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Extended Abstract

Child Health-Related Behaviors in Southern Ghana: Is Health Knowledge Important?

Introduction

This paper is concerned with the determinants of child health in Ghana. More specifically, my research attempts to elucidate *what people know* about child illnesses, *how they know it*, and *whether it matters*. In other words, what are the characteristics associated with "health knowledge," or knowledge of disease etiology, and does health knowledge, in turn, influence child health-related behaviors?

As in other developing countries, infant and child morbidity and mortality are relatively high in Ghana, and most infant and child deaths are due to infectious diseases. According to the 1998 Demographic and Health Survey (DHS), Ghana's infant mortality rate is 57 and its under-five mortality rate is 108 per 1000 live births (GSS and MI, 1999:83). One in nine Ghanaian children dies before reaching his or her fifth birthday.

Theoretical Background

There is a vast amount of empirical research on the determinants of child survival. One central socioeconomic influence long deemed influential is maternal education. Across many diverse cultural contexts, rising levels of maternal education and literacy are strongly associated with improved child survival. What is less clear, however, is exactly *how* improvements in education affect child survival.

One mechanism linking education and child health is "health knowledge," or knowledge of disease etiology. Preston and Haines (1991), in their analysis of child mortality in the U.S. in the late nineteenth century, identified health "know how" – acceptance of the germ theory of disease causality and associated hygienic practices – as an important determinant of mortality decline in the U.S. Moreover, Preston (1985) theorized that health knowledge was a product of formal education. Caldwell also identified health knowledge, or "awareness of health matters," as a causal mechanism through which education operates (1979:396). Similarly, other demographic researchers have also noted the importance of health knowledge in child survival, including Garenne and F. van de Walle (1985), Oppong and Abu (1987), and Mosley and Chen (1984).

Data and Methods

This paper is concerned with this intermediate causal mechanism through which education is thought to affect child health: health knowledge. In this paper, I examine both the determinants of health knowledge as well as whether health knowledge influences personal and household hygiene practices.

I rely on primary survey data (N=2500) collected in 2002 in coastal Ghana as well as qualitative interviews (Focus Group Discussions) conducted in 2003. We interviewed all adults (age 15+) in our sample about prevention, symptoms, causes, and treatment of three serious child illnesses in Ghana: malaria, diarrheal disease, and respiratory infection. I operationalize two types of "health knowledge," knowledge of the role of *contagion* in disease transmission, and, drawing on Caldwell, who suggested that it may not matter so much that people understand bacteriology, but that they understand what to do (1986:206), a less stringent measure, knowledge of the role of *hygiene* in disease tranmission.

Findings

Research presented at the 2004 PAA demonstrated first, that knowledge of etiology is quite low in this population. Only 53 percent of people in this area of Ghana identify the mosquito vector or the malaria parasite as the cause of malaria. And less than 10 percent identify contagion as the cause of diarrheal disease and respiratory infection. Respondents are more knowledgeable about hygiene, however. Second, multivariate research demonstrated that, in addition to the strong influence of formal schooling on health knowledge, other characteristics are important, including media exposure, civic participation, migrant experience, SES, and urban residence.

In this paper I move beyond the determinants of health knowledge to examine *whether it matters*. More specifically, does health knowledge, in turn, affect child health-related behaviors? Preliminary results suggest that yes, health knowledge is associated with improved health practices such as hygienic hand washing, household cleanliness, and type of toilet facility. This positive relationship between health knowledge and personal and household hygiene persists even when controlling for other influential factors, such as formal education, area of residence, and SES.

For example, **Table 1**, below, shows a multivariate model of the determinants of hygienic hand washing. Net of the important effects of education, literacy, and SES, those who have greater health knowledge (measured by an index measure of knowledge of contagion) exhibit more hygienic hand washing practices.

Implications

This research illuminates two important things. First, there are alternative pathways to biomedical knowledge (i.e., knowledge of contagion and hygiene) beyond formal schooling, including media exposure, urban residence, migrant experience, etc. Second, health knowledge, in turn, does appear to matter with respect to health behaviors. Those who are more knowledgeable about the role of contagion and hygiene in disease transmission exhibit better hygiene than those with less health knowledge – even when controlling for other important influences such as education and SES. This has important implications for child survival policies and programs in developing countries such as Ghana.

Table 1: Determinants of Hygienic Handwashing

2002 Ghana Population & Environment Survey

Ordered Logit
N = 2479

Independent Variable	Coef. (Rbst. Std. Err.)		*Odds Ratio*
Sex			
Male	**-0.407**	***	***0.67***
	(0.081)		
Age	0.001		*1.00*
	(0.004)		
CEB	0.003		*1.00*
	(0.017)		
Education			
None (Ref.)	0.000	--	*1.00*
Primary/Middle	**0.316**	**	***1.37***
	(0.112)		
Secondary+	**0.846**	***	***2.33***
	(0.180)		
Literacy			
Reads Easily	**0.233**	*	***1.26***
	(0.116)		
Media Exposure	-0.058		*0.94*
	(0.055)		
Civic Participation	0.029		*1.03*
	(0.062)		
Traditional Religion[2]	-0.196		*0.82*
	(0.127)		
Migrant	**0.460**	***	***1.58***
	(0.094)		
Non-Akan	-0.026		*0.97*
	(0.143)		
SES Index	**0.072**	**	***1.07***
	(0.025)		
Community			
Rural (Ref.)	0.000	--	*1.00*
Semi-Urban	-0.010		*0.99*
	(0.130)		
Urban	**0.254**	+	***1.29***
	(0.134)		
Health Knowledge[3]	**0.228**	**	***1.26***
	(0.073)		
Intercept 1	0.689		
	(0.184)		
Intercept 2	2.200		
	(0.192)		

***** = p < 0.001, ** = p < 0.01, * = p < 0.05, + = p < 0.10**

Chi^2 = 206.17
pseudo R^2 = 0.0510

[1] Three outcome categories: 0 = does not handwash after toileting nor before eating; 1 = handwashes either after toileting or before eating; 2 = handwashes both after toileting and before eating.

[2] Includes traditional Ghanaian and Syncretic.

[3] Index of Knowledge of Contagion [0, 3].