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NUTRITION-SENSITIVE DETERMINANTS OF ANEMIA AMONG WOMEN OF  
CHILDBEARING AGE IN EASTERN UGANDA: A SECONDARY ANALYSIS TO INFORM  
NUTRITION PROGRAMMING

BY

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## ABSTRACT

Anemia is associated with poor health status and poor birth outcomes among women of childbearing age. It is estimated to contribute to more than 115,000 maternal deaths and 591,000 prenatal deaths globally per year. Globally, in 2019 it was estimated that 30 percent of women 15–49 years were affected by anemia and in Eastern Uganda, the prevalence was 21 percent. In other areas, nutrition sensitive factors like.... are related to anemia. However, the relationship between nutrition-sensitive determinants such as household women's dietary diversity, water sanitation hygiene, and anemia is less known. The study explored nutrition-sensitive determinants including; Household food security, Women's Dietary Diversity, and Water, Sanitation and Hygiene (WASH) conditions, in relation to anemia among women of reproductive age in Eastern Uganda. Secondary data from the 2019 Uganda National Panel Survey (UNPS) was used. Multistage stratified sampling was used to select 558 women of reproductive age included in the study. Anemia among pregnant women was defined as a hemoglobin value  $< 11$  g/dL and non-pregnant women were  $< 12$  g/ dL. Chi-square was used to assess the association between individual nutrition-sensitive determinants with anemia. The logistic regression model was used to assess the status of anemia, using R. Variance Inflation Factor (VIF) with values below 5 were indicated lack of multicollinearity among independent variables and retained in the logistic regression model. The overall prevalence of anemia among women was 18.3 percent (SD: 38.7 percent). In the pregnant women, the prevalence of anaemia was 24.3 percent (SD: 43.5 percent) and for non-pregnant was 17.8 (SD: 38.3 percent). The results revealed 24.4 percent of women's households were food secure; 19% had acceptable dietary diversity, 94.3 percent had a source of water for drinking; 22.9 percent sanitation facilities, and only 7.3 percent practiced hand washing. The results show that only the Source of water for drinking: ( $\chi^2=4.9893$  p-value = 0.026) was significantly associated with anemia. The results from regression model demonstrated promising performance metrics, including the area under the curve (AUC) (81.2 percent) values. Women's dietary diversity (AOR =0.73; 95CI: 0.56–0.97), hand washing (AOR=0.72; 95CI: 0.14–0.91), pregnancy status (AOR=56.53; 95CI: 20.89–152.95) were associated with increased odds of being anemic while being wealthier reduced risk of anaemia (AOR=0.10; 95CI: 0.02–0.52) among women. The study findings of anaemia among women indicated a mild to moderate public health problem in eastern Uganda, and associated with several nutrition-sensitive determinants like women's dietary diversity, source of water for drinking, and hand washing practice.

**Keywords** Anemia, Nutrition sensitive determinants, Women of reproductive age, Eastern, Uganda