Article Review on Pattern and Distribution of Malaria in Wulu-A Typical County in Southern Sudan

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Abstract

The objective was to investigate the pattern and distribution of reported malaria infection in Wulu, Southern Sudan. Secondary data on malaria cases managed between January, 2104 and December, 2016 across all the eleven health districts of the county were obtained from the health management information systems and the district health management software. Descriptive statistics were used to analyze the extracted data. In his findings, the author claims that his study showed similar trend in pattern and distribution of malaria infection over a period of 2014 to 2016 and across the health districts, however it did not suggest a reduction in the trend of occurrence. It emphasized that, more attention should be given to the under 5 year's population. **Keywords:** Pattern and distribution of malaria, Malaria transmission, Malarial disease

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I. Introduction

The article by Gabriel Omoniyi et al, 2017, "pattern and distribution of malaria in Wulu-A typical County in Southern Sudan", Texila International journal of public health, September, Volume5, issue3, pp 58-66, visited and read on 08/04/2018, from website www.texilajournal.com/public-health/edition/59-volume5-issue3.

This review critically reviews "pattern and distribution of malaria in Wulu-A typical County in Southern Sudan", Texila International journal of public health. The review summarized the article, analyzed the effectiveness of the structure of the article, investigating the information used herein. Then the review critiqued the article, looking at its currency, accuracy, objectivity and coverage.

The review analyzed the graphs, tables and figures before jugging article accessibility and credibility. This article was well fairly written and organized, clear and highly related to its topic pattern and distribution of malaria in Wulu-A typical County in Southern Sudan.

II. Literature review on pattern and Distribution of Malaria

Ilona Carneiro et al, 2010 explains that there is evidence that the age-pattern of the Plasmodium falciparum malaria varies with transmission intensity. A better understanding of how its variation with the severity of outcome and across a range of transmission settings could enable locally appropriate targeting of interventions to those most at risk.

Prathiba M. De Silva and John M. Marshall (2012) says that Sub-Saharan Africa suffers by far the greatest malaria burden worldwide and is currently undergoing a profound demographic change, with a growing proportion of its population moving to the urban areas. Urbanization is generally expected to reduce the malaria transmission; however the disease still persists in most African cities, in some cases at higher levels than in nearby rural areas.

Noriko endo and elfatih AB Eltahir (2018) states that new dam construction is known to increase malaria transmission in Africa as the vectors of malaria—Anopheles mosquitoes—use bodies of water as breeding sites. The Precise environmental mechanisms of how reservoirs increase malaria transmission are yet to be identified. Understanding of these mechanisms should lead to a better evaluation of dam construction impacts and to new prevention strategies.

Article structure

The article was started with an abstract which summarized the whole paper by laying out a brief overview. This was followed by the keywords used in the article on the same page. The introduction followed, which showed estimates of malaria incidence rates according to world Health organization (WHO). All the

paragraphs in introduction were long enough. The information passed by each of the Paragraph was to understand and access its content. All information in the convectional writing in a research study was given. Materials and method section was well done, Secondary data used to investigate the past data on malaria disease from all the eleven health district facilities in the research study were well detailed. Same to the results which missed the introductory part, however this section was very much detailed with the figures, bar charts and tables. The result discussions and the conclusions plus recommendations came at the end the article, as is the case in a research article. The conclusions section was very much detailed and did address the research specific study objectives used in the main report in the introduction part. In the Conclusions section, the authors concluded that the study showed pattern and distribution of malaria in the area over a period of three years maintaining a similar trend. It also went further to state that the finding provided so insights on the direction and context the prevention, treatment and eradication approach should follow in order to achieve better outcome. On recommendations for further research on malaria, the Authors recommended study into finding why the pattern might not have been halted over the years despite the availability of proven and effective treatment regimen and preventative measures, among other studies recommended.

The overall article structure was developed logically which enabled the reader to read and understand easily the priorities in the research. The article was saved in pdf format which made sure the reader cannot change anything when reading the softcopy. The Authors gave links to most citations and references to enable the reader get more information easily and quickly, when reading online.

Article critique/Results

Authority

The Texila journal of public health was and is being published by Texila journal, owned by Texila American University, which is an academic institution headquartered in Guyana republic, Central America. Texila journal is fairly credible research data base going by the research-gate search engine, 2017 (www.researchgate.net).

The author credibility was established by the fact that Author 1 is a PhD student at Texila American University and Author 2 works at federal University of technology, Oweri, Nigeria. Author 3 works or studies at Texila American University, Guyana-South America. The 4th Author works at Rhodes University, Grahamstown, South Africa and the 5th author works at university of Ibadan, Ibadan, Nigeria. However the author's emails (except for the 1st author) are not indicated or listed. This varies greatly with Omwano Ondara Omwono et al, (2018) which shows emails for all the authors in the 1st page of the article.

Currency

The Journal article was published in September, 2017. The research which is detailed in this article is current, conducted between January 2014 and December 2016. The editorial references citied in this article are Current. This makes this article current, as it looks. Its Currency can be compared with Salomon G Massoda Tonye, (2018) which is very current, having been published in 2018.

Relevance

This Article "pattern and distribution of malaria in Wulu-A typical County in Southern Sudan" was polished in a relevant journal "Texila International journal of public health. This Journal is read by academic and researchers in the area of public health, nursing and medical fields, world over. Therefore this article is relevant to this journal where it was published. This compares very well with Salomon G Massoda Tonye et al, 2018; Habtie Tesfa et al, 2018 and Ben Lambert et al, 2018 which is very relevant in the areas of Current malaria study.

Objectivity

The article's information was developed objectively, with current research ideas originating from others sources, which were well acknowledged on the references section. This is also the case with Ben Lambert et al, 2018. There were no biases seen in the sampling method section as the study dwelt with data from District health information software. Literature review was well done and the relevant citation put in the references section. The research process followed by the authors was of high degree as evidenced by the citation (in text) from the journal articles/books/websites. The software used in the study was meant for the area of study. There was no pre-test done to ensure appropriate data collection at the research area of Wulu County, in the southern Sudan. The word wulu is a name of a place (i.e. town or city) and should not be a keyword.

Stability

This article, which its source is "Texila International journal of public health", (an academic journal) is an academic research data base, is considered a stable resource. Its read and cited by hundreds of searchers

worldwide. This article can be compared to Salomon G Massoda Tonye et al, 2018; Habtie Tesfa et al, 2018 and Ben Lambert et al, 2018 which are very stable academic research article read worldwide.

Analysis of Graphs, Tables and figures

The article presented 6 Tables and 6 figures. The tables were well labeled on the top side as per the publications rules and guidelines. The table variables heading and years 2014, 2015 and 2016 well highlighted by bolding. All the Figures for 2014, 2015 and 2016 were well labeled as the research rules dictates. The graphs in Figures 1 and 2 were too crowed and it was very difficult to extract information from the graphs.

Recent Advances Related to pattern and Distribution of Malaria/Discussions

Krijn P. Paaijmans et al, 2010 explains that Malaria transmission is strongly influenced by the environmental temperature but the biological drivers remain poorly quantified. Most studies analyzing malaria–temperature relations, including those investigating malaria risk and the possible impacts of climate change, are based only on mean temperatures and extrapolate from the functions determined under unrealistic laboratory conditions. They found that, compared with rates at the equivalent constant mean temperatures, the temperature fluctuation around low mean temperatures acts to speed up the rate of processes, whereas fluctuation around the high mean temperatures acts to slow the processes down.

Cyril Caminade et al, 2014 describes Malaria is an important disease that has the global distribution and significant health burden. The spatial limits of its distribution and the seasonal activity are sensitive to climate factors, as well as the local capacity to control the disease. The authors further alludes that Malaria is one of the few health outcomes which has been modeled by more than one research group and can therefore facilitate the first model inter-comparison for the health impacts under a future with climate change.

III. Conclusions

This review has summarized and critically reviewed Gabriel Omoniyi et al, 2017, "pattern and distribution of malaria in Wulu-A typical County in Southern Sudan", the area of the article content, the structure, were analyzed and then critiqued. The article has made public health contributions through the pattern and Distribution of malaria Disease, where the authors gave recommendations for possible interventions in future for better understanding and management of malarial disease in Wulu County, southern Sudan and in other parts of the world.

References:

- Gabriel Omoniyi ayeni, Okwuoma C Abanobi, Daniel o Ebenezer, Olagdegi M Oladapo and Oyewale M Morakinyo (2017) pattern and distribution of malaria in Wulu-A typical County in Southern Sudan. Texila American Journal of Public Health. Vol. 5(3). Pp 1-9.
- [2]. Masta Ondara Omwono, Justus Oseno Osero, Alloys Sigar Steven Orago, Taratisio Ndwiga (2018) Jaggery and Tea Workers Perceptions on the Use of ITNs in Prevention of Malaria in South Mugirango Sub- County, Kisii County, Kenya. World Journal of Public Health. Vol. 7(2). Pp 1-8.
- [3]. Salomon G. Massoda Tonye, Celestin Kouambeng, Romain Wounang and Penelope Vounatsou (2018) Challenges of DHS and MIS to capture the entire pattern of malaria parasite risk and intervention effects in countries with different ecological zones: the case of Cameroon. Malaria Journal. Vol. 17 pp156
- [4]. Habtie Tesfa, Abebe Genetu Bayih and Ayalew Jejaw Zeleke (2018) A 17-year trend analysis of malaria at Adi Arkay, north Gondar zone, Northwest Ethiopia. Malaria Journal. Vol. 17 pp155.
- [5]. Ben Lambert, Ace North, Austin Burt and H. Charles J. Godfray (2018) The use of driving endonuclease genes to suppress mosquito vectors of malaria in temporally variable environments. Malaria Journal Vol. 17pp.154
- [6]. Krijn P. Paaijmans, Simon Blanford, Andrew S. Bell, Justine I. Blanford, Andrew F. Read and Matthew B. Thomas (2010) Influence of climate on malaria transmission depends on daily temperature variation. Assessed from https://doi.org/10.1073/pnas.1006422107 on 10/04/2018
- [7]. Cyril Caminade, Sari Kovats, Joacim Rocklov, Adrian M. Tompkins, Andrew P. Morse, Felipe J. Colón-González, Hans Stenlund, Pim Martens and Simon J. Lloyd (2014) Impact of climate change on global malaria distribution. PNAS. Vol.111 (9) pp.3286-3291.
- [8]. Ilona Carneiro, Arantxa Roca-Feltrer, Jamie T. Griffin, Lucy Smith, Marcel Tanner, Joanna Armstrong Schellenberg, Brian Greenwood and David Schellenberg (2010) Age-Patterns of Malaria Vary with Severity, Transmission Intensity and Seasonality in Sub-Saharan Africa: A Systematic Review and Pooled Analysis. Plos 1. https://doi.org/10.1371/journal.pone.0008988, on 10/04/2018.
- [9]. Prathiba M. De Silva and John M. Marshall (2012) Factors Contributing to Urban Malaria Transmission in Sub-Saharan Africa: A Systematic Review. Journal of Tropical Medicine. Journal of Tropical Medicine. Volume 2012 (2012), Article ID 819563, pp 1-10. Assessed on 10/04/2018, from https://www.hindawi.com/journals/jtm/2012/819563/
- [10]. Noriko endo and elfatih AB Eltahir (2018)Environmental Determinants of Malaria Transmission Around the Koka Reservoir in Ethiopia. Geohealth. Vol.2 https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1002/2017GH000108, on 10/04/2018.
- [11]. www.researchgate.net, Assessed on 10/04/2018.

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