

## **Gender, Health, and Urban-Rural Influences on School Attendance in Nepal**

Niroj Bhattarai, Alexandra Bernasek and Anita Alves Pena

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- The Poverty Action Center (PAC@REDI) aims to utilize interdisciplinary academic tools and mixed-methods research approaches to help guide poverty action locally and globally. We are using original survey design and econometric data analysis to answer questions at the intersection of poverty, access to education, and student achievement.
- Eliminating gender disparities in access to education and educational attainment is central to UN Sustainable Development Goal 4, Quality Education (United Nations, 2017).
- Original data collection in Nepal shows that experience surrounding menstruation may widen educational gaps in secondary school in Nepal, especially in rural settings.

School attendance rates of girls are hypothesized to be negatively affected by menstruation in countries such as Nepal where traditional attitudes and taboo may surround transitions into womanhood. As recent as January 2018, the rural Nepali practice of banishment from family homes during menstruation made worldwide headlines when a 22-year old woman died from asphyxiation after making a fire for heat in a small hut.<sup>1</sup> Her death came after the outlawing of such practice, and thus highlights persistence of urban-rural differences in gender norms.

Girls' school experiences during adolescence may be impacted by menstruation and by exclusionary social practices surrounding it in certain world cultures. While some academic literature suggests that menstruation and access to female sanitary products has minimal relationships to school attendance in Nepal,<sup>2</sup> particular evaluations have been limited in scope and application. A goal of our ongoing research is to identify factors, both economic and social, that impact school attendance in grades eight, nine, and ten, in rural and urban areas in Nepal.

Since the decision of whether to attend school or not on a daily basis is may depend on various social, economic, personal, and institutional factors, we collected specific information on students' characteristics, household characteristics, and school characteristics via an original survey that solicited this information directly from students at seven schools in urban and rural areas in and around Kathmandu Valley, Nepal. We then matched survey data to school-provided attendance records for the final sample size of 365 students.

We find that there is a significant urban-rural gap in attendance rates across urban and rural settings, which is most pronounced for female students (Figure 1). Annual attendance rates of girls were more than six percentage points higher, for example, in urban over rural settings. An interrelated association is that more than 52 percent of girls in rural schools (45 of 86 cases) indicated menstrual pain as their top health reason for missing school in comparison to only 32 percent (31 of 96 cases) of students in urban schools (Figure 2). Since infrastructure necessary

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<sup>1</sup> Sharma, Bhadra & Gettleman, Jeffrey. (2018). In Rural Nepal, Menstruation Taboo Claims Another Victim. *New York Times*, January 10.

<sup>2</sup> Oster, E., & Thornton, R. (2011). Menstruation, sanitary products, and school attendance: Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*, 3(1), 91-100.

for sanitary menstrual hygiene practice is missing in some Nepali environments, we examined attitudes toward school via responses to a question asking, "Do you get excited about coming to school every day?" Girls had significantly higher rates of reporting excitement by this measure in schools that had running water (75.3 vs. 63.3 percent). Conversely, girls were less likely to report excitement if they attended schools without running water (88.5 vs. 90.3 percent).

Figure 1: Attendance Rates by Gender and Urban/Rural Status

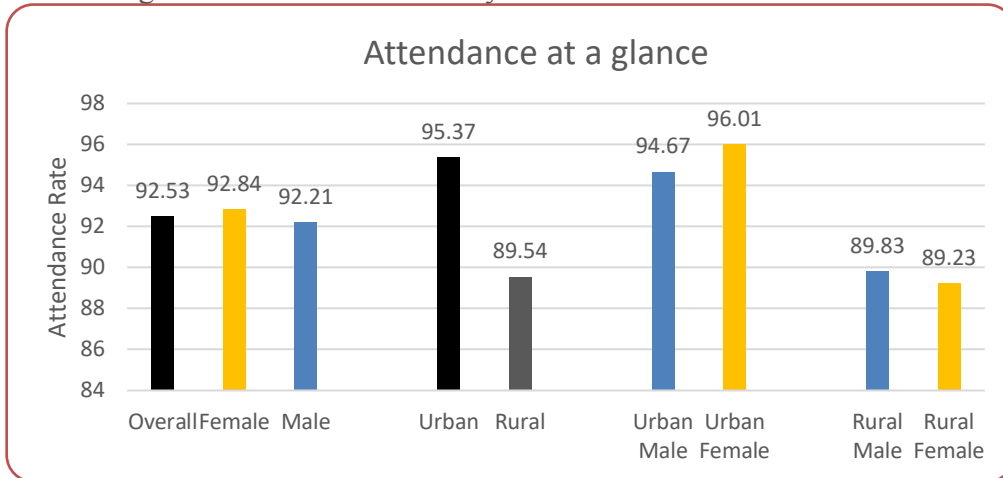
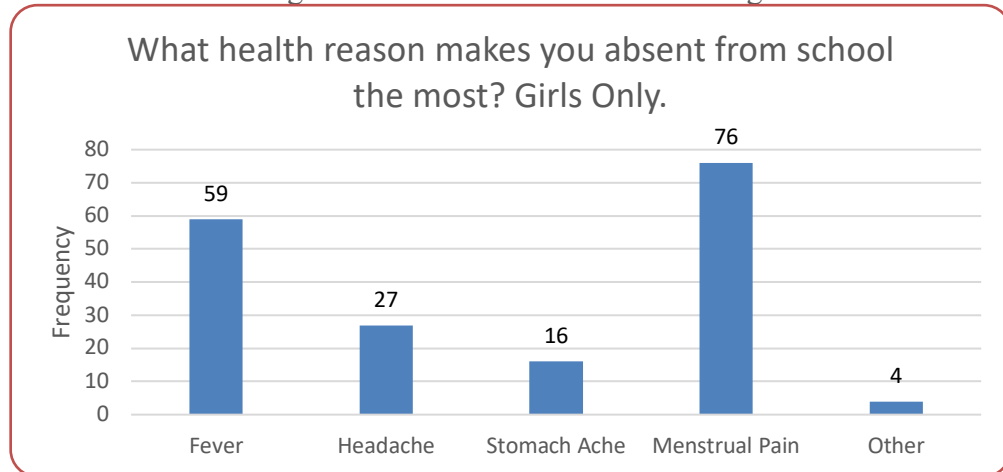


Figure 2: Health and Missed Schooling



Continuing research by PAC@REDI in Nepal is examining how other individual, household, and school-level associations impact school attendance, and ultimately student achievement. Individual factors include age, being a member of the privileged class, and time-use patterns associated with studying, household chores, and travel to school. Household factors include wealth indicators such family ownership of home, vehicles, and appliances, siblings and household size, and parental education and labor force participation. Schools characteristics include infrastructure indicators, teacher ratios, and incentives for attendance (e.g., rewards, fines). PAC@REDI is interested in extensions of this and other work in the areas of education and health within and beyond Nepal, and is poised to partner locally and internationally. Interested parties should contact Dr. Anita Alves Pena at [anita.pena@colostate.edu](mailto:anita.pena@colostate.edu).