

ABSTRACT

Introduction

Tuberculosis continues to be one of the communicable diseases which is associated with high deaths that usually affect people in developing countries. Tuberculosis, a disease cause by a bacterium known as *Mycobacterium tuberculosis* which can be transmitted from an infected person to another susceptible person through air. The disease is an important public health issue that does not have any respect for anybody because irrespective of where one resides whether in a developed country or developing county one can be infected. Tuberculosis can affect everyone but about 90% of the people who become infected with tuberculosis are usually adults.

Objectives

The main objective was to determine the spatial distribution of tuberculosis cases and access to healthcare in Birim South District of the Eastern Region with specific objectives of identifying clustering of tuberculosis cases in the district and to assess the geographical accessibility of healthcare for TB patients.

Methodology

A descriptive cross sectional study was used for this study. The study used census method since all patients who meet the inclusion criteria were used for the study. The study included all TB patients who were on treatment from January 2019 to July 2020. The pre-coded data were entered into excel, clean and later exported to STATA version 16 software for statistical analysis. Frequency distribution and percentages were used to compute the proportions for age, education level, sex, religion, and occupation. The mean age and mean distance in kilometers to health facilities and their respective standard deviations were computed. The spatial data (coordinates)

for place of residence and the health facilities was organized in excel and later exported to geographical information system (ArcGIS) version 10.7.1 software for spatial analysis.

Results

The findings reveal that the distribution of tuberculosis cases in the district was randomly distributed. The study also reveals that there was a substantial surge in the number of tuberculosis cases from 2017 to 2019. The study again shows that the geographical access to health care by tuberculosis patients was not a challenge as most 99.1%, 97.2% and 92.5% of the study participants were found within 5km, 3km and 2km radius respectively.

Conclusion

The district health directorate should conduct intensive health education on tuberculosis with emphasis on prevention in the district to decrease or reduce the spread of tuberculosis in the district. The district health directorate should conduct active case search in communities to detect and identify all possible cases in the communities for treatment.