

Abstract

Anemia is a significant public health concern worldwide with critical economic and health consequences affecting over 30% of the female population, particularly in the developing world. We assess the effects of community-level sanitation on women's hemoglobin (Hb) levels in Sub-Saharan Africa, a region particularly vulnerable to anemia. Using the geocoded location of clusters, we construct unique community-level panel data on access to sanitation facilities and combine it with individual women's hemoglobin levels based on the Demographic Health Survey (DHS) in ten countries. We adopt an instrumental variable design with cluster-fixed effects and exploit the geographical variation in sanitation and subsequent sanitation improvements within clusters. We show that a 100-percentage point change in the ratio of households practicing open defecation within a cluster increases women's hemoglobin levels by 0.658 g/dL. The heterogeneity analysis illustrates the substantial effects of community sanitation on women's hemoglobin levels in urban areas and households with clean water access. Our results show the spillover effects of community sanitation and document that observed hemoglobin advantage accrues to women even where households have sanitation facilities, suggesting the importance of community-level behavior change.

Keywords: Hemoglobin, Women's anemia, Community sanitation, Africa