

Schooling and Family Planning Knowledge among Unmarried Adolescent Females in Ethiopia

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BACKGROUND

According to the dominant theories in demography, knowledge of family planning is a necessary but not sufficient condition for adopting effective contraceptive behavior (Fishbein & Azjen, 2010). Attending schools can lead to increased knowledge about family planning in several ways. More educated women may be exposed to family planning information through formal sexual health programs offered in schools (Boonstra, 2011; UNESCO, 2011). They also may have greater access to family planning information through social networks, mass media, or community health workers, which are important instruments for disseminating family planning information in developing countries such as Ethiopia (Center for Communications Programs, 2010). Furthermore, schooling may provide women the tools necessary to make sense of family planning messages, including literacy skills, causal reasoning, and other critical thinking skills. Students also may be more motivated to seek or retain family planning information than non-students, as becoming pregnant often requires young women to leave school (Lloyd & Mensch, 2008).

In this paper we examined the relationship between schooling and knowledge about family planning among unmarried adolescent females in Ethiopia. We also assessed the relationship between schooling and exposure to family planning messages through mass media and community health workers, which is one possible pathway between schooling and family planning knowledge. Ethiopia is a particularly interesting setting in which to study schooling and family planning knowledge, as Ethiopia has fewer out-of-school adolescents and more female adolescents who progress to secondary school than other countries in sub-Saharan Africa (Hervish & Clifton, 2012). We distinguished between the effects of current school attendance and educational attainment. There may be distinct effects of merely attending school, regardless of the level or what is learned there, and achieving higher levels of educational attainment.

METHODS

We analyzed data from the 2011 Ethiopia Demographic and Health Survey (DHS). The sample included unmarried females aged 15–19 (n=3,051).

We included three measures of women's knowledge about reproductive health:

- *Knowledge of a modern contraceptive method:* We included a dichotomous variable for whether the respondent knows of a modern contraceptive method.
- *Knowledge of the ovulatory cycle:* A second dichotomous variable indicated whether the respondent correctly identified the middle of her monthly cycle as the time when she has the greatest chance of becoming pregnant.
- *Knowledge of a source for contraceptive methods:* A third dichotomous variable indicated whether the respondent could identify a source of family planning. This measure was available only for women who were not using a contraceptive method at the time of the interview.

The analysis included measures of exposure to family planning messages from both mass media and community health workers:

- *Exposure to family planning messages through mass media:* The DHS asks women whether they have heard about family planning from a list of possible sources in the last few months. For the present analysis, we created a dichotomous variable for whether the respondent had heard about family planning from the radio, television, or newspapers/magazines.
- *Exposure to family planning messages from a community health worker:* A second dichotomous variable indicated whether the respondent had discussed family planning with a community health fieldworker in the twelve months prior to the interview.

We first used multivariate logistic regression analyses to compare schooling differences in each measure of exposure to family planning messages and family planning knowledge, controlling for age, rural/urban residence, household wealth, employment status, and sexual history. Next, we used multivariate logistic regression analyses to compare schooling differences in knowledge of family planning, independent of exposure to family planning messages, as well as the social and demographic control variables.

RESULTS

Schooling and Exposure to Family Planning Messages. Table 1 shows the results of multivariate logistic regression models examining the odds of exposure to family planning messages through the media and community health workers among unmarried adolescent females in Ethiopia. Current students were significantly more likely than non-students to report exposure to family planning messages from the media (odds ratio 2.04) and community health workers (odds ratio 1.62). Similarly, having a primary education was associated with greater odds of exposure to family planning messages through both the media and community health workers (odds ratios 2.53 and 2.69, respectively).

Schooling and Family Planning Knowledge. Among unmarried adolescent females in Ethiopia, being a student was associated with greater odds of knowledge of modern contraceptive methods (odds ratio 2.74), the ovulatory cycle (odds ratio 1.90), and where to obtain contraceptive methods (odds ratio 2.22). Independent of whether they are currently attending school, having completed primary school was associated with greater odds of knowledge in each of the three areas (odds ratios 14.61, 2.05, 2.32, respectively). The positive association between schooling and each measure of family planning knowledge holds after controlling for exposure to family planning messages through the media and community health workers. Exposure to family planning messages in the media was positively associated with family planning knowledge, but exposure through community health workers was not a significant predictor of family planning knowledge in any of the models.

CONCLUSIONS

This analysis found that, among unmarried adolescent females in Ethiopia, students have more knowledge about family planning than their peers not in school. In addition, those who have completed primary school have more family planning knowledge than their peers who have not. The strong positive relationship between schooling and family planning knowledge remained when we controlled for exposure to family planning messages and potential social and demographic confounders. Interestingly, exposure to family planning messages through community health workers was not a significant predictor of family planning knowledge. Before the PAA Annual Meeting, we will use mediational statistical methods to formally test potential pathways between schooling and family planning knowledge, such as exposure to family planning messages through mass media, empowerment, literacy skills, and fertility intentions.

References

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Table 1: Among unmarried 15-19 year old females in Ethiopia, adjusted odds ratios from logistic regression analysis identifying associations between schooling measures and exposure to family planning messages, according to source (n=3,051^a)

	Mass media	Community health worker
Schooling		
Attending school		
Yes	2.04***	1.62*
No	(ref)	(ref)
Completed primary school		
Yes	2.53***	2.69***
No	(ref)	(ref)
Social and demographic		
Age	1.10*	0.95
Residence		
Rural	0.49	1.19
Urban	(ref)	(ref)
Household wealth index		
Poorest	(ref)	(ref)
Second	1.63*	1.08
Third	2.30***	1.70
Fourth	2.48***	1.30
Wealthiest	3.31**	0.87
Employed		
Yes	1.37*	1.09
No	(ref)	(ref)
Ever had sex		
Yes	1.40	1.40
No	(ref)	(ref)

* p<.05. ** p<.01. *** p<.001; ^aSample size is unweighted.

Table 2: Among unmarried 15-19 year old females in Ethiopia, adjusted odds ratios from logistic regression analysis identifying associations between schooling measures and family planning knowledge, according to topic (N=3,051^a)

	Knowledge of a modern contraceptive method		Knowledge of ovulatory cycle		Knowledge of a source of contraceptive method ^b	
Schooling						
Attending school						
Yes	2.74***	2.23**	1.90***	1.80***	2.22***	2.02***
No	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
Completed primary school						
Yes	14.61*	10.38*	2.05***	1.92***	2.32***	2.00**
No	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
Exposure to family planning message						
Mass media						
Yes		5.12**		1.67**		2.39***
No		(ref)		(ref)		(ref)
Community health worker						
Yes		2.49		0.78		0.91
No		(ref)		(ref)		(ref)
Social and demographic						
Age	1.21*	1.19	1.15*	1.14*	1.13**	1.12*
Residence						
Rural	0.38	0.44	0.76	0.82	0.70	0.81
Urban	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
Household wealth index						
Poorest	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
Second	2.46*	2.14	1.27	1.20	1.33	1.26
Third	1.66	1.37	1.15	1.07	1.29	1.15
Fourth	1	0.78	1.4	1.27	1.38	1.21
Wealthiest	0.93	0.58	1.39	1.21	1.63	1.34
Employed						
Yes	2.21*	2.07*	0.84	0.81	1.70***	1.65**
No	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
Ever had sex						
Yes	3.17*	2.92*	1.74*	1.69	2.65**	2.69**
No	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)

* p<.05. ** p<.01. *** p<.001; ^aSample size is unweighted; ^bn = 2,997 women who are not currently using a contraceptive method.