

# Prevalence of Measles, Malaria and Hepatitis -A Among Male and Female in Yobe State Specialist Hospital, Damaturu, Nigeria

**Sabina Khanam\***

*Department of Biological Sciences, Yobe State University, Nigeria*

**\*Corresponding author:** Sabina Khanam, Department of Biological Sciences, Yobe State University, Nigeria



## ARTICLE INFO

**Received:** 📅 August 22, 2022

**Published:** 📅 September 02, 2022

**Citation:** Sabina Khanam. Prevalence of Measles, Malaria and Hepatitis -A Among Male and Female in Yobe State Specialist Hospital, Damaturu, Nigeria. Biomed J Sci & Tech Res 46(1)-2022. BJSTR. MS.ID.007280.

## ABSTRACT

This study was carried out to determine the prevalence rate of malaria, measles and hepatitis among male and female of different age groups. The prevalence rate of measles is more in the children of more than five years of age in both the sexes. Males of age greater than five had the highest (60%) prevalence rate of measles and lowest (40%) in less than five of age. The highest (62.5% ) prevalence of malaria was found in females of age group 11-20 years and lowest(28.57%) was found in males of age group 11-20 and 21-30 years. In males the prevalence of hepatitis -A was highest in the age group 21-40(72.72%) while in case of female the prevalence of hepatitis-A was highest in the age group 1-20(80%).

**Keywords:** Malaria; Measles; Hepatitis A; Prevalence

## Introduction

Measles, malaria and hepatitis are the major problems in children as well as in adults in Africa, Europe, and South-east Asia [1]. Measles is one of the disease of under five child mortality in Nigeria. The reason behind this is may be delaying vaccination which may increase the complications of this disease [2,3]. In Sub Saharan Africa measles is the major cause of mortality and morbidity with around 650,000 deaths and around 13 million measles cases annually [4]. Around 1.5 million people are affected by hepatitis A virus each year globally. It is the important public health problem globally in middle income and low income regions [5]. Malaria is a disease caused by the parasite Plasmodium species. It is distributed largely in warmer regions of the world. Development of the malarial parasite in red blood cells may cause various clinical symptoms. Malaria infection transmitted through the infected female anopheles mosquito. The symptoms are: High Fever, Chills and shivering, Chest and abdominal pain, Enlargement of liver and spleen, Pulmo-

nary edema, Black water fever [6]. Approximately a total of 30% of malaria cases are from the Nigeria in whole african continent which affects the Nigerian economy with a loss of approximately 700 million USD in prevention and treatment . In Nigeria malaria mainly control by taking Chloroquine drug because it is the cheapest anti-malarial drug [7-9].

## Material and Method

### Study Area

This study was carried out in Damaturu Local Government, Yobe State, Nigeria. According to 2006 census the population of Damaturu is 88,100 with 25.2°C average temperature.

### Climate

The climate here is considered to be a local steppe climate, there is little rainfall throughout the year. This location is classified

as BSH by Koppen and Geiger in Damaturu, the average annual temperature is 25.2°C. in a year, the average rainfall is 649mm.

**Data Collection**

The data was collected from General Hospital , Damaturu for the analysis.

**Prevalence Rate**

Prevalence rate was calculated by using the following formula

$$\text{Prevalence rate} = \frac{\text{Number of Patients having disease}}{\text{Total Number of Patients diagnose}} \times 100$$

**Results and Discussion**

Table 1 shows prevalence rate of male and female of different age groups. A total of 15 subjects were participated in the study. Out of 15 participants 10 were male and 5 were female. Males of age greater than five had the highest (60%) prevalence rate of measles and lowest (40%) in less than five of age. All the 5 females belongs to age greater than five. In 2006, 383 measles cases, in 2007, 2542 and in 2008, 9510 cases has been reported in Nigeria [10,11]. There are some evidences which shows that measles virus indirectly affects the central nervous system which leads to electroencephalographic abnormalities in early stages of measles [12,13]. Table 2 shows the prevalence rate of malaria among male and female of different age group. A total of 15 participants were taken for the study. Out of 15 participants 7 were male and 8 were female. In males out of 7 participants 3(42.85%) were belongs to age group 1-10 years, 2(28.57%) of age group 11-20 and 2(28.57%) of age group 21-30 years. In females out of 8 participants 3(37.5%) belongs to age group 1-10 years and 5(62.5%) of age group 11-20 years.

**Table 1:** Prevalence Rate of Measles Among Male and Female of Age <5 and >5.

Age	Male	Prevalence (%)	Female	Prevalence (%)
<5	6	60	5	100
>5	4	40	0	0
Mean±SD		50±10		50±50
P		0.125NS		0.499NS

**Table 2:** Prevalence Rate of Malaria Among Male and Female of Different Age Group.

Age	Male	Prevalence (%)	Female	Prevalence (%)
1-10 Years	3	42.85	3	37.5
11-20 Years	2	28.57	5	62.5
21-30 Years	2	28.57	0	0
Mean±SD		33.33±6.73		33.33±25.68
P		0.019*		0.207NS

**Table 3:** Prevalence Rate of Hepatitis- A Among Male and Female of Different Age Group.

Age	Male	Prevalence (%)	Female	Prevalence (%)
1-20 Years	3	27.27	4	80
21-40 Years	8	72.72	1	20
Mean±SD		49.99±22.72		50±30
P		0.271NS		0.344NS

The highest (62.5%) prevalence of malaria was found in females of age group 11-20 years and lowest(28.57%) was found in males of age group 11-20 and 21-30 years. Some researchers in Nigeria found 64% (128/200), 59.6%(118/198) and 58%(233/400) prevalence of malaria cases in children of Kebbi State, Awka and Abuja respectively [14-16]. Table 3 shows the prevalence rate of hepatitis-A among male and female of different age group. A total of 16 participants were taken for the study. Out of 16 participants 11 were male and 5 were female. In 11 male participants 3(27.27%) were belongs to age group 1-20 and 8(72.72%) were belongs to age group 21-40. On the other hand out of 5 female participants 4(80%) were belongs to age group 1-20 and 1(20%) participant belong to age group 21-40. In males the prevalence of hepatitis -A was highest in the age group 21-40(72.72%) while in case of female the prevalence of hepatitis-A was highest in the age group 1-20(80%). Ikobah, et al. [17] studied that the highest prevalence rate of hepatitis-A virus was in the 21-30 years of age group 84(5.5%)and 55.2% of prevalence rate reported in the study of children from Nigerian rural community. A similar study was reported by Nwolisa, et al. [18], and he reported that the infection of hepatitis B virus was highest in males.

**References**

- (2011) World Health Organisation. Reported measles cases and incidence rates by WHO member states 2010 and 2011. WHO factsheet.
- (2006) World Health Organisation. Mortality country fact sheet on Nigeria.
- Gagneur A, Pinquier D, Aubert M, Balu L, Brissaud O, et al. (2008) Kinetics of decline of maternal measles virus-neutralising antibodies in sera of infants in France in 2006. Clin vaccine Immunol 15(12): 1845-1850.
- Muller CP, Hanses F, Troung A, Ammerhan WO, Ikusika W, et al. (1999) Molecular epidemiology of Nigerian and Ghanaian measles virus isolates revealed a genotype circulating widely in western and central Africa. J Gen Virol 80(4): 871-877.
- Jacobson KH, Wiersma ST (2010) Hepatitis A virus seroprevalence by age and world region, 1990 and 2005. Vaccine 28: 6653-6657.
- Monif GRG, Baker DA (2004) Infectious Diseases in Obstetrics and Gynecology, 5th Edition. New York: Parthenon, pp. 736.
- (2014) World Health Organisation. Geneva: World Health Organisation.
- (2012) WHO. Progress and impact series: focus on Nigeria. Geneva: World Health Organisation.
- (2012) Federal Ministry of Health. Malaria advocacy brief for policy makers. Abuja: Federal Ministry of Health.

10. (2009) World Health Organisation. Measles reported cases 2009.
11. Weldegebriel GG, Gasasira A, Harvey P, Masresha B, Goodson JL, et al. (2011) Measles resurgence following a nationwide measles vaccination campaign in Nigeria, 2005-2008. *J Infect Dis* 204: 226-231.
12. Gibbs FA, Gibbs EL, Carpenter PR, Spies HW (1959) Electroencephalographic abnormality in uncomplicated childhood diseases. *JAMA* 171:1050-1055.
13. Pampiglione G (1964) Prodromal phase of measles: Some neurophysiological studies. *Br Med J* 2: 1296-1300.
14. Nmadu PM, Peter E, Alexander P, Koggie AZ, Maikenti JI (2015) The prevalence of malaria in children between the ages 2-15 visiting Gwarinpa General Hospital Life-camp, Abuja, Nigeria. *J Health Sci* 5: 47-51.
15. Mbanugo JI, Ejims DO (2000) Plasmodium infections in children aged 0-5 years in Awka Metropolis, Anambra State, Nigeria. *Niger J Parasitol* 21: 55-59.
16. Singh R, Godson II, Singh S, Singh RB, Isyaku NT, et al. (2014) High prevalence of asymptomatic malaria in apparently healthy school children in Aliero, Kebbi State, Nigeria. *J Vector Borne Dis* 51:128-132.
17. Ikobah JM, Okpara HC, Ekanem EE, Udo JJ (2015) Seroprevalence and predictors of hepatitis A infection in Nigerian children. *The Pan African Med J* 20: 120.
18. Nwolisa E, Mbanefo F, Ezeogu J, Ahmadi P (2013) Prevalence of hepatitis B coinfection among HIV infected children attending a care and treatment centre in Owerri, South Eastern Nigeria. *Pan African Medical* 14: 89.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2022.46.007280

Sabina Khanam. Biomed J Sci & Tech Res



This work is licensed under Creative Commons Attribution 4.0 License

Submission Link: <https://biomedres.us/submit-manuscript.php>



#### Assets of Publishing with us

- Global archiving of articles
- Immediate, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<https://biomedres.us/>