An Analysis of Newspaper Coverage of HIV/AIDS, Malaria and Polio in Nigeria

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Abstract

This study examined the newspaper coverage of HIV/AIDS, malaria and polio in Nigeria to determine the level of attention Nigerian newspapers have given to these three diseases in their reportage over the years vis-a-vis their high prevalence in the country. The author performed content analysis on four Nigerian national newspapers covering from 2010 to 2013. Findings show that Nigerian newspapers have not given adequate attention to HIV/AIDS, malaria and polio in their health coverage. This, therefore, suggests that this may have contributed to the high prevalence of these diseases in Nigeria. The author, therefore, calls for more newspaper coverage of these diseases by Nigerian newspapers as well other media in order to reduce their prevalence in the Nigerian society.

Keywords: HIV/AIDS, malaria, polio, newspaper, health reporting, Nigeria.

Introduction

NEWSPAPERS have consistently remained useful resources in society since their emergence in the 17th century . As a medium of mass communication, newspapers serve as tools for shaping thoughts, and means of controlling economic and political powers . Newspapers also provide an essential forum for public discussion and debates, thereby providing guidance for society (Copeland, 2003). Newspapers are regarded as courtrooms, where judgements are passed against societal ills through editorials. The information, education and entertainment roles of newspapers also make them agents of socialisation . Newspapers socialise members of the public by inculcating the values and norms of society in them (Stephens, 1988). In fulfilling these basic functions in society, newspapers like other channels of

mass communication, have always devoted attention to the coverage of various aspects of human endeavours. These include, but not limited to, politics, education, sports, business and economy, religion, arts and culture, entertainment and health.

This study, therefore, investigates newspaper coverage of HIV/AIDS, malaria and polio, which are described as the three global scourges to know the extent to which Nigerian newspapers give attention to the diseases considering the havoc they have caused to the Nigerian nation.

Literature Review

Over the years, the state of the health system in Nigeria has been of concern because the country continues to battle with various epidemics as well as other preventable and curable diseases. Nigeria has recorded a huge loss of lives from these diseases and consequently; it has attracted attention by governments at all levels (within the country). The situation has also attracted attention from the global health agencies like the World Health Organisation (WHO), United States Agency for International Development (USAID), United Nations Development Programme (UNDP) and Bill and Melinda Gates Foundations. The federal ministry in Nigeria also confirms the poor state of the health sector in the country. It states that the health profile of Nigeria in terms of burden of epidemics, like HIV/AIDS, malaria, polio and the general health system

are all in a deplorable state. The primary, secondary, and tertiary health care, health policies, structures, facilities, personnel, and the overall health administration are also poorly affected .

This situation, according to the federal ministry of health in Nigeria, is compounded by increasing poverty in the country. "Poverty is keeping more and more people in poor health and so also is the poor health of increasing number of Nigerians retaining them in poverty" . Therefore, the nation is at a point where concerted efforts are needed by all stakeholders to improve the health status of Nigerians for sustainable development of the nation at large (Federal Ministry of Health, 20009b). This study, therefore, reviews the health profile of Nigeria in relation to three major diseases- malaria, HIV/AIDS and polio.

Malaria is found throughout the tropical and subtropical regions of the world and causes more than 300 to 500 million acute illnesses and at least one million deaths annually . It is estimated that 40 percent of the world's population, the larger proportion of whom are living in the poorest nations of the world, is at risk of malaria (Najera, 2001). Malaria affects five times as many people as Acquired Immune Deficiency Syndrome (AIDS), leprosy, measles and tuberculosis combined . The global trend in health research reveals that malaria is the most prevalent parasitic endemic disease in Africa despite the fact that it is preventable,

treatable and curable (Nabarro & Mendis, 2000; Sachs & Malaney), and it remains one of the major health problems in Nigeria . Malaria in Nigeria is yet to improve despite several programmes of actions that have been designed by the government over the years .

Statistics from the federal government indicate that the country records 70-110 million malari clinical cases per year and malaria related annual deaths for children under five years of age are estimated at around 300,000 (285,000-331,000). Furthermore, 11 percent of maternal mortality is due to malaria. This has an enormous economic impact of about N132 billion lost to malaria annually in form of treatment costs, prevention and loss of hours (Federal Ministry of Health, 2009b). Nigeria bears 25 percent of malaria disease burden in Africa. The children and women are the most affected. Malaria accounts for 30 percent of under age-five mortality and contributes to about 60 percent of outpatient visits and 30 percent of admissions annually (Federal Ministry of Health, 2012).

It has also been found that the malaria preventive culture among mothers of under age-five is generally poor across the six geo-political zones in Nigeria (Sachs & Malaney, 2004). The preventive health behaviour against malaria, especially the use of bed net among under-fives, was found to be generally low across the six geo-political zones. Only 10 percent of the respondents in a national study claimed to use bed nets (Federal Ministry of Health, 2003).

Similarly, HIV/AIDS, which is regarded as a global threat, also poses challenges to human development in Africa. In many countries, the epidemic is said to have cut life expectancy and robbed society of millions of people in their prime working years. It has also dimmed the hope of living full and productive lives for unimaginable numbers of infants, children, young and adults . In the global arena, the pandemic of HIV/AIDS has constituted a major health and socio economic challenge for the past three decades. HIV/AIDS has reversed many of the health and developmental gains in the underdeveloped and the developing countries (Federal Ministry of Health, 2012). It is also reported that none of the problems plaguing society in the 21st century wars, famine or crime, is as threatening to mankind as Acquired Immune Deficiency Syndrome (AIDS). Since its discovery in 1981 by Robert Gallo of USA and Lue Montgnier of France, , the virus has killed more than 33.3 million people in the world out of which Sub-Saharan Africa accounts for 22.5 million (68 percent of the global total). In Nigeria, it is estimated that HIV/AIDS has affected 2.98 million people, thereby making Nigerians the second highest number of people living with HIV/AIDS in the world after South Africa (Federal Ministry of Health, 2010). Furthermore, between 2000 and 2011, the World Bank alone has provided more than $1.5 billion to

over 30 countries in Sub-Saharan Africa, including Nigeria to combat the epidemic of HIV/AIDS .

The scourge of HIV/AIDS in Nigeria has affected the social and economic fabrics of the nation thereby impeding the overall progress of the country. Since the first case of HIV/AIDS reported in 1986, the pandemic has continued to evolve with multiplier effects . Retrospectively, in 1991, the HIV prevalence rate in Nigeria was 1.8 percent, 5.8 percent in 2001, 4.4 percent in 2005, 4.6 percent in 2008 and 4.1 percent in 2010. Among the high risk groups, female sex workers constitute an important reservoir of HIV infection for continuous transmission to the general population (Federal Ministry of Health, 2010).

The prevalence of HIV/AIDS in Nigeria has facilitated the re-emergence of disease conditions such as pulmonary tuberculosis and other opportunistic infections (Federal Ministry of Health, 2010). Furthermore, it is found that HIV/AIDS cases are very visible in Nigeria because about one out of every four persons in the country had seen someone with HIV/AIDS or known someone who died of AIDS (Federal Ministry of Health, 2010). Benue State, a state from the north central geo-political zone of the country has the highest prevalence rate of HIV/AIDS. Among the six geo-political zones in the country, north central has the highest prevalence rate of HIV/AIDS, while the most affected age group is 30-34 (Federal Ministry of Health, 2010).

The case of polio and its epidemic nature in the global arena has been an age-long phenomenon across the world. The pandemic once ravaged the developed countries of the world. For instance, the United Kingdom in 1789 and United States of America in 1843 recorded their first polio cases respectively . According to the , polio is a highly infectious disease caused by a virus, which invades the nervous system, and can cause total paralysis in a matter of hours. Poliomyelitis, or polio as commonly called, is a disease caused by an enterovirus found throughout the world , and one in 200 infections leads to irreversible paralysis (usually in the legs). While five to ten percent of those paralysed die when their breathing muscles become immobilised, it is confirmed that unlike the scourge of malaria and HIV/AIDS, polio has largely been eradicated in many countries of the world .

In Nigeria, polio seems perpetual as over the years, the pandemic continues to exist. found that out of the three countries (Afghanistan, Pakistan and Nigeria) of concern, where polio eradication is yet to be achieved, Pakistan has reduced the number of polio cases from 198 in 2011 to 56 in 2012. Afghanistan saw a decrease from 80 to 35 during the same period, but cases in Nigeria increased from 62 in 2011 to 119 in 2012. The long history of Nigeria's struggle with polio is evidenced in traditional linguistic descriptions of polio throughout the country over time (Renne, 2010). For instance, it is

called *arun aromolapa romolese* (literally, a disease that cripples a child's hands and legs) among the Yorubas, in the southwest, o rı a ngwulo (a disease that causes paralysis of limbs, lameness) among the Igbos in the southeast, and *cutar Shan Inna* (literally, a disease caused by the drinking of *Inna*) among the Hausas in the north (Renne, 2010). Because of the prevalence of polio in Nigeria, studies since the 1950s and in the early 1960s started to focus attention on this endemic, particularly when some six European expatriates contracted polio in Lagos, south west Nigeria, which led to the death of two of them .

Nigeria over the years consistently makes the list of countries where polio is yet to be eradicated. The World Health Organisation declared Nigeria as one of the three countries where polio is yet to be eradicated alongside Afghanistan and Pakistan in 2013 . In 2006, Nigeria was also declared as the country that had the highest numbers of confirmed cases of polio in the world (Renne, 2010). Furthermore, when many countries failed to meet up with the year 2000 target for eradicating polio across the world, the World Health Organisation set another target as 2005 (Renne, 2010). In setting the 2005 target, immunisation efforts specifically focused on Nigeria and India because, the polio epidemics that struck both countries at that time contributed to the increased numbers of polio cases across the world between 2001 and 2002 .

Consequently, global attention has since been shifted to Nigeria on how to eradicate polio given the fact that the few remaining cases of polio in Nigeria still represent a threat to global efforts to end polio. This is because the virus knows no borders and could still spread into many countries (Ruhl, 2011). Onno Ruhl is the World Bank Country Director for Nigeria who decried the remaining cases of polio in the country when the World Bank's Board approved an additional credit of $60 million for Nigeria's partnership for polio eradication project in 2011, making the gesture the third of such since 2003 .

On the other hand, newspapers have disseminated health information to members of the public. They also disseminate information to create awareness on various health risks, disease outbreaks and other prevalent health issues in society (Torwel & Rodney, 2010). For a serious health information seeker, newspapers appear to be the best option to get health information. Newspapers are seen to be highly reliable sources of information . This is the more reason why information-oriented newspapers have been noted for health promotion as they connect the public with relevant health information (Atkin & Wallack, 1990).

Also, in the process of disseminating health information, mass media are noted for portraying health and health care issues in society . argue that newspapers are a major channel in measuring the

media portrayal of health issues effectively. The authors examined newspaper reports in New Zealand on the portrayal of tuberculosis in the three major cities of New Zealand: Auckland, Christchurch and Wellington. The study found tuberculosis occurring in the three major cities, but indicates that tuberculosis predominantly occurs in Auckland. The study concludes that representation of tuberculosis in New Zealand print media is partial, mirroring the reality about tuberculosis prevalence in New Zealand. The authors, therefore, describe tuberculosis as a national concern in New Zealand. Other health issues which health communication studies have examined in relation to newspaper reportage include HIV/AIDS, malaria, polio, family planning, abortion, drug and tobacco intakes and hypertension. .

In Nigeria, however, Okidu (2013) studied communication models in HIV/AIDS coverage in selected Nigerian newspapers. The study confirmed the strategic roles newspapers play in setting the contextual agenda to complement the multi-sectoral and community-based response to HIV/AIDS prevention, treatment, care and support adopted by the government. The significant coverage in the frequency of HIV/AIDS activity-oriented information in Nigerian newspapers confirms how HIV/AIDS contextual issues are high on their agenda (Okidu, 2013). The study, however, concludes that the overwhelming burden of new cases of HIV/AIDS in Nigeria cannot be attributed to diminished media coverage of contextual elements.

Methodology

Given the nature of this study where communication texts on health issues in Nigerian newspapers were systematically studied and analysed, the use of content analysis was necessary. Content analysis is described as a structured method, which is based on the principles of social science of measuring and counting of media contents . As postulated by , content analysis is described as a "research technique for the objective, systematic and quantitative description of the manifest content of communication." (p. 18) The ultimate goal in content analysis is to attain a condensed and broad description of the text under study. The outcomes of the analysis are concepts or categories that enable the researcher to describe and explain the text being studied.

The data collection process of the study began with the selection of national newspapers and the justifications for their selection. The researcher clearly defined the population and the sample of the study within which the data was collected. In gathering the data proper, the researcher decided the unit of analysis as well as the variables as contained in the coding scheme. The researcher, however, adopted composite sampling technique for data gathering. Furthermore, the

researcher carried out a pre-test analysis to ensure the validity and reliability of the research instrument (coding sheet). Having done this, the researcher also carried out an inter-coder reliability test, which determined the degree of agreement between the researcher and his research assistant in the coding process.

Selected newspapers of study and rationale for selection

In Nigeria, there are over 150 newspapers, most of which are not daily publications but regional in coverage and circulation (Nigeria Press Council, 2009). There are approximately 20 daily newspapers, which have national coverage, circulation and readership in the country . The researcher selected four of the national newspapers for the purpose of this study. These newspapers include: The Guardian, The Punch, Nigerian Tribune and Daily Trust.

These four newspapers were purposely chosen based on both common attributes and unique characteristics. For instance, all the four newspapers have national coverage, reach and circulation, which make them popular across Nigeria. All of the newspapers have been in existence for at least ten years in the country. These newspapers have consistently published since their establishment and enjoy readership across the length and breadth of Nigeria. Also, Okidu (2013) notes that the these

newspapers have a strong network of national correspondents and thoroughly bred professionals, which have over the years, earned them respect for their in-depth analysis and coverage of such national issues as politics, health, education, economy, sports, marine and insurance and so forth. In view of this, these newspapers have been widely cited in workshops, seminars, and training sessions on health communication in the country (Okidu, 2013).

All the four newspapers are English language dailies. The selection of only English language newspapers in this study is based on the fact that the English language is the official language in Nigeria. This provides these newspapers wider readership in Nigeria than indigenous newspapers, which mostly focus on particular geo-ethnic areas or regions. In Nigeria today, the selected newspapers are among the top eight standing in terms of circulation, coverage and readership (Dragomir & Thompson, 2012). They all also have online versions for online readership and this is important because Nigerian audience are now conscious of reading online version of newspapers (Dragomir & Thompson, 2012).

Similarly, these newspapers have certain unique characteristics that qualify them for selection in this study. The Guardian Newspaper which is based in Lagos State, south west Nigeria, readily draws the attention of the elite class of the country. Still, this newspaper is substantially commercial in

orientation and for many years, it has attracted the largest proportion of advertisements among the national newspapers (Osewa, 2005; Dragomir & Thompson, 2012)The Punch Newspaper, a Lagos-based publication remains the most widely circulated newspaper in Nigeria. Over the years, The Punch Newspaper is characterised with sharp criticism against the government of the day. So, the newspaper readily attracts the attention of the politicians, old and young as well as any Nigerian literate who is interested in the political happenings in the country.

The Nigerian Tribune is the oldest newspaper in Nigeria since 1949, making it the only existing precolonial newspaper, and the only national newspaper currently being published in Ibadan - the largest city in Africa, Oyo State, south west of the country. Daily Trust is one of the national newspapers currently being published in the north, specifically located in Abuja, the Federal Capital Territory of the nation. There are other newspapers in the north, but they do not have national coverage and circulation. In contrast, these other newspapers are largely regional in orientation and circulation compared to the Daily Trust Newspaper.

Population, sample, sampling technique and sampling period

The population of the newspaper editions from which the sample of this study was selected were the entire editions of the four selected newspapers published over four years from the 1st of January, 2010 to 31st of December, 2013 excluding Saturday and Sunday editions. The rationale for a limited timeframe is that most of the health communication studies conducted in Nigeria within the context of newspapers were done within a short period, and at most two years (see Okidu, 2013; Uwom & Oloyede, 2014, Batta, 2012, Towel & Rodney, 2010). This study examines a period of four years as a further step to earlier studies in Nigeria. This timeframe allows for a broader insight into the coverage of health issues by Nigerian newspapers and perhaps, health communication research in Nigeria.

Consequently, the total amount of newspaper editions for the period of four years of weekday coverage are estimated as 1,040 for each newspaper (5 days x 52 weeks=260editions, x 4 years= 1,040) and 4,160 as total editions for the four newspapers (1,040 x 4= 4,160). To determine the sample, a composite sampling technique was adopted. This technique has been adjudged the most scientific and superior over random sampling and consecutive day sampling techniques, when analysing newspaper content. This sampling technique is also considered effective because it controls the bias of cyclical trends in news coverage . Therefore, composite technique was performed over the 48 months of the four years

studied for each newspaper (2010-2013) to determine the selected newspaper editions for content analysis.

Through the application of composite or constructive sampling technique for each of the newspapers, 211 newspaper editions were content analysed. Therefore, for the four newspapers, 844 editions were content analysed as the sample from the total population of 4,160 editions. This sample size is approximately estimated at 21percent of the entire population, which is adequate to make a representative judgement for the entire population. A sample size between 10 percent and 25 percent is recommended as acceptable when determining sample size in content analysis (Wimmer & Dominick, 2011). The researcher, assisted by one research assistant, sourced all the 844 editions of newspapers by visiting the Olabisi Onabanjo University Library Sagamu Campus, Ogun State, south west Nigeria, the Simeon Adebo Library Abeokuta, Ogun State, south west Nigeria and the Daily Trust Newspaper library, Lagos and Abuja Offices.

The unit of analysis and content categories

The study focused on the selected newspapers as the units of analysis. Within the units of analysis, newspaper stories, articles and photographs were coded according to themes. These themes include: straight or conventional news stories, feature articles, editorials, opinions or columns and letters to the editors and pictures. The major content category that was focused in the story contents include health themes or topics.

Validity, reliability and inter-coder reliability

In any content analysis study, it is essential for the researcher to painstakingly factor the components of validity and reliability in the whole process of the study design. This is viewed as fundamental because validity and reliability are research components through which researchers make a strong case for the data generated through content analysis . According to , the questions of validity and reliability in content analysis studies should be carefully and essentially answered by researchers, especially when the results of content analyses are likely to be adopted in public health campaigns. It has also been argued that reporting validity and reliability in content analysis occurs in studies whereby the results of content analysis studies are meant to be applied in crisis management situation , to understand and use power in organisations , to develop techniques for dealing with spousal abuse , and to maintain collaborative work groups

As generally accepted in other fields of studies, reliability is a fundamental characteristic of content analysis . However, Krippendorff (1980) notes that in the context of

content analysis, reliability implies inter-rater reliability, inter-coder reliability or inter-rater agreement. Inter-coder reliability refers to the degree of agreement that exists between independent coders on the rating or code they assign to each object in the study. Given that it is not generally accepted for a single researcher to perform the task of coding in content analysis studies to avoid subjective judgement, reliability is then emphasised between or among coders. "If a single researcher performs the tasks of reading a text and coding it with the help of a code book, the coder's judgments may be highly subjective. The involvement of multiple coders, however, calls for gauging the strength of agreement between them." (Oleinik, Popova, Kirdina & Shatalova, 2014, p. 2704) Therefore, achieving reliability between coders is necessary i in the whole process. Reliability, which is also referred to as re-productivity according to (Krippendorff, 2004), is conceptualised as:

The degree to which a process can be replicated by different analysts, working under varying conditions, at different locations, or using different but functionally equivalent instruments. To be clear, agreement is what we measure; reliability is what we wish to infer from it. In content analysis, reproducibility is arguably the most important interpretation of reliability". (Krippendorff, 2004, p. 215).

Furthermore, note that re-productivity (reliability) requires a test-test process whereby different coders or raters analyse the same text, coding the set of content once. If the judgements of the coders are the same by producing the same coding pattern, the data generated can be regarded as scientifically reliable. This, therefore, implies that results generated from such data can be regarded as valid. Given that the "reliability problems usually grow out of the ambiguity of word meanings, category definitions, or other coding rules" , it is highly essential that valid inference is made from the text, by ensuring that classification procedure is reliable. This is achieved through the principle of consistency, whereby different people code the same text in the same way (R.P. Weber, 1990). R.P. Weber, (1990) notes further that "the best test of the clarity of category definitions is to code a small sample of the text. Testing not only reveals ambiguities in the rules, but also often leads to insights suggesting revisions of the classification scheme." (R.P. Weber, 1990, p. 23)

In content analysis studies, one of the common methods of measuring reliability is to measure the degree of agreement in percentage term between coders or raters . According to Stemler (2001), this approach sums up the number of cases coded in the same way by two different coders and divides it by the total number of cases. Despite the general acceptance of this percent agreement approach, had long identified its major flaw. The flaw that is associated with this approach is that if fails to consider the

fact that raters or coders are expected to agree with each other a certain percentage of the time simply based on chance (J. Cohen, 1960). Therefore, to guide against this problem, suggest Cohen's Kappa to calculate the inter-coder reliability. Cohen's Kappa presents 1 as a perfect reliability (perfect agreement) in coding while 0 implies no agreement other than what would be expected by chance (Heney, et al., 1998). Kappa is calculated or computed thus:

Further to this, while suggests that a kappa coefficient of 0.61 implies a reasonably good agreement (good reliability), suggest a comprehensive benchmark for interpreting kappa coefficient values. The benchmark is stated in the table below.

Table 1: Showing Kappa statistic and its strength of agreement

Kappa Statistic	Strength of Agreement
< 0.00	Poor
0.00-0.20	Slight
0.21.0.40	Fair
0.41-0.60	Moderate
0.61-0.60	Substantial
0.81-1.00	Almost Perfect

In this study, the researcher adopted Cohen's kappa to calculate the degree of agreement between the researcher and one research assistant in the coding exercise in order to determine the reliability of the data.

Cohen's kappa coefficient was chosen to calculate the inter-coder reliability because it accounts for agreement that is expected to occur by chance . Furthermore, Cohen's kappa is specifically designed to measure the level of agreement between two coders (Murphy & Ciszewska-Carr, 2005). Before the coding exercise, the researcher had designed a coding scheme and coding instruction, which was used to train the research assistant. The research assistant, at the time of this research, is a fresh graduate of mass communication from Olabisi Onabanjo University, Ago Iwoye Nigeria. The training lasted for three days, taking about three hours each day. After the training, the research assistant independently coded 150 health stories across the four selected national newspapers covering the month of June, 2014. Afterwards, the research assistant sought clarifications from the researcher on areas that were not clear during the coding exercise. The researcher took time to clarify these unclear areas, which improved the understanding of the research assistant and his ability to perform content analysis.

After the examination of 150 preliminary articles, the researcher and the research assistant independently coded another set of health stories to determine the level of agreement. In this case, the researcher and the assistant coded the same 241 health stories, which lasted for three days. The 241 health stories coded were used to determine the intercoder agreement. This was estimated at 10.2

percent of the entire 2,368 health stories that were eventually coded for the study. The Statistical Package for the Social Sciences (SPSS) was used to calculate kappa coefficient. The kappa coefficient value found was .857, which suggested that there was almost perfect agreement between the researcher and the assistant in the coding exercise (Landis & Koch, 1977). Therefore, the researcher and the assistant then coded all the entire health stories found in the four selected national newspapers for the study from 1st of January, 2010 to 31st of December, 2013. In all, the total number of stories coded was 2,368, out of which the researcher coded 1,491 stories (63.1percent) while the research assistant coded 873 stories (36.9percent) respectively.

Hypothesis Testing

Study hypothesis

H0: Newspaper coverage of malaria, HIV/AIDS and polio byNigerian newspapers will not be related to the prevalence of these health issues in Nigeria.

H1: Newspaper coverage of malaria, HIV/AIDS and polio by Nigerian newspapers will be related to the prevalence of these health issues in Nigeria.

In testing the study hypothesis, the author carried out a correlation analysis through the use of statistical software for social science (SPSS). In doing this, two variables in the coding sheet were correlated with each other. The first variable in the coding sheet, which was a type of story such as a news story, feature article, editorial, column/commentary or letter to the editor, were correlated with the coverage of HIV/AIDS, malaria and polio in particular.

Table 2: Correlation coefficient value of the study hypothesis

Correlations		Type of story	Health themes/topics
Type of story	Pearson Correlation	1	-.115**
	Sig. (2-tailed)		.006
	N	564	564
Health themes/topics	Pearson Correlation	-.115**	1
	Sig. (2-tailed)	.006	
	N	564	564

**. Correlation is significant at the 0.01 level (2-tailed)

To achieve this, the value of 564; implying the total coverage of HIV/AIDS, malaria and polio across the newspapers studied, which is technically referred to as the observation (Table 2 above), was extracted from the SPSS-generated values of all health topics covered by Nigerian newspapers.

This was then correlated with the types of stories covered by Nigerian newspapers (Table 2 above). With a correlation coefficient value of -0.115 derived from SPSS, the study found that there is a significant correlation between the two variables. More importantly, the correlation coefficient value of -0.115 (negative correlation) implies a correlation in the opposite direction.

This means that the less attention HIV/AIDS, malaria and polio receive from Nigerian newspapers, the higher their rates of prevalence in the country. Furthermore, the correlation coefficient value of -.115 is less than 0.5, which implies that the strength of the correlation is weak. In other words, there is an observed coverage of HIV/AIDS, malaria and polio by Nigerian newspapers but the fact remains that the coverage was not adequate considering the high prevalence of these diseases in Nigeria. That is, there was a low negative correlation between the two related variables, which is statistically expressed as: $[r = -.115, n = 564, p = .000]$.

Discussion of findings

As noted by Towel and Rodney (2010) and in relation to this study, newspapers disseminate information on various health issues to members of the public to create awareness on health risks, disease outbreaks and other prevalent health issues. Previous studies have found that due to the dissemination of information by newspapers on various health issue, people endlessly seek health information from them (newspapers). This is common for people in both developing and developed countries (Gasher et al., 2007; Axelsson & Strid, 2007). This is further confirmed in the case of Nigeria by the findings of this study. Gasher et al. (2007), state that health is a prominent daily topic in Canadian newspaper reporting. According to the authors, on a daily basis, Canadian newspapers report various health issues that engage the general Canadian population.

Furthermore, the findings of this study are similar to study of Catalan-Matamoros, Axelsson and Strid (2007), who found that the public effectively receives health information through newspapers because of the descriptive analyses related to the presentation of health issues. The authors note that in Sweden, newspapers are very notable in conveying health news and scientific breakthroughs to members of the public. Similarly, it was previously found that newspapers disseminate health information to members of the American public and Americans who identify themselves as health conscious and health oriented often consider newspapers in their sources of health information (Dutta-Bergman, 2004; Hoover & Cross, 2009). In general, newspapers are seen to be highly reliable sources of health information (Dutta-Bergman, 2004) because they connect members of the public with relevant health information (Atkin & Wallack, 1990).

More importantly, the archival quality of newspapers, which makes it possible for members of the public to access health information readily even from past editions (Sissors & Bumba, 1977) and share such a health information with other people (Dutta-Bergman, 2005) further accounts for the popularity of newspapers in seeking health information amongst members of the public.

Therefore, previous studies have investigated coverage of specific health issues to determine their level of coverage and portrayal in newspapers. In this regard, Rachul et al. (2011) investigated coverage of the A/H1NI vaccination programme in Canadian newspapers and found that it was widely covered. Davidson and Wallack (2004) examined the reporting of non-HIV STDs in American newspapers and found that their coverage was low, and the authors recommended increased attention on the health issue.

Furthermore, Gollust and Lanzt (2009) examined the coverage of type-2 diabetes in American newspapers and found behavioural factors and obesity as the predominant explanation in newspapers for the causes of the disease. In New Zealand, Lawrence et al. (2007) studied the portrayal of tuberculosis in New Zealand newspapers and found that the portrayal and presentation of tuberculosis in newspapers were partial, mirroring the reality of tuberculosis in New Zealand. Okidu (2013) also studied newspaper coverage of HIV/AIDS in Nigeria and found that HIV was frequently reported by Nigerian newspapers. Similar to these previous studies, the findings of this study suggest that newspapers play an important role in their coverage of health issues and dissemination of health information in Nigeria. It further indicates that newspapers are good sources of information on various health issues

to members of Nigerian public.

However, considering the high prevalence and economic implications of HIV/AIDS, malaria and polio, this study has found that Nigerian newspapers have not given adequate attention to these three diseases. This is because statistics from the federal government of Nigeria show that there are 70-110 million malaria cases diagnosed per year and annual malaria-related deaths for children under five years of age are estimated at around 300,000. Furthermore, 11 percent of maternal mortality is due to malaria.

This has an enormous annual economic cost of approximately N132 billion ($704m) in the form of treatment costs, prevention and loss of man hours (Federal Ministry of Health, 2009b). The country bears 25 percent of the malaria disease burden in Africa. Children and women are the most affected. Malaria accounts for 30 percent of under age-five mortality and contributes to about 60 percent of outpatient visits and 30 percent of admissions annually (Federal Ministry of Health, 2012). Given this statistical profile of Nigeria in relation to malaria and the correlation statistics that reject the null hypothesis, this study concludes that Nigerian newspapers have not given adequate attention to malaria in their health coverage.

Similarly, the high prevalence of HIVAIDS in Nigeria is portrayed through the available statistics. The disease was first discovered in Nigeria in 1986, five years after it

was discovered globally. As at 2010, HIV/AIDS has affected 2.98 million people in Nigeria and the country is ranked second in the world with the highest number of people living with HIV/AIDS (Federal Ministry of Health, 2010). The prevalence of the virus is very visible in Nigeria as roughly one out of every four people in the country has seen someone with HIV/AIDS or known someone who has died of AIDS (Federal Ministry of Health, 2010). With this high rate of HIV/AIDS, and the correlation statistics that reject the null hypothesis, this study concludes that Nigerian newspapers have not given adequate attention to HIV/AIDS in their health coverage.

Considering the high prevalence of polio in Nigeria, Nigerian newspapers have not given adequate attention to the disease in their health coverage. This is because polio has remained almost perpetual in Nigeria as it has yet to be eradicated over the years. In 2006, Nigeria was declared the country with the highest number of polio cases, with rates continuing to increase, despite a decrease in rates around the world (World Health Organisation, 2013b). The World Bank and the Bill and Melinda Gates Foundation have spent millions of US dollars towards the eradication of polio in Nigeria.

Conclusion and Recommendations

This study further confirms the resourceful value noted about newspapers since their emergence in the 17th century (George, Curran, & Wingate, 1978; tom 2012; J. Weber, 2006). Despite the evolution of information communication technologies, which have widened the communication wave and platforms in the 21st century, the study firmly establishes that newspapers are still important to members of the public in obtaining health information to improve their health. Furthermore, newspapers are still amongst the leading media channels that promote health information on various health issues for the benefit of society. Given this fact, the author posits that regardless of the advancement in information communication technologies, newspapers continue to be relevant to people of all ages in disseminating information on various health issues. The enduring nature of newspapers shows that if they can be strategically channeled to give adequate attention to the coverage of HIV/AIDS, malaria and polio as well as other health issues ravaging the socio-economic life of the Nigerian nation, there is every possibility to achieve extremely low prevalence of these diseases in Nigeria. This is because newspapers have the potential to change the health orientation, attitudes and the general health behaviours of the populace. It may be argued, however, that newspaper is a medium of the literate, whereas illiteracy is associated with the prevalence of diseases. The author still holds that, newspapers, coupled with other mass media like television and radio, which can break the barrier

of illiteracy, can still go a long way in creating more awareness about HIV/AIDS, malaria and polio to the extent of reducing their high prevalence in Nigeria. Therefore, the health policy makers, health communication practitioners, health care professionals and other stakeholders should explore newspapers in communicating important messages on how to reduce the menace of HIV/AIDS, malaria and polio to the Nigerian populace.

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