

The Effect of Using Mosquito Bed Nets on Children School Attendance and Health Outcomes

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This study examines the effects of using the treated mosquito bed nets on education and health outcomes for school-age children and under-five children respectively. The scope of the study included 1,559 DHS clusters from 10 countries namely Tanzania, Kenya, Uganda, Rwanda, Malawi, Ghana, Mali, Senegal, Nigeria, and Zimbabwe. The two-year panel dataset was created by matching 2000 and 2015 DHS clusters whose shortest distance was equal to or less than 5 kilometers. Then, the matched DHS clusters were overlaid with malaria atlas project (MAP) of which a circle of 5 kilometers radius for each cluster was created to impute initial malaria prevalence.

Furthermore, the use of mosquito bed nets is an endogenous variable. So, I used a 2SLS estimation strategy to overcome the endogeneity problem of which the interaction of the imputed initial malaria prevalence with time was used as an excluded instrument variable. Basically, according to 2SLS estimation, the use of treated mosquito bed nets revealed significant improvement in children-age children to attend schools, reduction of school attendance grade differences as well as reduction of the likelihood for the under-five children to get a fever during the last two weeks before the survey. The results show a substantial increase in the possibility of attending school by roughly 24.8 percentage points for the school-age children with 6 - 15 years old if slept under treated mosquito nets, improved the probability of attending school for school-age girls with 6 – 15 years old by almost 40.3 percentage points compared to those who did not sleep under mosquito bed nets. Also, for girls, the grade gap substantially reduced by almost 0.702 years. On the other hand, the mosquito bed nets significantly reduced the probability for under-five children to get a fever in the last two weeks before the survey by approximately 25.3 percentage points.

Conclusively, the use of the treated mosquito bed nets showed statistically significant impacts on education outcomes such as school attendance and grade differences for girls compared to boys. Likewise, the impacts are different across age groups such as school-age children 6 – 10 years old and 11 – 15 years old as classified and discussed in chapter IV of this study.