girls		Boys	
Currently in school	β		β		β	
<i>Socio-demographic controls</i>						
Age 13 (ref.)						
Age 14	-0.216	*	0.040		-0.503	***
Age 15	-0.297	**	-0.140		-0.485	***
Age 16	-0.526	***	-0.482	***	-0.609	***
Age 17	-0.613	***	-0.690	***	-0.551	***
Female	-0.051					
<i>Health Status</i>						
Serious illness	-0.242		-0.240		-0.488	
Disability	-0.707	***	-1.166	***	-0.210	
<i>Community Context</i>						
Development index	0.053		-0.218		0.334	*
Rural (ref.)						
Town	0.677	**	1.141	**	0.223	
City	0.519		1.188	**	-0.166	
Constant	1.396	***	0.989		1.807	***
Second Step Model: High Educational Aspirations						
<i>Socio-demographic controls</i>						
Age 13 (ref.)						
Age 14	-0.176	*	-0.230	*	-0.150	
Age 15	-0.232	**	-0.301	**	-0.175	
Age 16	-0.066		-0.105		-0.077	
Age 17	0.075		-0.124		0.150	
Female	-0.259	***				
Gender equality index	0.172	***	0.388	***	0.084	
<i>Health Status</i>						
Vulnerability to serious illness	-0.127	***	0.034		-0.215	***
<i>Family Resources</i>						
Muslim (ref.)						
Orthodox Christian	0.126	*	0.103		0.130	
Protestant	0.221		0.243		0.235	
First born	0.079		-0.027		0.172	
Number of siblings	-0.008		-0.009		-0.001	
Wealth index	0.080	***	0.085		0.085	
<i>Community Context</i>						
Development index	0.119		-0.256		0.434	**
Rural (ref.)						
Town	0.161		0.820	*	-0.252	
City	-0.257		0.345		-0.648	
<i>Interactions</i>						
Vulnerability*Gender Equality			-0.109	**		
Vulnerability*Wealth index					0.001	
Constant	-0.651	**	-1.27	***	-0.626	**
Rho	0.149	*	0.994	***	0.851	
Number of cases: total (uncensored)	2083 (1896)		1025 (931)		1058 (965)	

* $p < 0.10$, ** $p < 0.05$