Introduction

The World Health Organization (WHO) estimates that the number of people with visual impairment worldwide in 2002 was in excess of 161 million, of whom about 37 million were blind [1]. More than 90% of the world's visually impaired live in developing countries, the vast majority of them in rural areas of the least-developed countries [2]. In these settings, blindness is associated with considerable disability and excess mortality; resulting in huge economic and social consequences [3]. However, 75% of this visual impairment is estimated to be avoidable (preventable and curable) [4]. In 1999, the WHO Prevention of Blindness Program launched "VISION 2020: The Right to Sight Initiative" with the objective of assisting member states in eliminating avoidable blindness by the year 2020 [5,6]. The global target is to ultimately reduce blindness prevalence to less than 0.5% in all countries, or less than 1.0% in any community [7,8].

Baseline data on the prevalence and causes of blindness are important in planning for prevention-of-blindness strategies. Blindness is believed to be common in southern Sudan, although a national blindness survey has not been conducted. A blindness survey was conducted in East and West Equatoria provinces by Tizazu and Mburu in 1983; however, two

interceding decades of civil war have rendered the data of limited use in guiding current prevention-of-blindness programs [9]. Reports from eye surgical camps and anecdotal data indicated that blindness and low vision were common in Mankien payam (district). This survey was conducted with the main objective of planning for the implementation of prevention-of-blindness programs in Mankien. The specific objectives were: (1) to estimate the prevalence of blindness and low vision; (2) to identify the main causes of blindness and low vision; and (3) to estimate targets for blindness prevention programs.

Methods

Study Site

A population-based cross-sectional study was conducted in Mankien payam of southern Sudan in May 2005 (Figure 1, map). Mankien has an estimated population of 50,000 persons and is located in Unity state [10]. This area has been severely affected by the 21-y conflict in southern Sudan because it is located near the oil fields. Mankien comprises four bomas (subdistricts): Tam, Mandul, Kernyang, and Mankien. The main economic activities are cattle rearing and subsistence farming, and the Nuer are the predominant ethnic group. During the

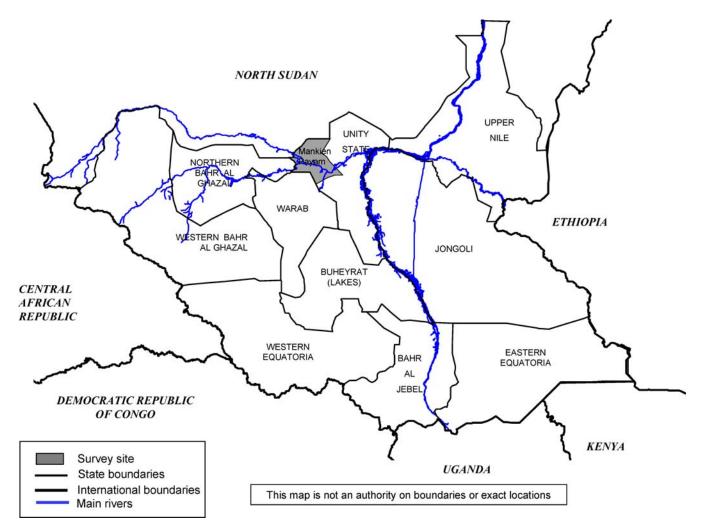


Figure 1. Map of Southern Sudan Showing the Study Site (Mankien Payam) doi:10.1371/journal.pmed.0030477.q001

