

**Risk Factors for Kala-Azar In Fangak County, Jonglei State, Southern Sudan**

**John Lagu Nyungura**

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## ABSTRACT

Leishmaniasis has been considered a tropical affliction that constitutes one of the six entities on the World Health Organization tropical disease research list of most important diseases. The disease is one of the most important parasitic tropical

diseases in Sudan and other parts of the world. Leishmaniasis ranks only second to malaria among human protozoan diseases. It is estimated that about 500,000 persons are affected by visceral leishmaniasis annually; often people living in poor rural areas with limited health care resources. Unmatched case control study was conducted in Fangak County in Jonglei State, Southern Sudan from October 2007 to December 2007. Subjects were interviewed using a structured questionnaire to assess behavioral and environmental variables presumed to be risk factors for kala-azar transmission. The questionnaires which were originally in English were translated into Nuer for study recruits and their responses translated back into English for the principal researcher to complete the forms. A total of 144 participants were recruited for the study with (33%) cases and (67%) controls. Of the total study participants, (44%) were males and 56% were female. The mean age for cases was eight years with a range from nine months to forty five years, while for the controls it was ten years for the mean age with a range from five months to sixty two years. The types of bed nets in use were: long lasting insecticide treated, cotton cloth- untreated (“Dhamoria”), and, ‘silk cloth’ untreated (“Smooking”). On the use of a bed net, significantly more kala-azar cases were using the “Smooking” type of bed net compared to the controls. Sometimes smearing of cow dung ashes on the body was associated with kala-azar. People who occasionally engage in traditional dances at night or children playing around the houses during the night were also found to be significantly associated with kala-azar. During the rainy season, the consistent use of different types of bed nets namely; “Polyethylene”,

“Dhamoria” and “Smooking”, were protective. The study found out that more than half (56%) of the participants affected by the kala-azar were children less than five years. Accessibility to treatment is delayed and most people use wrong types of bed nets. Irregular use of cow dung ashes is associated with kala-azar and is not protective contrary to the local believes and practice. Playing/dancing outside in the dark may lead to an increased risk for kala-azar among children. The study recommends the establishment of kala-azar treatment units in existing health facilities in the counties with high prevalence.