

**LAUTECH Journal of Nursing is indexed in International Scientific Indexing (ISI).
The Journal Impact Factor Value is 1.283 for the year 2004 - 2025 based on
International Citation Report (ICR).
The URL for journal on ISI server is [https://isindexing.com/isi/journal details.php?id=14256](https://isindexing.com/isi/journal%20details.php?id=14256)**

16TH EDITION LAUTECH JOURNAL OF NURSING

**A Publication of the Faculty of Nursing Sciences,
College of Health Sciences,
Ladoke Akintola University of Technology, Ogbomoso, Nigeria**

VOLUME 16, March, 2025

ISSN 2659-1405

16th Edition LAUTECH Journal of Nursing (LJN)

Copyright © LAUTECH JOURNAL OF NURSING (LJN)

ISSN 2659-1405

© Copyright 2025

VOLUME 16, March 2025

Address:

Faculty of Nursing Sciences,
College of Health Sciences,
Ladoke Akintola University of Technology,
P. M. B. 4000, Ogbomoso, Nigeria.
Tel: +2348033579737

All Rights Reserved:

No part of this journal may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the Editor –in-Chief.

Printed and published in Nigeria by

Esthom Graphic Prints
Ibadan, Oyo State
Nigeria.
+2347030298365,
E-mail: durowojuthomas@gmail.com

EDITORIAL BOARD

Editor-in-Chief

- **Professor Florence O. Adeyemo**
Department of Community Health Nursing
Faculty of Nursing Sciences,
College of Health Sciences.
Ladoke Akintola University of Technology,
Ogbomoso, Nigeria.

Assistant Editor-in-Chief

Dr. Uba E. James
Institute of Education
University of Ibadan
Ibadan – Nigeria

Associate Editors

- **Dr. Tunmise Olajide**
Ladoke Akintola University of Technology,
Ogbomoso, Nigeria
- **Dr. Ade Adeniji**
Department of General Studies
Ladoke Akintola University of Technology,
Ogbomoso, Nigeria
- **Dr. Adeyemo A. Adewale**
Tennessee Technological University,
Cookeville, TN, 38505, USA.
- **Yinyinola O. Makinde**
Department of Maternal & Child Health Nursing
Faculty of Nursing Sciences, College of Health Sciences,
Ladoke Akintola University of Technology, Ogbomoso, Nigeria.
- **Dr. Zaccheus Oyewumi**
Community and Public Health Nursing
Faculty of Nursing Sciences, College of Health Sciences,
Ladoke Akintola University of Technology, Ogbomoso, Nigeria.

Editorial Advisory Board

Dr. Elkannah Ndie

Faculty of Health Sciences
National Open University of Nigeria

Dr. Ademola Adele

College of Health Sciences,
Ladoke Akintola University of Technology, Nigeria.

Prof. Adedayo A. Adegbola

Ladoke Akintola University of Technology,
Ogbomoso, Nigeria.

EDITORIAL COMMENT

1. LAUTECH Journal of Nursing (LJN) has the goal of becoming the most widely cited Nursing Journal in West Africa with Impact Factor Value of 0.861 based on International Citation Report (ICR) for the year 2020-2021.
2. The LJN has the tripartite mission of:
 - (a) Promoting a culture of excellence in Nursing Research.
 - (b) Encouraging the exchange of profound and innovative ideas capable of generating creative practice in nursing research practise.
 - (c) Disseminating information on nursing related development that are not usually easily available to academics and practitioners.
3. The Journal will accordingly encourage the publication of the following categories of papers.
 - (a) Research papers that move away from orthodoxy and which really break new grounds in terms of methodology and findings.
 - (b) Essays and issues papers that contribute to reorienting received ideas, values and practices.
 - (c) Documents emanating from national and international conferences, as well as from largescale research work that emerging trends and thinking in nursing related development.
4. LJN is published biannually in any area of nursing interest or relevant to needs of academics and practitioners.

In this edition, nineteen (19) manuscripts scale through the eye of the needle of the Editor-in Chief. The title of the papers in this edition are: Assessment of client satisfaction with contraceptive services in public health care facilities in Zamfara State, Nigeria; Sociocultural and economic determinants of open defecation practices in Kano State, Nigeria; effect of simulation based training on midwives' skills in managing retained placenta with umbilical vein oxytocin injection in health facilities, Osun State, Nigeria; Nurses Level Of Preparedness In Management Of Patient With Viral Hemorrhagic Fever In Emergency Ward In University Of Ilorin Teaching Hospital, **Nigeria**; Nursing Education: A Sine Qua Non For Addressing The Healthcare Demands Of The 21st Century; Influence Of Nursing Training On Their Competency In Selecting Wound Dressing Materials At A Secondary Health Facility In Ilorin, Kwara State, Nigeria; Prevalence And Outcome Of Malaria Infection Among Children Below 11 Years In A Tertiary Healthcare Facility In Benin City From 2018-2020; Factors Influencing Prevalence Of Gender Based Violence Among Men And Women In Bagudo LGA Kebbi State, Nigeria; Knowledge Of Health Implications Of Rape And Associated Factors Among Male Undergraduates In Ahmadu Bello University Zaria, Nigeria; Quackery In Nursing, The Causes, Effects And Control Measures: The Nigeria Experience; Knowledge, attitude and practice of injection safety among nurses in Nigeria: a case study of University of Ilorin Teaching Hospital Ilorin, Kwara State, Nigeria; Awareness Of Computer Vision Syndrome Among Staff Of Information Communication And Technology Unit Of University Of Benin Teaching Hospital, Benin City, Edo State, Nigeria; Utilization Of Personal Protective Equipment Against Organic Dusts Among Poultry Farmers In Ona-Ara Local Government Area, Ibadan, Nigeria; Predictors Of Surgical Site Infection Amongst Post Operative Patients In Federal Medical Centre Lokoja, Nigeria; Evaluation Of The Involvement Of Nurses In Policies And Policy Formulation In Nigeria; Determinants of Stress and Coping Mechanisms among Nurses in Aminu Kano Teaching Hospital, Kano State, Nigeria; Influence Of Nursing Training On Their Competency In Selecting Wound Dressing Materials At A Secondary Health Facility In Ilorin, Kwara State, Nigeria; Adaptation To Stress And Academic Performance Of Students In Nursing Institutions In Oyo State, Nigeria; Medication Adherence And Quality Of Life Of Hypertensive Patients Attending Selected Hospitals In Port Harcourt, Rivers State, Nigeria; Perspectives Of Youth On The Legalization Of Abortion In North Central Nigeria.

EDITORIAL DESK

Welcome to LAUTECH Journal of Nursing!

LAUTECH Journal of Nursing focus on but not limited to research findings in the different areas of Nursing: Nursing Care, Nursing Education, Medical Surgical Nursing, Maternal and Child Health Nursing, Community Public Health Nursing, and Psychiatric/Mental Nursing. This journal is published to promote quality scholarly writing and hence instigating and generating vibrant discourse in the different areas of nursing. Apart from providing an outlet for publications of research findings, it offers opportunities for professionals and students to disseminate their views or position on topical issues and emerging theories within the scope of the journal. The Journal is peer reviewed by seasoned scholar. Eighty authors have contributed in one way or the other to the thirteenth edition of the journal.

In this regard, the journal welcomes articles from individuals and corporate organisations for the sixteenth edition. Interested contributors may forward copy of their manuscript; computer-typed in double line spacing, using Times New Roman 12 point font, with abstract not more than 300 words on a separate page. Manuscript should not be more than 15 pages and sent to doctoradeyemo@yahoo.com or lautechjournal@gmail.com.

Happy reading!!!

GUIDELINES FOR AUTHORS

Contributors to the journal are to respect its avowed principle of QUALITY in all its Ramifications and ensure that:

(a) **Presentation of Manuscript**

We require an electronic copy, doubled spaced and paginated. The file should be saved as a Word Document, do not use PDF. Ensure the manuscript you provide is double space throughout, including indented block quotes, excerpt, extract, references. The font should be Times New Roman 12 Points. **RESEARCH PAPERS** are technically and faultlessly designed, executed and reported

(b) **ESSAYS AND ISSUES PAPERS** are analytically sound, presenting solidly original ideas that can positively influence change in educational thoughts, research and practices.

(c) The manuscript, which should include title, abstract, text, tables, figures, where necessary, should be typewritten on A4 size paper with double-spacing and should not exceed 15 pages

(d) The abstract should not be more than 250 words

(e) Authors should use the latest APA manual of styles. Some examples are:

i. **Book**

Uba, J. E. (2007). Overcoming the hurdles of research projects, thesis, dissertation. Calabar, Nigeria, Ushie Printers.

ii. **Chapter in edited book**

(a) Simeon, O. L & Adewale, J.G. 2013. Student Extrinsic and Intrinsic Factors as Correlates of Technical and Vocational Education Enrolment in Osun State. A. O. U. Onuka. Eds. Esthom Graphic Prints, Nigeria. 286-296.

iii. **Chapter in edited book**

(b) Oluwaponmile G. A. & Adegbile J. A. 2013. The Concept of Individualization of Instruction and Christian Education. A. O. U. Onuka. Eds. Esthom Graphic Prints, Nigeria. 114-155.

iv. **Article from journal**

Halliday, M. A. K. (1961). Categories of the theory of grammar word, 17, 241-92. (**Note** No 'pp.' required for journal articles).

Millers, A. (2000). Choice and the relative pleasure of consequences. Psychological Bulletin 126.3:910-924.

Landro, M. (1999). Repeatability issues of 3-D VSP data. *Geophysics* 64:1673-1679.
_____. 2001. Discrimination between Pressure and fluid saturation changes from time lapse seismic data. *Geophysics* 66:836-844.

v. **Article from magazine**

Kandel, E. R. and Squire, L. R. 2000. Neuroscience: breaking down scientific barriers to the study of brain and mind. *Science* 290. Nov 10:113-1120.

Article from newspaper

(where the name of the author is neither given nor known, begins reference with "Anon")

Encyclopaedia article

Bergmann, P.G. 1993. Relativity. *The new encyclopaedia Britannica*. Chicago: Encyclopaedia Britannica, 501-508.

Patent

Fawole, I., Afolabi, N. O. and Ogunbodede, B. A. 1986, Description of cowpea cultivar: IFH101.NGVU-00-22,2000.

Unpublished theses, dissertation, projects and essays

Alaba, O.B. 2003. Balance of payment adjustment mechanisms in Nigeria. PhD. Thesis. Department of Economics. University of Ibadan. Xiv+183pp

E-journal article from the internet

VandenBos, G, Knapp, S. and Deo, J. 2001. Role of reference element in the selection of resources by psychology undergraduates. *Journal of Bibliographic Research* 5. 117- 123. Retrieved June. 13,2019, from <http://jbr.org/article.html>.

Organization/Government/Personal web page

U.S. General Accounting Office. Feb., 1997, Telemedicine: federal strategy is needed to guide investments. Publication No. GAO/NSAID/HEHS-97-67. Retrieved Sept. 15,2000, from http://www.access.gpo.gov/su_docs/aces160.shtml?/gao/index.html.

Tables

1. A table should be typed with the minimum of horizontal rules. Vertical rules should be avoided.
2. Table should be referred to in the text as 'in Table 2' rather than 'in the following table or in the table above or below'.
3. All tables should have captions, source and notes are placed immediately below.
 - (f) Papers which should be written on only one side should be submitted in triplicate (hard copies)

- (g) Papers are blind peer-reviewed, each paper attracts an assessment fee of #5000.00 or \$100.00.
- (h) Neither the editor, nor the editorial board shall be liable for article(s) lost in transit.
- (i) The editor and editorial board will not enter into correspondence with authors over rejected articles
- (j) Those whose articles are accepted for publication will pay the sum of #40,000.00 and be informed as regards other commitments:
- (k) Papers could be transmitted at any time for publication in any subsequent issue.

Manuscripts should be submitted electronically to the:

Editor in-chief, **Prof. Florence O. Adeyemo**, Department of Community Health Nursing, Faculty of Nursing Sciences, College of Health Sciences, Ladoke Akintola University of Technology, Ogbomoso and copy the Editor, LAUTECH Journal of Nursing (LJN) using the following email addresses: doctoradeyemo@yahoo.com or lautechjournal@gmail.com

Copyright

1. Permission must be obtained if you want to quote at length from another author's work or use an illustration previously published. Please note that obtaining permissions can be a lengthy process and should therefore be initiated well before the final manuscript is submitted to Continuum. Please refer to copyright holder's website/information: they may have forms or templates for requesting permission. If they provide no specific information on submitting requests, a standard permission request letter is available from us and should be used when approaching the copyright holder.

2. Please be aware that permission must also be sought for images, text etc that is sourced from the internet. Copyright may belong to the website owner, or to the original creator. Do not assume that just because an item is on a website it is in the public domain - it may be that the website owner does not have the permission to use it.

If you have any questions about the preparation of your article at any stage, please do not hesitate to ask.

Prof. Florence O. Adeyemo

The Editor-in-Chief

doctoradeyemo@yahoo.com or lautechjournal@gmail.com

LIST OF CONTRIBUTORS

- A. AHMAD** Department of Nursing Sciences,
Ahmadu Bello University, Zaria
ahmadamina89@gmail.com
Phone No: 07063903228
- A.W. ISMAILA** Niger State College of Nursing Science, Kontagora
Phone No: +234 7038 465 723
Email: maigonawaziri@gmail.com
- ABDULLAHI A.S** Department of Nursing Science,
Faculty of Allied Health Science
Ahmadu Bello University Zaria
Email: salihuai25@gmail.com
Phone number:
- ABDULLAHI ADAMU** Department of Nursing Sciences,
Federal University Dutse, Jigawa State
Phone No: 08036032395
Email: abduladam76@gmail.com
- ABDULLAHI HARUNA IBRAHIM** Department of Nursing Sciences,
Bayero University Kano, Kano State
Phone No: 08035570017
Email: ahibrahim@gmail.com
- ABDULRAHEEM AMINA** Department of Nursing Science,
University of Maiduguri
Borno State, Nigeria.
Email: aminaabdulraheem@unimaid.edu.ng
Phone number: +2348065480186
- ABIGAIL MAMINETU EDEOGHO** College of Nursing,
Department of Post Graduate Nursing Studies,
University of Benin Teaching Hospital,
Edo State, Nigeria
Email: edeoghonabigail12@gmail.com
Phone number: 07069691263
- ABIODUN SAMUEL OLOWOLAFE** Faculty of Nursing and Allied Health Science,
Department of Community Health Nursing,
University of Abuja, Nigeria
Email: olowolafe.samuel@uniabuja.edu.ng
Phone number: 07030828536

ADAMU ALHAJI

Department of Nursing Science,
Federal University of Health Sciences,
Azare, Bauchi State
Email: adamu.alhaji@fuhsa.edu.ng
Phone number: 08065499113

ADAMU DALHATU

Department of Nursing Sciences,
Bayero University Kano, Nigeria
Phone No: 08039503072
Email: adamudalhatu206@gmail.com

ADEGOKE Adenike Idowu

Department of Community and Public Health Nursing
Ladoke Akintola University
Email: omolewa68@gmail.com
Phone number: 07071611100

ADENIYI, YETUNDE ELIZABETH

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Kwara state, Nigeria
08085805463
yetundeadeniyi311@gmail.com

AFOLABI TINUOLA BOLANLE

Department of Nursing,
Babcock University
Email address olaniyitinuola45@gmail.com
Phone number 07064608464

AHAIWE, CHINEDUM. I.

Faculty of Nursing and Allied Health Sciences,
University of Abuja, Abuja, Nigeria.
Email -ahaiwe2@aol.com
09030545657

AHMED RUFAl ABUBAKAR

Department of Nursing Sciences,
Bayero University Kano, Kano State
Phone No: 08162800885
Email: arabubakar.nur@buk.edu.ng

AHMED SUBERU

Department of Nursing Sciences,
Bayero University Kano, Kano State
Phone No: 08069178254
Email: ayemy1074@gmail.com

AKINBOWALE Busayo Temilola

Department of Nursing Science,
Osun State University, Osogbo
Busayo.akinbowale@uniosun.edu.ng
+2348034125952

ALIGWO CLOTHILDA CHINWE

Department of Nursing,
Babcock University
Email: tildaama75@gmail.com
Phone number: 07063835115

ALIYU, FATIMA TINUOLA

University of Ilorin Teaching Hospital
Kwara State.
Email: fattykobi2004@gmail.com
Phone number: 08035764308

ALUKO JOEL O.

Department of Nursing
University of Ilorin
Email: joelforfavour@hotmail.com
Phone number: +2347015055376

ARANSIOLA MARVELLOUS MERCY

Department of Nursing Sciences,
Faculty of Clinical Sciences,
College of Health Sciences,
University of Ilorin, Ilorin, Nigeria

AWWAL MUHAMMAD LADAN

Department of Nursing Sciences,
Bayero University Kano, Kano State
Phone No: 08037040794
Email: mladan.nur@buk.edu.ng

AYANBEKU, JOY KOFOWOROLA

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Kwara state, Nigeria.
07061019445
Email: joyayanbeku@gmail.com

AYANBEKU, TOYESE STEPHEN

Department of Medical Microbiology and Parasitology,
Bowen University, Iwo, Nigeria
08062513324
Toye2ayan@yahoo.com

AYANDOKUN, ADETOUN

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Nigeria.
08033834622
adetounayandokun@gmail.com

BALOGUN, MUIBAT IYABODE

Department of Nursing Services,
Oni & Sons Memorial Children's Hospital
Email: muiBATbalogun2020@gmail.com
Phone number: 08029029046

BASIL PERFECTGODSGIFT NNAMDI

Joseph Ayo Babalola University
Arakeji Ikeji
npbasil@jabu.edu.ng
08064403018

BATURE F. U.

Department of Nursing Science,
Faculty of Allied Health Sciences,
College of Allied Health and Pharmaceutical Sciences,
Kaduna State University. Kaduna.
fatimabature143@gmail.com
08063166005

BETTY UKHUEGBE EKUOBASE,

College of Nursing,
Department of Post Graduate Nursing Studies,
University of Benin Teaching Hospital,
Edo State, Nigeria
Email: ekuobasebetty@gmail.com
Phone number: 08035639119, 07015913009

B. M. TUKUR

Department of Nursing Sciences,
University of Maiduguri, Borno State
Phone No: 08065612550
Email: tukurbm@gmail.com,
tukurbm@unimaid.edu.ng

CHINENYENWA EDO OSAGIE

Department of Nursing,
University of Benin, Benin City
Chinenyenwa.edo-osagie@uniben.edu.ng
Phone number: 07030255496

DATHINI HAMINA

Department of Nursing Science,
University of Maiduguri, Borno State
Email: haminadathini@yahoo.com
Phone number: 08109062067

DERE, BASHIRAT NIKE

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Nigeria.
08133859714
Bashiratdere@gmail.com

ELISHA OLUWATOBI OLABISI

Ladoke Akintola University of Technology,
Ogbomoso, Oyo State
Orcid: <https://orcid.org/0009-0007-0703-5176>
Email: Olabisielisha@gmail.com
+2348167225864

ELIZABETH GWAZA

Kebbi State College of Nursing Sciences
Birnin Kebbi
Email: elizabethqwaza@gmail.com
Phone No: 08067770426

FAITH FERDINAND NLUMANZE

Department of Nursing Science
University of Calabar Teaching Hospital,
Calabar, Nigeria
Phone number: 08055101869, 07053444969

FATUKASI, ABIODUN OMOTAYO

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Kwara state, Nigeria
08034474656
fatukasi@gmail.com

GABRIEL EKEYI

Nursing Department
Federal Teaching Hospital Lokoja
08030888350.
gabrielekeyi@gmail.com.

HABU HARUNA

Department of Nursing Science,
University of Maiduguri, Borno State
Email: habaharun@unimaid.edu.ng
Phone number: 08032798785

IBRAHEEM, M. AYOODE

Department of Nursing
Al-Hikmah University
Email: maibraheemalhikmah.edu.ng
Phone number: 07066400666

IBRAHIM NENGE

Kebbi State College of Nursing Sciences
Birnin Kebbi
Ibrahmnenge@gmail.com
+234 (0) 8061294844

IBRAHIM OPEYEMI

Department of Nursing
Al-Hikmah University
Email: ibrahimopeyemi007@gmail.com
Phone number: 081 6474 5845

IMAM, ABUBAKAR AYINLA

Department of Nursing Science,
Faculty of Health Sciences,
Al-Hikmah University,
Ilorin, Nigeria
Imabubakar59@gmail.com
Phone: 08114962533

J. B. HARUNA

Niger State College of Nursing Science, Kontagora
Phone No: 08136406132
Email: jubrinbabangida11@gmail.com

LAWAL, S. ABIODUN

Department of Nursing
Al-Hikmah University
Email: mulmons01@gmail.com
Phone number: 070 6232 1577

LONGE, OLUREMI OLURANTI

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Kwara state, Nigeria.
08034380123
oluremilonge.ol@gmail.com

LOVETH OGHOGHO OTOIDE

College of Nursing,
Department of Post Graduate Nursing Studies,
University of Benin Teaching Hospital,
Edo state, Nigeria
Email: lovetherhun@gmail.com
Phone number: 07038671264

LYDIA OLUBUKOLA ODESANYA

Uniosun Teaching Hospital,
Osogbo, Osun State, Nigeria
Orcid: <https://orcid.org/0009-003-2989-0860>
odesanya0255@pg.babcock.edu.ng
+2348055038739

M. KURE

Department of Nursing Sciences,
Kaduna State University
Phone No: 080 6563 5768
Email: mercy@kasu.edu.ng

MALOMA, L. OMOTAYO

Department of Nursing
Al-Hikmah University
Email: lukemalomo@gmail.com
Phone number: 080 3636 0067

MURTALA HASSAN HASSAN

Department of Nursing Science,
Faculty of Allied Health Science,
Bayero University Kano
Email: murtalahh@gmail.com
Phone number: 08060102360

MUSA H.A

Department of Nursing Science,
Faculty of Allied Health Science
University of Maiduguri
Email: limaabdool78@gmail.com
Phone number: 08035957780

MUSA-MALIKA A,

Department of Nursing Science,
Faculty of Allied Health Science
Ahmadu Bello University Zaria
Email: aunumusamaliki@abu.edu.ng
aishaudu@yahoo.com
Phone number: +2347038159582

NAFISA UMAR USMAN

Department of Nursing Sciences,
State Specialist Hospital, Gombe.
Email: nafisatumar055@gmail.com
Phone number: +2348021419708

NWOZICHI CHINOMSO

Department of Nursing,
Babcock University
Email: nwozichi@babcock.edu.ng
Phone number: +1 (512) 927-9521

OKAFOR NGOZI A.

Department of Nursing,
Babcock University
Email: okafor@babcock.edu.ng
Phone number: 08035273775

OKOLI C.E,

Department of Nursing Science,
Faculty of Allied Health Science
Ahmadu Bello University Zaria
Email: okolicalister953@gmail.com
Phone number: +2348022860007

OLARERIN JOKOTADE JEMILAT

Department of Nursing
Atiba University, Oyo
Email: jokolarerin@gmail.com
Phone number: +2348033852831

OLAYINKA A. ONASOGA

Department of Nursing Sciences,
Faculty of Clinical Sciences,
College of Health Sciences,
University of Ilorin, Ilorin, Nigeria
yinka_onasoga@yahoo.com
onasoga.aa@unilorin.edu.ng
+2348064967578

OLUWASEYI OMOBOLA TEMILOLA

Department of Maternal and Child Health Nursing
Medical University Ondo State
Phone No: 08034456057
Email: ooluwaseyi@unimed.edu.ng

OMOTOSHO OKIKIOLUWA O.

Department of Nursing Sciences,
Faculty of Clinical Sciences,
College of Health Sciences,
University of Ilorin, Ilorin, Nigeria
Email: okikiomo2014@gmail.com
Phone number: +2349037321609

OPEYEMI AFOLABI

Adeleke University, Ede, Osun State
Department of Nursing Science,
Adeleke University, Ede, Osun State, Nigeria
Orcid: <https://orcid.org/0000-0002-4548-9685>
afolabi.opeyemi@adelekeuniversity.edu.ng
+2348036381547

OYELEYE, DEBORAH IYABODE

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Nigeria.
08032351312
Debbieoyeeye555@gmail.com

OYEWUMI LYDIA OMOWUMI

Department of Nursing Science,
Ladoke Akintola University of Technology
Open and Distance Learning Centre,
Ogbomoso, Oyo State.
looyewumi@lautech.edu.ng
+2347039026486

OYEWUMI ZACCHEUS OPEYEMI

Department of Community/Public Health Nursing,
Faculty of Nursing Sciences,
Ladoke Akintola University of Technology,
Ogbomoso, Oyo State.
zooyewumi@lautech.edu.ng
+2348037689685

PHETLHU DELIWE RENE

Makgatho Health Science University,
Pretoria, South Africa
Email: renephetlhu@gmail.com
Phone number: +27219593303

ROBERT TERYILA KEVER

Department of Nursing Science,
University of Maiduguri, Borno State
Email: robertkever72@unimaid.edu.ng
ORCID ID:0000-0001-9154-5169
Phone number: 08065306905

**SOWUNMI CHRISTIANAH
OLANREWAJU**

Department of Maternal and Child Health Nursing
School of Nursing Science,
Babcock University, Illishan-Remo, Ogun State
Email: Phone No: 07050916896

THOMAS, OLUWASHIKEMI MERCY

School of Post Basic Accident and Emergency Nursing,
University of Ilorin Teaching
Hospital, Ilorin, Kwara state, Nigeria
08102393000
mercyshekemi@gmail.com

UMAR LAWAL BELLO

Department of Nursing Sciences,
Bayero University Kano, Kano State
Phone No: 08036628115
Email: ulbello.nur@buk.edu.ng

UMAR MUSA ABDULLAHI

Department of Nursing Sciences,
Federal University Dutse, Jigawa State
Phone No: 08060443720
Email: umusa17@gmail.com

UMAR YUNUSA

Department of Nursing Science,
Bayero University, Kano.
Telephone: +2348038199802
Email address: yunusa.nur@buk.edu.ng
ORCID: 0000-0002-3079-7730

USIFO PATRICIA ABIEYUWA

Department of Nursing,
University of Benin Teaching Hospital,
Edo State, Nigeria
Phone number: 08051595976

USMAN IBRAHIM MUHAMMAD

Department of Nursing Sciences,
Federal University Dutse, Jigawa State
Phone No: 08065503376
Email: ibrahimmohd537@gmail.com

USMAN RUTH DLAKWA

Department of Nursing Sciences,
University of Maiduguri, Borno State
Email: rutharhye130@gmail.com
Phone number: 09031744732

USMAN YAHAYA

Department of Nursing Sciences,
Federal University Dutse, Jigawa State
Phone No: 07068732206
Email: uy1500359@gmail.com

YETUNDE KEMI TIMOTHY

Faculty of Nursing and Allied Health Sciences,
University of Abuja, Abuja, Nigeria.
Email -timyet235@gmail.com
08035073143

YUSUF, ABDURRASHID G.

Department of Nursing Sciences,
Faculty of Clinical Sciences,
College of Health Sciences,
University of Ilorin, Ilorin, Nigeria
Email: yusufgambary@gmail.com
Phone number: +2348072777457

TABLE OF CONTENTS

1.	Assessment of Client Satisfaction with Contraceptive Services in Public Health Care Facilities in Zamfara State, Nigeria A. Ahmad; J. B. Haruna; A. W. Ismaila; B. M. Tukur; H. A. Musa; M. Kure; & F. U. Bature	1
2.	Socio-Cultural and Economic Determinants of Open Defecation Practices in Kano State, Nigeria Umar Lawal Bello; Abdullahi Haruna Ibrahim; Awwal Muhammad Ladan; Umar Yunusa; Ahmed Rufai Abubakar; Murtala Hassan Hassan; Adamu Dalhatu; Umar Musa Abdullahi; Usman Yahaya; Ahmed Suberu; Usman Ibrahim Muhammad; & Abdullahi Adamu	14
3.	Effect of Simulation Based Training on Midwives' Skills in Managing Retained Placenta with Umbilical Vein Oxytocin Injection in Health Facilities, Osun State, Nigeria Lydia Olubukola Odesanya; Olayinka A Onasoga; Opeyemi Afolabi; & Elisha Oluwatobi Olabisi	26
4.	Nurses Level of preparedness in management of patients with Viral Hemorrhagic Fever in Emergency ward in University of Ilorin Teaching Hospital, Kwara State, Nigeria Ayanbeku, Joy Kofoworola; Oyeleye, Deborah Iyabode; Ayanbeku, Toyese Stephen; Dere, Bashirat Nike; Ayandokun, Adetoun; Longe, Oluremi Oluranti; Fatukasi, Abiodun Omotayo; Adeniyi, Yetunde Elizabeth; & Thomas, Oluwashikemi Mercy	40
5.	Nursing Education: A Sine Qua Non for Addressing the Healthcare Demands of the 21st Century Yetunde Kemi Timothy & Ahaiwe, Chinedum. I.	51
6.	Influence of Nursing training on their Competency in Selecting Wound Dressing Materials at a Secondary Health Facility in Ilorin, Kwara State, Nigeria Oyeleye, D. I., Aliyu, F. T., Ayandokun, A. T., Longe, O. O., Fatukasi, O. A. Dere, B. N. & Oyeleye, O.E	58
7.	Perceived Sociocultural and Economic Determinants of Teenage Pregnancy among Residents of Jere Local Government Area Borno State, Nigeria Robert Teryila Keвер; Habu Haruna; Dathini Hamina; Adamu Alhaji & Usman Ruth Dlakwa	72
8.	Prevalence and Outcome of Malaria Infection among Children Below 11 Years in a Tertiary Healthcare Facility in Benin City, Edo State, Nigeria from 2018 - 2020 Chinenyenwa Edo Osagie	83
9.	Knowledge and Practice of Ocular Health among Post Basic Nursing Students of University of Benin Teaching Hospital, Benin City, Edo State, Nigeria Betty Ukhuegbe Ekuobase; Faith Ferdinand Nlumanze; Abigail Maminetu Edeogho; Abiodun Samuel Olowolafe	90
10.	Factors Influencing Prevalence of Gender Based Violence among Men and Women in Bagudo Local Government Area, Kebbi State, Nigeria Ibrahim Nenge	102

11. **Quackery in Nursing, the Causes, Effects and Control Measures: The Nigerian Experience**
Oyewumi Zaccheus Opeyemi; Oyewumi Lydia Omowumi;
& Akinbowale Busayo Temilola 113
12. **Knowledge, Attitude and Practice of Injection Safety among Nurses in Nigeria: A case study of University of Ilorin Teaching Hospital, Ilorin Kwara State, Nigeria**
Imam A. Ayinla; Ibraheem, M. Ayooade; Maloma, L. Omotayo; Lawal, S. Abiodun
& Ibrahim Opeyemi 121
13. **Awareness of Computer Vision Syndrome among Staff of Information Communication and Technology Unit of University of Benin Teaching Hospital, Benin City, Edo State, Nigeria**
Betty Ukhuebge Ekuobase; Loveth Oghogho Otoide; Abiodun Samuel Olowolafe;
& Usifo Patricia Abieyuwa 131
14. **Utilisation of Personal Protective Equipment against Organic Dusts among Poultry Farmers in Ona-Ara Local Government Area, Ibadan, Southwest, Nigeria**
Adegoke Adenike Idowu & Oyewumi Zaccheus Opeyemi 144
15. **Predictors of Surgical site Infection amongst Post Operative Patients in Federal Medical Centre, Lokoja, Nigeria**
Gabriel Ekeyi 159
16. **Evaluation of the Involvement of Nurses in Policies and Policy Formulation in Nigeria**
Olarerin J; Phetlhu D. R. & Aluko J. O. 173
17. **Determinants of Stress and Coping Mechanisms among Nurses in Aminu Kano Teaching Hospital, Kano State, Nigeria**
Nafisa Umar Usman & Umar Yunusa 189
18. **Adaptation to Stress and Academic Performance of Students in Nursing Institutions in Oyo State, Nigeria**
Afolabi Tinuola Bolanle & Okafor Ngozi A. 198
19. **Medication Adherence And Quality Of Life Of Hypertensive Patients Attending Selected Hospitals In Port Harcourt, Rivers State, Nigeria**
Aligwo Clothilda Chinwe, Nwozichi Chinomso, Okafor Ngozi 207
20. **Perspectives of Youth on the Legalization of Abortion in North Central Nigeria**
Onasoga, Olayinka A., Omotosho Okikioluwa O., Yusuf,
Abdurrashid G.; Aransiola Marvellous Mercy 218
21. **Disaster Preparedness and Management among Nurses Working in Emergency Units of Health Facilities in Ibadan, Southwest Nigeria**
Balogun, Muibat Iyabode 226
22. **Unveiling the Unknown: Investigating Knowledge and Preventive Practices of Rh Factor Incompatibility Among Pregnant Women at Ahmadu Bello University Teaching Hospital, Shika, Zaria.**
Musa H.A, Abdulraheem A. Okoli C.E, Abdullahi A.S, Murtala H.H, Musa-Maliki A 243
23. **Qualitative Inquiry Into Mother's Experience Of Respectful Maternity Care In Secondary Health Care Facilities In Ondo State, Nigeria**
Sowunmi Christianah Olanrewaju, Oluwaseyi Omobola Temilola 252

PREVALENCE AND OUTCOME OF MALARIA INFECTION AMONG CHILDREN BELOW 11 YEARS IN A TERTIARY HEALTHCARE FACILITY IN BENIN CITY FROM 2018-2020

CHINENYENWA EDO OSAGIE

ABSTRACT

Malaria is a major public health problem in sub-Saharan Africa, and children are especially vulnerable. In 2019, an estimated 409,000 people died of malaria, most (274,000) were young children and 94% of the cases and deaths were in Africa. This study aims to assess the prevalence and outcome of malaria infection among children below 11 years in a tertiary healthcare facility in Benin City. Instrument for data collection was the checklist. A descriptive analysis of the data in relation to the research question was done, the data was presented in tables of numerical values put in percentages and research questions answered. The demographic characteristics of this study revealed that majority of the respondents are within ages 3 to 6 yrs (42.8%), female (57.2%) with primary education (58.3%) and are Christians (79.1%). The findings from this study, shows that malaria was most prevalent in May in the year 2019 and equally revealed that malaria infection is most prevalent in females. From this study, three hundred and fifty-six (356) children below 11 years that had malaria infection from 2018-2020. Lastly, this study shows that the treatment outcome of malaria infection among children below 11 years had 95% success rate and 5% failure rate. The study conclude that the prevalence of malaria infection is most prevalent in May, in the year 2019, among females and the treatment outcome of malaria infection has a high success rate

Keywords: Prevalence, Treatment Outcome, Malaria Infection

INTRODUCTION

Infections and other communicable diseases have continued to remain the top causes of childhood morbidity and mortality in Africa. (Okoronkwo et al, 2018). Malaria is older than all historical tales and possibly was a pestilence to prehistoric man and is said to have been wreaking havoc on mankind for decades (Sa'idu et al., 2021). Malaria is a mosquito – borne (vector) protozoan infection of the red blood cells (medium) transmitted by the bite of a female Anopheles mosquito (mode of transmission).

Malaria parasite is transmitted where there is a reservoir of infection, appropriate mosquito vectors (Anopheles) and susceptible hosts (humans) all available (Onwe et al., 2018). The mosquito genus, Anopheles, encompasses more than 400 species which are widely distributed. The most important malaria transmitting species in Nigeria and other parts of Africa include *Anopheles gambiae*, *Anopheles funestus*, *Anopheles arabiensis* and *Anopheles mellas* (Okhuebor, 2021). The four species of plasmodium that causes human malaria are *Plasmodium vivax*, *P. falciparum*, *Plasmodium malariae* and *Plasmodium ovale*. Of these four species of *Plasmodium falciparum* appears to be the most widespread in the sub-Saharan region of the world (Onwe, et al., 2018).

In Nigeria, malaria is endemic and its occurrence rate is well perceived and surveys indicating its prevalence in various communities in Nigeria have been documented (Simon- Oke et al., 2019). Increased level of malaria endemicity, parasite resistance to

available drugs and insufficient access to treatment facilities have added in enabling the disease to be ranked first as the major killer of children, making up for an approximate 300,000 deaths each year. With anaemia, pregnancy miscarriages and low birth weight of babies indicated as the most deteriorating effects of the disease and it accounts for 11% of maternal deaths in the country. Different studies have revealed that malaria infection occurs more in primigravidae than in multigravidae (Simon-Oke et al., 2019).

Malaria is a parasitic disease that commonly occurs in southern Nigeria. It consists clinically of fever, poor health, anemia and splenomegaly and is caused by apicomplexan parasites of the genus *Plasmodium* (Onwe et al, 2018). Severe malaria is acute malaria having signs of organ dysfunction and/or high degree of parasitaemia and is often linked with high mortality. It is characterized by clinical or laboratory proof of major organ dysfunction and normally happens as a result of a delayed treatment of uncomplicated malaria. It is a medical emergency which calls for prompt and effective treatment to prevent loss of life (White et al., 2014).

The World Health Organization (WHO) in 1990 established the criteria for the diagnosis of severe malaria. In 2000, WHO revised these criteria to encompass other clinical manifestations and laboratory findings that signify a poor prognosis based on past clinical knowledge gathered in semi-immune patients (Edelu et al., 2019).

Despite an approximate 18% worldwide reduction in malaria infection occurrence, from 76 to 63 cases per 1000 population at risk, from 2010 to 2016. About 216 million cases of malaria infection occurred worldwide in 2016, with 90% of these cases occurring in sub-Saharan Africa. In 2016, there were an approximated 445, 000 deaths from malaria internationally with 91% of malaria mortality occurring in sub-Saharan Africa (Paul et al., 2019).

In 2015, more than 214 million estimated cases of malaria infection were reported, with more than 450,000 deaths globally (WHO, 2020). Intriguingly, in 2018, these number of malaria

cases was discovered to have increased to more than 300 million globally (Aychiluhm et al., 2020), while in 2019 the approximate malaria infection cases from 87 endemic nations were estimated to be at least 230 million (WHO, 2020). It is recorded that, there was experienced globally, a steady reduction in the approximate number of mortality due to malaria infection cases from more than 730,000 in 2000 to more than 400,000 in 2019 (WHO, 2020). In 2017, there were an approximate of 430,000 deaths; Sub-Saharan Africa (SSA) had more than 90% of the world's malaria mortalities, with more than 260,000 of these deaths being children under five years of age, meaning that there was at least one child dying in two minutes (UNICEF, 2021). As at 2019, below five years deaths from malaria were above 60% of the total estimated deaths (WHO, 2020). It is worthwhile to note that in the last two decades, a lot of programs and strategies have been put in practice to curb the increase of malaria infection both at the international and national levels, which has led to the prevention of more than 6 million deaths between 2000 and 2015 in SSA (Aychiluhm et al., 2020).

- Efforts are, however, being made by the Nigerian government through the national malaria control strategic plan (NMCSP) which deals with reducing malaria infection related death, reducing malaria parasite prevalence in Pediatric patients, speeding up the acquisition and use of insecticide-treated nets (ITNs) and long-lasting insecticidal nets (LLINs), showing and scaling up the amount of people who practice indoor residual spraying (IRS), increasing the application of diagnostic tests for fever patients, improving efforts linked to concise and prompt diagnosis and treatment of malaria, and speeding coverage of intermittent preventive treatment (IPT) of malaria during pregnancy. All these efforts carried out for this age group is very important to reduce malaria-related childhood morbidity and mortality particularly in endemic regions.

The objectives of the study are

To determine the months and years when malaria infection among children below 11 years was most prevalent in a selected tertiary healthcare in Benin City, Edo State from 2018-2020.

- To determine the gender among the children below 11 years in which the malaria infection was most prevalent in a selected tertiary healthcare in Benin City, Edo State from 2018-2020.
- To determine the number of children below 11 years that had the malaria infection in a selected tertiary healthcare in Benin City, Edo State from 2018-2020.
- To assess the treatment outcome of the malaria infection among children below 11 years in a selected tertiary healthcare in Benin City, Edo State from 2018-2020.

METHODOLOGY

Research Design: The study adopted a non-experimental, retrospective research design method. This approach entailed gathering and describing subject-provided data without alterations. This research design was chosen because it involves collecting data through observation or survey without manipulating any variables or controlling the environment to ensure unadulterated results.

Research Setting: This research was carried out at University Benin Teaching Hospital, an institution of tertiary healthcare situated in Egor Local Government Area of Edo State, Nigeria. The University of Benin Teaching Hospital (UBTH) was established in 1973 as the General Hospital, Benin City. It was upgraded to a teaching hospital in 1975 and was subsequently renamed the University of Benin Teaching Hospital. UBTH is a tertiary healthcare facility that offers patients from Edo State and other states in Nigeria specialized medical services such renal dialysis, chemotherapy, and open-heart surgery. In addition, it serves as a place for medical students, residents, and other healthcare experts to receive training. UBTH has

improved its facilities and services throughout the years, such as the introduction of a modern diagnostic center, a cancer treatment center, and a reproductive health center. Furthermore, it has carried out a range of quality improvement initiatives and has been recognized with numerous awards for its exceptional healthcare provision.

Target Population: The research population included all 3286 patients with malaria in Pediatric and Pediatric-extension wards (P ward and P-ext ward) from 2018-2020.

Inclusion Criteria: All the patients with malaria in Pediatric and Pediatric-extension wards (P ward and P-ext ward) within the period of 2018-2020.

Exclusion Criteria: All the patients without malaria in Pediatric and Pediatric-extension wards (P ward and P-ext ward) within the period of 2018-2020.

Sample Size: The sampling size for this study incorporated all 356 cases of children with malaria in the units from 2018-2020.

Instrument for Data Collection: In order to collect information from the medical records of the children, a checklist was created by the researcher. The Medical Records of UBTH provided the pertinent information regarding the target children and their prevalence of malaria infections.

Method of Data Analysis: Data collected was analyzed using Statistical Package for Social Sciences (SPSS) version 20. Mean, SD were earmarked as variable of relevance.

Ethical Consideration: The research authorization was sought from the Ethics committee of the University of Benin Teaching Hospital, Nigeria. Authorization for the records was taken from Medical Records University of Benin Teaching Hospital, Benin City, Edo state, Nigeria.

Method of Data Collection: The research assistants received training on how to use the checklist to gather information from the medical case notes in the Pediatric and Pediatric-

extension wards (P ward and P-ext ward) of UBTH. The research authorization was gotten from the Ethics committee of the University of Benin Teaching Hospital, Nigeria. Authorization for the records was taken from Medical Records University of Benin Teaching Hospital, Benin City, Edo state, Nigeria. Data collection lasted for two weeks from Monday to Friday, 8am to 2pm daily.

RESULTS

Table 1 showed the socio-demographic characteristics of respondents, most 106(42.1%) of the respondents are within 3-6

years, 106(29.8%) are within 0-2 years while 100(28.1%) are within 7-11 years. Most 206(57.9%) of the respondents are females while 150(42.1%) are males. Few 22.5% of the respondents are in pre-schools, 35.4% of the respondents are infants while 42.1% are in primary school. Most 256(71.9%) of the respondents are Christians while 100(28.1%) are Muslim. The demographic characteristics of this study reveals that majority of the respondents are within ages 0 to 3yrs (42.1%), female (57.9%) with primary education (42.1%) and are Christians (71.9%)

Table 1: Socio-demographic characteristics of respondents

Variables	Attributes	Frequency	Percentage
Age (years)	0-2	150	42.1
	3-6	106	29.8
	7-11	100	28.1
Gender	Male	150	42.1
	Female	206	57.9
Educational Status	Infants	126	35.4
	Preschool	80	22.5
	Primary	150	42.1
Religion	Christianity	256	71.9
	Muslim	100	28.1

n=356 respondents

Research Question One: Prevalence of Malaria Infection among Children Below 11 Years

Table 2 showed the months and years when malaria infection among children below 11

years was most prevalent. From the table above, malaria infection among children below 11 years were most prevalent in May and the year it was most prevalent is 2019.

Table 2: Months and Years When Malaria Infection Among Children Below 11 Years Was Most Prevalent

Months	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total
Years													
2018	15	8	14	10	30	11	9	7	10	11	10	15	150
2019	10	6	5	8	20	10	7	8	11	8	6	7	106
2020	7	6	5	6	15	9	8	7	7	9	11	10	100
Total	32	20	24	24	65	30	24	22	28	28	27	32	356

Research Question Two: The Gender Among the Children Below 11 Years in Which the Malaria Infection Was Most Prevalent

Table 3 showed the gender among the children below 11 years in which the malaria infection was most prevalent. From the table below, malaria infection among children below 11 years were most prevalent in females.

Table 3: The Gender Among the Children Below 11 Years in Which the Malaria Infection Was Most Prevalent

Gender	Frequency
Male	150 (42.1%)
Female	206 (57.9%)

Research Question Three: Number of Children Below 11 Years That Had the Malaria Infection in a Selected Tertiary Healthcare in Benin City, Edo State From 2018-2020.

Table 4 showed the number of children below 11 years that had the malaria infection in a selected tertiary healthcare in Benin city, Edo State from 2018-2020. From the table below, 356 children below 11 years that had malaria infection from 2018-2020.

Table 4: Number of Children Below 11 Years That Had the Malaria Infection In A Selected Tertiary Healthcare In Benin City, Edo State From 2018-2020.

Years	Frequency
2018	150
2019	106
2020	100
Total	356

Research Question Four: Treatment Outcome of The Malaria Infection Among Children Below 11 Years

Table 5 showed that treatment outcome of the malaria infection among children below 11

years. From the table below, the treatment outcome of the malaria infection has a survival rate of 95% and a death rate of 5%.

Table 5: Treatment Outcome Of The Malaria Infection Among Children Below 11 Years

Outcome	Frequency
Survivals	338 (95%)
Death	18 (5%)

DISCUSSION

This research assessed the prevalence and outcome rates of malaria infection in children under 11 years of age at the University of Benin Teaching Hospital, Edo State, from 2018 to 2020. Nine hundred respondents participated in this study. The demographic characteristics revealed that the majority of respondents were between 3 to 6 years old, female, had primary education, and were Christians. Data on the sociodemographic factors of the respondents, prevalence, and outcome rates were assessed using a designed checklist.

Prevalence of Malaria Infection

The findings from this study, shows that malaria was most prevalent in May and in the year 2019. This study equally revealed that malaria infection is most prevalent in females. This agrees with Tiedje et al, (2017) who found out that prevalence of malaria was high among children between 11-20 years and in wet season. This study is also in line with the findings of Afrane et al., (2021) which revealed that malaria infection is most prevalent in females.

Gender of Children Below 11 Years in Which Malaria Infection Was Most Prevalent

Findings revealed that malaria infection was most prevalent in females. This is in line with the findings of Afrane et al., 2021 which revealed that malaria infection is most prevalent in females.

Number of Children That Had the Malaria Infection From 2018-2020.

From this study, 356 children below 11 years that had malaria infection from 2018-2020.

This agrees with Tiedje et al, (2017) who found out that prevalence of malaria was high among children between 11-20 years

Treatment Outcome of Malaria Infection

The findings of this study show that the treatment outcome of malaria infection had 95% success rate and 5% failure rate. This is in line with the findings of Afolabi et al., (2018) which revealed a success rate of 90.8%, with a failure rate of 9.2%. This could be as a result of the potency of antimalarials and strict compliance to treatment regimen and preventive measures of malaria.

CONCLUSION

Malaria infection is a global health challenge, which remains prevalent in both developed and developing countries. The findings of this study, suggests that in order to achieve the optimum goal of improving health, measures to reduce the prevalence of malaria among children under 11 years should be considered. It is paramount that for effective strategies to be made, patients should be actively involved in the management of their health. From the findings of this research work, the researcher concluded that the treatment outcome of malaria infection has a high success rate.

REFERENCES

- Afolabi, B. M., Akinbobola, A., Wemambu, S. N., Abiodun, A., Oluboyo, B. O., & Oduola, A. M. (2018). Treatment outcome of malaria infection among children under five years of age in a tertiary hospital in southwestern Nigeria. *Journal of infection and public health, 11(1):23-29*
- Afrane YA, Malm KL, Jeffery GM, Adjei-Kusi P, Yan G. 2021. Gender differences in asymptomatic malaria infections in children in a malaria-endemic area of Ghana. *Malaria Journal 20:209*. From <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6942882/>
- Aychiluhm, S.B., Gelaye, K.A., Angaw, D.A., Dagne, G.A., Tadesse, A.W., Abera, A. & Dillu, D. (2020). *Determinants of Malaria among Under-Five Children in Ethiopia: Bayesian Multilevel Analysis*. BMC Public Health. 20-1468.
- Edelu, B.O., Ndu, I.K., Igbokwe, O.O. & Iloh, O.N. (2018). *Severe Falciparum Malaria in Children in Enugu, South East Nigeria*. Retrieved January 31th, 2019 from <http://www.njcponline.com>.
- Okoronkwo, N.C., Onyearugha, C.N. & Ohanenye, C.A. (2018). *Pattern and outcomes of paediatric medical admissions at the Living Word Mission Hospital, Aba, South East Nigeria*. *Pan African Medical Journal*. (30):202.
- Onwe, S.O., Mbamalu, C., Ani, O.C., Anthony, I., Nwovu, A.I. & Igwe, C.C. (2018). *Middle-East Journal of Scientific Research*. 26(4): 418-423.
- Paul, N.I. & Yaguo-Ide, L.E. (2019). *Severe Falciparum Malaria: Prevalence, Comorbidities and Outcome in children in Port Harcourt, Nigeria*. International Journal of Medical Science 6(10):5. Retrieved October, 2019 from www.internationaljournalsrg.org.
- Sa'idu, H.I, Shiaka, G.P, and Balogun, J.B. (2021). *Prevalence and Pattern of Severe Malaria Among Children in Two General Hospitals, Jigawa State-Nigeria*. FUDMA Journal of Sciences (FJS) 5(2):511-518.
- Simon-Oke, I.A., Ogunseemi, M.F., Afolabi, O.J., and Awosolu, O.B. (2019). *Prevalence of Malaria Parasites among Pregnant Women and Children under Five years in Ekiti State, Southwest Nigeria*. Journal of Biomedicine and Translational Research. Retrieved July 25th, 2019 from <https://doi.org/10.14710/jbtr.v5i1.3711>.
- Tiedje, K. E., Oduro, A. R., Agongo, G., Anyorigiya, T., Azongo, D., Awine, T., Ghansah, A., Pascual, M., Koram, K. A., & Day, K. P. (2017). Seasonal variation in the epidemiology of asymptomatic plasmodium falciparum infections across two catchment areas in Bongo District, Ghana. *American Journal of Tropical Medicine and Hygiene, 97(1):199–212*.
- White, N.J., Pukrittayakamee, S., Hien, T.T., Faiz, M.A., Mokuolu, O.A., Dondorp, A.M., et al. (2014). *Malaria*. Lancet. 383:723–35
- White, N.J., Pukrittayakamee, S., Hien, T.T., Faiz, M.A., Mokuolu, O.A., Dondorp, A.M., et al. (2014). *Malaria*. Lancet. 383:723–35.
- World Health Organization (WHO). (2020). *World Malaria Report 2020: 20 Years of Global Progress & Challenges*. Retrieved January 3rd, 2021 from <https://www.who.int/publications-detail-redirect/9789240015791>