

Academic Risk and Resilience in Rural Guatemala: Family and Individual Predictors of Mayan Children's School Attainment

Education is a powerful tool in the war on poverty. Whether we aim to promote positive outcomes for American children living in urban housing projects or Guatemalan children living in rural hovels, education is a vital key to unlocking opportunities across the life course. Extensive scholarship has examined the effects of socioeconomic disadvantage on children's education in developed nations. This research suggests that although disadvantaged youth face higher odds of experiencing academic difficulties (Crosnoe and Cooper 2010)¹, many children from low-income families and under-resourced schools remain engaged in and ultimately complete high school (NCES 2004). Work exploring the factors that promote educational resilience suggest that maternal mental health and education, children's social and emotional well-being, and positive family relationships serve as protective factors, promoting low-income children's positive academic trajectories (Bornstein and Bradley 2003; Burchinal et al. 2006; Mistry et al. 2010).

Research from developing countries, where socioeconomic disadvantage is more pervasive, is more limited in scope but has increased our understanding of factors that potentially place children at risk academically. In these countries, families are often plagued by poor sanitation and limited access to clean water, electricity, health services, and schools. In Guatemala in particular, more than half of the overall population and about 75% of the indigenous population live below the poverty line (UNICEF 2011). Not surprisingly, Guatemalan children's educational chances are bleak, with about one-third completing primary school and less than one-quarter enrolled in secondary school (ibid). Indigenous girls, in

¹ References available upon request.

particular, appear most at risk, with only 14% completing primary school and 5% ever attending secondary school (vs. 30% and 14% for indigenous males; Hallman et al. 2006).

Prior research on indigenous Guatemalans suggests that low maternal education and low family income contribute to poor academic outcomes (Hallman et al. 2006; Stith, Gorman, and Choudhury 2003). Little is known, however, about the educational consequences of other forms of socioeconomic disadvantage, especially those specific to families in isolated, rural areas. Even less is known about individual- and family-level resources that potentially buffer against academic risks. Gaining a better understanding of these risk/protective factors and whether they vary by child gender can inform policies and programs designed to improve the educational chances of indigenous children.

To address this issue, we developed a multi-stage, mixed-method research project to address the following questions:

RQ1. To what extent are school-aged, indigenous children in Guatemala exposed to various forms of socioeconomic disadvantage (e.g., material hardship, low parent education)?

RQ2. To what extent are the quantity and quality of this disadvantage associated with children's school attainment (i.e., years completed)?

RQ3a. What are the social, cultural, emotional, and health factors that promote academic resilience and reduce the negative association between socioeconomic disadvantage and school attainment?

RQ3b. To what extent do these factors, their association with school attainment, and their protective role vary by child gender?

Methods

The first round of data was collected between December 2010 and February 2011. We randomly selected 50% of the homes within each of 15 Camanchaj neighborhood sectors ($n =$

264). Because we were interested in educational attainment, we excluded 37 homes without school-aged children (4 to 18 years of age). Additionally, we excluded 17 homes deemed dangerous for visitation, leaving 210 potential homes. Of these, interviews were conducted with 179 Mayan mothers (85% response rate).

Two female, university-educated, Mayan interviewers fluent in Spanish and K'iche (the local Mayan language) were trained by Dr. Cooper, who worked in the community for two years. During interviews, mothers' responses were entered by the interviewers on a laptop using REDCap, a secure data-entry software application. Interviews lasted approximately one hour and, based on the advisement of local community members, participating mothers received 1/2 pound of beans for every child 18 years or under in the home.

Development of the Wave 1 survey was a multi-step process. Initial items were included based on (a) a review of relevant literature on socioeconomic disadvantage and education in the U.S. and internationally and (b) the experiences of Dr. Cooper and the SYP staff in the target community. After initial survey development, the items were reviewed by Guatemalan and American SYP staff members to ensure both the content and question structure were appropriate for the Camanchaj population. After revisions, the final survey was approved by the local Camanchaj governing body. The survey assessed the following domains: household composition (e.g., ages, sex, and relation to mother of all household members); socioeconomic disadvantage (e.g., parent education and employment, monthly household expenses, material hardship); and children's education (e.g., school enrollment, financial assistance, experiences at school, parent-teacher communication, factors contributing to school withdrawal). A smaller number of items were included on social/cultural resources (e.g., community participation/leadership, church attendance, relationship with marital/cohabiting partners) and health resources (e.g., access to medical/dental care, parents' and children's physical and mental health).

Descriptive analyses will be used to document the socioeconomic disadvantage of the sample (RQ1). The links between socioeconomic disadvantage and children's educational attainment (RQ2) will be explored using OLS regression. We will conduct path analyses in a structural equation modeling framework to examine possible mediating and moderating effects of resources on the associations between disadvantage and school attainment (RQ3a). Multiple group analyses will examine differences in these associations by child gender (RQ3b). All analyses will be conducted in Mplus v6.1, which was selected for its ability to simultaneously address missing data (via full-information maximum likelihood or multiple imputation, depending on the amount and type of missingness), produce correctly adjusted standard errors (to account for children nested in families), and allow subpopulation estimates (e.g., by child gender). At present, Wave 1 data have been entered and translated, and they are being prepared for data analyses. The proposed analyses will be completed by January of 2011.

Significance of Project

Although access to primary education has increased in Guatemala in recent years, primary school completion remains among the lowest in Latin America (UNICEF 2011). Indigenous children are most at risk for low levels of schooling and illiteracy (Hallman et al. 2006; Shapiro 2005). Recognizing the critical connection between education and social opportunity, this study will identify the socioeconomic circumstances of Mayan families that strongly impact school attainment. We also look within families to locate resources that block the deleterious effects of socioeconomic disadvantage on educational attainment. Together, these two goals will focus intervention efforts to help indigenous children achieve the levels of education that they and their families desire.