

IMPACT OF CLIMATE VARIABILITY ON THE OCCURRENCE OF SOME HUMAN INFECTIOUS DISEASES IN PART OF IKA SOUTH LOCAL GOVERNMENT AREA, DELTA STATE, NIGERIA

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ABSTRACT

Climate plays a significant role in the spread of certain disease through the influence of its variable such as temperature, rainfall and relative humidity. This research work was aimed at investigating the impact of climate variability on the occurrence of malaria, cholera and meningitis diseases taking account of rainfall, temperature and relative humidity Ika south local government area of Delta state. 250 questionnaires were administered and analyzed. Climate data and hospital record were procured from Nigerian meteorological agency (NIMET) and Ika south general hospital respectively. The data were analyzed using descriptive and inferential statistics. The findings indicated that there was a fairly good relationship between rainfall event and occurrence of malaria disease($R=0.55$), however, malaria occurrence and temperature were poorly correlated. Therefore a stronger relationship exists between rainfall and malaria than temperature and relative humidity. The relationship between temperature and cholera and meningitis occurrence was fairly good, $R^2>0.5$. The spread of cholera does not have a direct relationship with climate parameters however; temperature and relative humidity exacerbate the spread. The result shows that malaria is most prevalent in the rainy season. It was concluded that the climate of the area show the variability in rainfall, relative humidity and temperature over a period of 30years (1986-2015) and these variabilities have had impact on human health as manifested on the prevalent and occurrence of climate related infectious diseases in the area. Therefore, the study recommend a broadening of the scope of the current study to state or regional levels with input data from other observation and models, government and other parastatals and stakeholders in the health sector should plan with climate inclusion such that an input from climate scientists should be incorporated into current health care planning and there should be training on the causes of climate variability to increase the level of awareness and by extension coping mechanisms.