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**DEPARTMENT OF HEALTH INFORMATION
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All portions of the manuscript must be typed double-spaced and all pages numbered starting from the title page.

The Title should be a brief phrase describing the contents of the paper. The Title Page should include the authors' full names and affiliations, the name of the corresponding author along with phone, fax and E-mail information. Present addresses of authors should appear as a footnote.

The Abstract should be informative and completely self-explanatory, briefly present the topic, state the scope of the experiments, indicate significant data, and point out major findings and conclusions. The Abstract should be 100 to 300 words in length. Complete sentences, active verbs, and the third person should be used, and the abstract should be written in the past tense. Standard nomenclature should be used and abbreviations should be avoided. No literature should be cited. Following the abstract, about 5 to 7 keywords that will provide indexing references to should be listed. A list of non-standard Abbreviations should be added. In general, non-standard abbreviations should be used only when the full term is very long and used often. Each abbreviation should be spelled out and introduced in parentheses the first time it is used in the text. Only recommended SI units should be used.

The Introduction should provide a clear statement of the problem, the relevant literature on the subject, and the proposed approach or solution. It should be understandable to colleagues from a broad range of scientific disciplines.

Materials and methods should be complete enough to allow experiments to be reproduced. However, only truly new procedures should be described in detail; previously published procedures should be cited, and important modifications of published procedures should be mentioned briefly. Capitalize trade names and include the manufacturer's name and address. Sub headings should be used. Methods in general use need not be described in detail.

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**UTILIZATION OF AGRICULTURAL INFORMATION BY RICE FARMERS IN
GARUN-MALLAM, KANO STATE NIGERIA**

BY

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Abstract

Agriculture is the backbone of Nigeria's economy, and rice production plays a vital role in ensuring food security and economic stability. To enhance productivity and sustainability in the rice farming sector, access to relevant and timely agricultural information is crucial. This paper explores the utilization of agricultural information by rice farmers in Garun-Mallam, Kano State Nigeria, assessing the sources, dissemination channels, challenges, and potential solutions to improve information access and utilization in this critical sector. The study adopted a descriptive research design and targeted 1,301 rice farmers in Garun-Mallam, Kano State, Nigeria with a sample size of 130 rice farmers selected through proportionate sampling technique of Krejcie and Morgan recommended formula. The study utilized Questionnaire, for data collection. The instruments were pilot tested to ensure it measures the expected objectives. Data on farmers' demographic profile were analysed descriptively using frequencies and percentages then translated on tables and graphs. While the study objectives were analysed quantitatively based on the study design. The findings revealed that majority of the farmers in Garun Mallam Local Government Area were using radio as source of agricultural information at 31%, agricultural agent 16%, agricultural show 17% and farmer association 6%. Other included television 11%, books 5% library 5% newspaper 5% and internet 4%. The study concludes that radio is a widely used and effective means of communication for disseminating agricultural information to the farming community Garun-Mallam. Radio has a wide coverage area and can reach remote and rural communities where other forms of media may not be accessible. The study thus recommends that there is need for the relevant bodies in the agriculture sector in Nigeria to increase access and utilization of agricultural extension services which should also be strengthened to increase their reach and effectiveness. This should be achieved through the recruitment and training of more extension workers and the provision of resources such as vehicles, equipment, and communication tools. Also, there is need for the government of Nigeria to increase access and utilization of technology and digital platforms among rice farmers in Garun-Mallam, Kano State, Nigeria.

Keywords: *Agricultural Information, Rice Farmers, Utilization, Farming Practices, Nigeria*

Introduction

Nigeria is the most populous country in Africa, with a growing demand for rice as a staple food. Rice cultivation is a vital component of the nation's agricultural sector, contributing significantly to food security, employment generation, and income generation for rural households. To optimize rice production and increase yields, farmers require access to accurate and up-to-date agricultural information on various aspects of rice farming, including agronomy, pest and disease management, market prices, and climate patterns.

The ability of farmers to critically determine the extent of information need, access available information effectively and evaluate the information to accomplish a specific farming purpose is known as agricultural information literacy (Eamin & Roknuzzaman, 2017). Agricultural information literacy played significant roles to researchers, stakeholders in the agricultural sector such as agricultural extension workers and farmers at different stages of farming; land preparation, pest control, harvesting, food storage, credit facilities and marketing (Kiplang'at, 2019). Osokoya, Alabi and Fagbola (2014) added that informed farmers are known for their competence in terms of identification of information need, sources, access and utilization of agricultural information to solve agricultural problems geared towards enhancing agricultural productivity.

Agricultural information plays a crucial role in farmers' decision-making and overall agricultural performance. According to a study by Ifeanyi-obi, Wigwe, Adesope and Obafemi (2023), farmers who use agricultural information sources have significantly higher crop yields than those who do not. Similarly, in a study by Tanti, Jena and Aryal (2022), farmers who access agricultural information through mobile phones reported higher adoption rates of new farming practices and technologies. However, the effectiveness of information sources can vary based on factors such as farmers' age, education level, and access to technology (Ifeanyi-obi *et al.*, 2023). Therefore, it is important for agricultural extension services to consider these factors when designing and delivering information to farmers, in order to maximize its impact on agricultural performance.

The life and livelihood of rice farmers around the world, especially in developing countries, are often fraught with challenges. A study by Thapa and Joshi (2019) examined the socioeconomic factors affecting the productivity of rice farmers in Nepal. They found that, despite the country's high dependence on rice farming, many farmers continue to use traditional farming methods due to limited access to modern technologies. The lack of access to credit facilities and education further compounds these challenges, leading to lower productivity and incomes. In contrast, a study in Kenya by Ochieng *et al.* (2020) showed that the adoption of System of Rice Intensification (SRI) among rice farmers led to improved yields and income. SRI involves changes in rice farming practices such as planting younger seedlings, using organic fertilizers, and managing water more efficiently. The study found that farmers' access to education and training significantly influenced their willingness to adopt SRI. Information sources are tools or carriers that provide required information to an individual. Farmers obtained agricultural information from several sources of information such as print and non-print bibliographic sources; books, encyclopaedias, magazines, electronic databases (AGRIS, AGORA), newspapers, library catalogues, broadcast media such as television and radio. Others are new age media such as social media platforms which include WhatsApp, Facebook, Twitter, and Instagram among others (Mugwisi, Ocholla & Mostert, 2016). Ajuwon and Odeku (2018) stressed that agricultural information sources contribute significantly to agricultural production as farmers can adopt new technologies or farming systems, identify when to plant and harvest, crop to produce and where to sell. It is also through agricultural information that farmers can acquire bank facilities, seedlings as well as pests and diseases control measure which consequently

is capable of improving agricultural productivity and improve farmers' standard of living.

The advent of digital technology has revolutionized the dissemination of agricultural information to farmers. One of the major strengths of contemporary sources of agricultural information is their extensive reach and accessibility. Online platforms, such as e-Agriculture (FAO, 2019), provide a wealth of information on best practices, new technologies, and research updates. These platforms enable farmers to acquire knowledge and skills necessary to improve their productivity and sustainably manage their resources. Additionally, mobile applications like AgriApp (Patil *et al.*, 2020) deliver timely, location-specific information on weather, pest and disease control, and market prices, helping farmers make informed decisions in real-time.

Farmers today use a variety of information sources to stay up-to-date with the latest practices, technologies, and market trends in the agricultural industry (Kountios, Konstantinidis & Antoniadis, 2023). The agricultural information sources used by farmers are bibliographic sources, broadcasting media, extension services, exhibitions and agricultural shows, information and communication technology. According to a study by Igwe *et al.*, (2019), bibliographic sources, such as agricultural publications and research papers, are a valuable source of information for farmers. These sources provide comprehensive and in-depth information on a variety of topics, from farming techniques to crop diseases (Ghobadpour, Monsalve, Cardenas & Mousazadeh, 2022). However, the use of bibliographic sources may be limited by farmers' literacy levels and their ability to access and interpret these resources. Moreover, exhibitions and agricultural shows provide valuable information, but their utilization is limited by factors such as distance and cost. On the other hand, the use of Information and Communication Technology (ICT), particularly mobile phones, has been increasing among farmers. According to a study by Mekonnen *et al.*, (2021), farmers are increasingly using mobile phones to access agricultural information, including market prices, weather forecasts, and expert advice. However, factors such as network coverage and digital literacy can influence the extent to which farmers can effectively use these technologies.

In Brazil, rice is an essential staple crop, cultivated across approximately 1.6 million hectares, involving an estimated 250,000 farmers (CONAB, 2022). These rice farmers have access to various sources of agricultural information, including traditional channels like agricultural extension services, research institutions, and input suppliers (Debastiani, 2021). Additionally, the Brazilian Agricultural Research Corporation (Embrapa) plays a significant role in providing research-based information to farmers (Embrapa, 2022). With the increasing adoption of digital technologies in Brazil's rural areas, farmers are also turning to digital platforms, such as mobile apps, websites, and social media, for timely, accurate, and location-specific information on crop management, pest control, weather forecasts, and market prices, enhancing their ability to make informed decisions and boost productivity (Santos *et al.*, 2022).

Currently, there are an estimated 28,000 hectares of land utilized and divided amongst farmers in the agricultural land fields with intense labour as farmers utilize flooding and furrow irrigation as methods of food production. However, agriculture in Kano is providing farmers with employment and the process require necessary information and knowledge for better implementation strategies geared towards improvement in terms of farming method, marketing and food storage to ensure all year-round food sufficiency.

Statement of the Problem

Agricultural information literacy of farmers is of paramount importance for the growth and development of the agricultural sector. However, despite the richness of Nigeria in variety of subsistence crops such as maize, corn, beans and sorghum, there have substantially been

declined in productivity in recent years leading to frequent famine. This problem has been linked to unrealized agricultural information competencies, which lead to low productivity and a dire food insecurity particularly in Nigeria. There is evidence of a decline in agricultural productivity among rice farmers in Nigeria, Nigeria (Wudil *et al.*, 2020).

Rice farmers in Nigeria face challenges in accessing timely, accurate, and relevant agricultural information, which negatively impacts their productivity (Yunusa *et al.*, 2019). Despite the increasing availability of information sources, such as agricultural extension services, research institutions, input suppliers, and digital platforms, farmers may lack the necessary information literacy skills to effectively utilize these resources (Adebayo *et al.*, 2020). Information literacy encompasses the ability to identify, evaluate, and apply information to solve problems or make decisions, which is crucial for the adoption of innovative agricultural practices and technologies. The limited information literacy among rice farmers in Nigeria, Nigeria, hinders their ability to enhance productivity, manage resources efficiently, and adapt to changing market conditions and environmental challenges (Suleiman *et al.*, 2019).

The efforts by the government to raise the agricultural information literacy level of rice farmers by providing agricultural extension services have not yielded the desired literacy level of the rice farmers as most farmers rely on scarce information they get from listening to agriculture related programs on radio although farmer characteristics playing significant role in underutilization of agricultural information is not known. The persistent reports of low agricultural production (yields) necessitated the need for this study to explore the utilization of agricultural information by rice farmers in Garun- Mallam, Kano State, Nigeria assessing the sources, dissemination channels, challenges, and potential solutions to improve information access and utilization in this critical sector.

Objectives

To explore the utilization of agricultural information by rice farmers in Garun-Mallam, Kano State Nigeria.

Literature Review

Utilization of agricultural information in Nigeria has been the subject of numerous studies and reports over the years. This literature review provides an overview of key findings and insights from research on the use of agricultural information in Garun-Mallam, Kano State Nigeria.

Access to Agricultural Information:

Potential solutions to improve information access and utilization in this critical sector. The target population was 1,301 smallholder rice farmers in Garun-Mallam Local Government Area of Kano State of Nigeria, which was available from registered membership of rice farmers' associations in farming wards obtained from the Kano Agricultural and Rural Development Agency. A multi-stage sampling procedure was used; in the first stage, Garun-Mallam Areas in which the project area is located was purposively selected for the study representing the first stratum. The second stratum of the sampling technique took place at the ward level. Five farming wards were chosen for the study on the basis of their intensity in rice production and large number of registered rice farmers. The third phase of the study component was the sampling of respondents at various ward level in which the actual data collection took place.

The sample size determination was based on Krejcie and Morgan (1970) Sample Size Table for $\pm 5\%$ precision and 95% confidence levels. It stated that when the population is 6,340 at $\pm 5\%$ precisions, 364 should be the sample at a 95% confidence level. Due to the uneven number of Rice Farmers across the wards in each Local Government, sample size was calculated proportionately using Krejcie and Morgan's recommended formula. The sample size of the study therefore comprised 130 respondents. Primary data tools were applied to collect data for this study. A structured questionnaire was designed essentially to collect information that relate to participant's demographic profile such as age, gender, duration and scope of practice, marital status, and educational background. Moreover, the designed questionnaire also used to capture level of utilization agricultural information. The designed questionnaires were distributed to the respondents in their respective places with the aid of the research assistant. The exercise was conducted within 6 weeks, the researcher spent 2 weeks in Garun-Mallam local government area in order to interact fully with the respondents. Data collected through questionnaires were checked and cleaned. The data were also coded and analysed through the use of Statistical Package for Social Sciences (SPSS) software. Descriptive Statistics was used to identify and analyse the level of utilization of agricultural information of the rice farmers.

FINDINGS

The study found that utilisation of sources of agricultural information is essential for rice farmers in Garun-Mallam, Kano State, Nigeria to improve their yields, increase their productivity, and access new markets. Agricultural extension services provide farmers with information on best practices, new technologies, and market opportunities. These services are typically provided by government agencies or non-governmental organizations (NGOs). Farmer organizations, such as cooperatives and associations, can provide farmers with access to shared resources, market information, and training programs. These organizations can also provide a platform for farmers to share their knowledge and experiences. In Garun Mallam Local Government Area, 130 questionnaires were distributed and only 120 representing 92% were returned.

The collected data were analysed and presented in Table 1.

Table 1: Utilisation of Sources of Agricultural Information in Garun Mallam Local Government

<i>Utilisation Category</i>	<i>Number of Respondents Confirming Utilisation of Sources</i>	<i>Percentage</i>
<i>Radio</i>	34	31%
<i>Agricultural extension Agents</i>	18	16%
<i>Books</i>	5	5%
<i>Agricultural show</i>	19	17%
<i>Television</i>	12	11%
<i>Newspapers and magazines</i>	16	5%
<i>The Internet</i>	4	4%
<i>Library</i>	5	5%
<i>Farmer Association</i>	7	6%

The results indicated that the use of radio source is at 31%, agricultural agent 16%, agricultural show 17% and farmer association 6%. Other included television 11%, books 5% library 5% newspaper 5% and internet 4%.

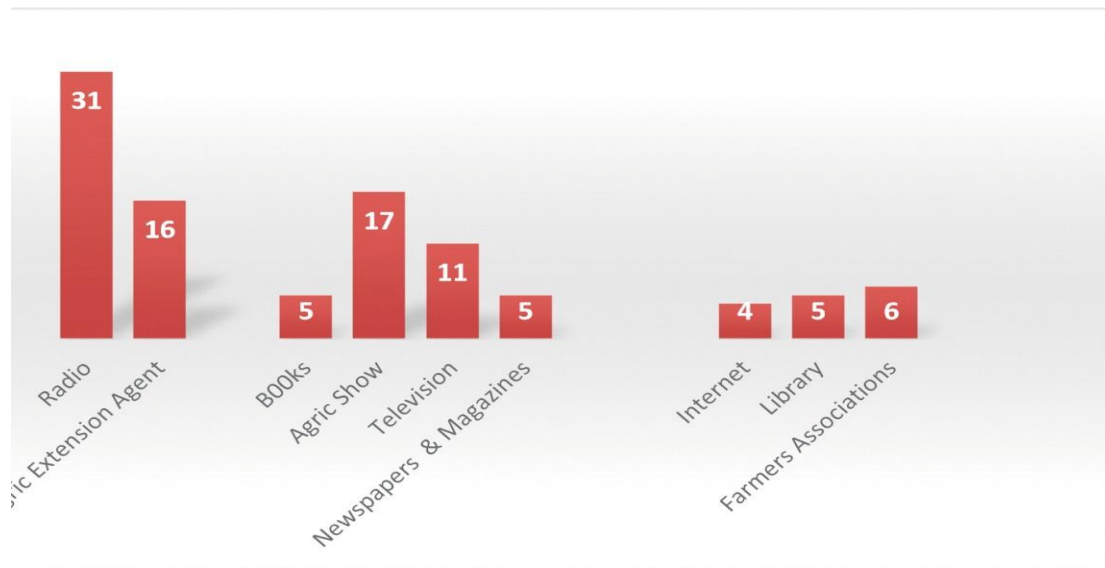


Figure 1: Level of Utilisation of Sources of Agricultural Information in Garun Mallam Local Government

The findings in Figure 1 shows that the use of radio source is at 31%, agricultural agent 16%, agricultural show 17% and farmer association 6%. Other included television 11%, books 5% library 5% newspaper 5% and internet 4%. From the findings, the study established that the respondents were more interested in radio source. This also implies that radio is a widely used and as effective means of communication for disseminating agricultural information to the farming community. Radio has a wide coverage area and can reach remote and rural communities where other forms of media may not be accessible. The high level of access to radio as a source of agricultural information for rice farmers can have positive effects on their productivity, competitiveness, and access to markets. It is thus important to continue to invest in radio programs that provide high-quality agricultural information to farmers and ensure that this information is reaching those who need it most.

Agricultural extension agents are easily accessible by rice farmers in Garun-Mallam, Kano State Nigeria. Access to agricultural extension agent helps farmers learn about new technologies, best practices, and other innovations that can improve their agricultural practices and increase their yields. Agricultural extension agents can provide farmers with information about market demand, prices, and other market related information, which can help farmers make informed decisions about what crop to grow and when to sell them.

However, significant portion of the farming community may be missing out on valuable knowledge and resources that can help them improve their farming practices and increase their yields. Books on agriculture can provide in-depth knowledge on specific topics related to farming practices, such as soil management, pest control, and crop rotation. Without access to these resources, farmers may miss out on valuable information that could improve their farming practices. Additionally, books on agriculture can provide farmers with training on a range of topics, from basic farming practices to more advanced techniques. Without access to these resources, farmers may miss out on opportunities to build their capacity and knowledge, making them less equipped to manage their farms and adapt to new challenges.

Rice farmers in Garun-Mallam, Kano State Nigeria attend agricultural shows and this enables them access relevant agricultural information they need to improve their productivity. Agricultural shows often feature demonstrations of new technologies, tools, and equipment that can help farmers improve their farming practices and increase their yields. The results imply that farmers who attend these agricultural shows are likely to have the opportunity to learn about new technologies and how to use them effectively. Moreover, an agricultural show provides rice farmers with opportunities to network with other farmers, industry experts, and service providers. These connections can lead to valuable collaborations and partnerships that can help farmers improve their farming practices and access new markets.

Access to television as a source of agricultural information may be limited in some areas, it remains an important medium for disseminating agricultural information to farmers in Nigeria. Many television programs are broadcast in local languages, which helps ensure that information is accessible to a wider audience. This is particularly important in Garun-Mallam, Kano State Nigeria, where there are many different ethnic groups and languages spoken. Television is an effective source of agricultural information for the rice farmers who have access to it. Television programs provide information on a wide range of topics related to agriculture, such as weather forecasts, market prices, and new technologies.

The limited utilisation of newspapers and magazines as a source of agricultural information for rice farmers in Nigeria suggests that there is a need to improve the dissemination of information to farmers. This could involve developing new channels for information dissemination, such as digital platforms or radio programs, or improving the distribution of print materials in rural areas. By improving access to information, farmers can be better equipped to make informed decisions and improve their livelihoods. Farmers who do not have access to newspapers and magazines as a source of agricultural information are likely to miss out on important news and developments in the sector, such as changes in government policies, new research findings, and innovations in farming practices.

Similarly, limited utilisation of internet as a source of agricultural information among rice farmers in Garun-Mallam, Kano State Nigeria. The limited access to the internet as a source of agricultural information for rice farmers in Nigeria suggests that there is a need to improve internet infrastructure in rural areas and provide more affordable and accessible internet services to farmers. This could involve developing new programs and initiatives to provide digital training and support to farmers, as well as promoting the use of digital platforms for information dissemination in the agricultural sector. By improving access to the internet, farmers can be better equipped to make informed decisions and improve their livelihoods.

In addition, the farmers were asked to indicate whether they had access to Library and Information Centre as a Source of Agricultural Information or not. Rice farmers in Garun-Mallam, Kano State Nigeria have limited utilisation of books as a source of agricultural information suggests that there may be limited access to libraries and information centres. Libraries and information centres are important sources of agricultural information, providing access to books, journals, reports, and other resources related to agriculture. However, if farmers do not have access to books, it is possible that they also have limited access to libraries and information centres. This limits their ability to access the latest research findings, best practices, and other important information related to agriculture.

It is worth noting that the lack of access to books may be due to a range of factors, including limited availability of books in local languages, high cost of books, and limited access to libraries and information centres. Addressing these issues could help to improve access to books as a source of agricultural information, as well as access to libraries and information centres

more broadly. Additionally, a large majority of the farmers may not be benefitting from the information and knowledge-sharing that takes place within such associations. Farmers associations can provide a range of services to their members, including access to information and resources related to agriculture, such as new farming techniques, market information, and government policies affecting agriculture. By not having access to farmers' associations as a source of agricultural information, rice farmers in Garun-Mallam, Kano State Nigeria may be missing out on important opportunities to improve their farming practices, increase their yields, and connect with other farmers and agricultural experts. This could result in lower productivity and incomes, as well as a reduced ability to adapt to changing market and environmental conditions.

The findings show support to the findings of similar studies conducted, it should be noted that rice farmers in most developing nations, including Tanzania, have access to radio source (Daniel 2013; CUTS International 2011). Radio stations have the capacity to reach a greater number of people at a given moment because broadcasting is made possible by satellites and antennas (Wahab, 2015). Furthermore, the transition from analogue to digital radio transmissions has increased the accessibility and reachability of radio frequencies (Wahab, 2015). Radio has remained a convenient and healthy means of educating a sizable portion of her population, notably the nomadic element.

Similarly, agricultural extension agents also received the attention of the respondents with 84.3% rate of accessibility. The result corroborates with Ali, Hamad, Abdallah, and Elagab (2020) who investigated the function of extension officers in providing agricultural services to small-scale farmers in Gezira State, Sudan. The study used a field survey and structured questionnaires to collect data from 36 extension officers chosen using a quota sampling technique. For data analysis, the Statistical Package for Social Sciences (SPSS) was utilised, which relies on descriptive statistics, correlation, and regression analysis. 81 percent of respondents had good direct contacts with farmers.

Conclusion

The utilization of agricultural information is essential for enhancing rice production in Garun - Mallam. By addressing challenges and promoting effective dissemination channels, stakeholders can empower rice farmers with the knowledge and resources needed to improve their yields, livelihoods, and contribute to national food security. Collaboration among government agencies, agricultural organizations, and the private sector is crucial to achieving these objectives and ensuring a sustainable future for rice farming in Garun-Mallam, Kano State Nigeria.

Recommendation

The government and other stakeholders should use a participatory approach in involving rice farmers in Nigeria. A participatory approach involves working with rice farmers to identify their information needs, as well as developing and implementing solutions that are tailored to their needs. This approach can help ensure that the information provided is relevant, appropriate, and useful for the farmers. Additionally, there is need for the government and extension officers to consider the local context when assessing the information needs of rice farmers in Garun-Mallam Local Government Area. This involves understanding the local agricultural practices, the socio-economic conditions of the farmers, and the available communication channels for delivering information.

Rice farmers in Garun-Mallam should adopt a variety of information sources. A variety of information sources should be considered when assessing the information needs of rice

farmers; these sources should include agricultural extension services, research institutions, agro-input suppliers, local radio, and other media outlets. This approach ensures that farmers have access to a range of information sources and can select the most appropriate for their specific needs. It is essential to monitor and evaluate the process of assessing the information needs of rice farmers. This helps to identify any gaps in the process and to make improvements for future assessments. Evaluation can also help to measure the impact of the information provided on the farmers' productivity and livelihoods. Rice farmers in Garun-Mallam, Kano State should be trained and educated on the various sources of agricultural information available to them. This should include information on the internet, agricultural extension services, mobile applications, and other sources. Farmers should be trained on how to access and effectively use these sources to improve their farming practices.

The government should increase investment in research and development. Investment in research and development in the agricultural sector should be increased to identify and develop new farming technologies and practices that can improve the productivity of rice farmers in Garun-Mallam. Also, policies should be developed and implemented to promote sustainable agriculture practices that protect the environment and natural resources. Efforts should be made to increase the access of rice farmers in Garun-Mallam, Kano State, Nigeria to local and international markets. This will help to improve their income and incentivize them to increase their productivity. Moreover, policies should be monitored and evaluated to ensure their effectiveness in improving farmer information literacy and agricultural productivity performance, this will help to identify areas for improvement and refine policies to achieve the desired impact.

References

- Adebayo, O. O., Shehu, H., & Idris, N. A. (2020). Assessment of rice farmers' access to agricultural information in Kano State, Nigeria. *Journal of Agricultural Extension*, 24(1), 87-98.
- Adio, E. O., Abu, Y., Yusuf, S. K., & Nansoh, S. (2016). Use of agricultural information sources and services by farmers for improve productivity in Kwara State. *Library Philosophy and Practice (e-journal)*, 1456.
- Aina, L. O. (2007). Globalisation and small-scale farming in Africa: What role for information centres. In *World Library and Information congress: 73rd IFLA general conference and council* (pp. 1-8).
- Aina, L. O. and Dulle, F. W. (1999). The information needs of small scale dairy farmers in Tanzania.
- International Association of Agricultural Information Specialists (IAALD) Quarterly Bulletin 44(3-4): 173-176
- Ajuwon, G. A., & Odeku, E. L. (2018). Module One Information Sources Ibadan. *African Journals*, 5(1), 87-93
- Ali, A., Adekola, A. A., Awoyemi, O. A., & Onumah, E. E. (2020). Effects of seed selection and management practices on rice productivity in Nigeria. *Journal of Agribusiness in Developing and Emerging Economies*, 10(2), 189-204.

- Ali, J., Ishaq, M., Shahzad, M. A., & Khan, A. A. (2019). *Factors affecting the use of information sources by rice farmers in Punjab, Pakistan*. *Information Development*, 35(3), 452-458.
- FRI. (2020). Farm Radio International. Retrieved <https://www.farmradio.org/> from Kiplang'at, J. (2019). An analysis of the opportunities for information technology in improving access, transfer and the use of agricultural information in the rural areas of Kenya. *Library Management*, 20(2), 63–75
- Kountios, G., Konstantinidis, C., & Antoniadis, I. (2023). Can the Adoption of ICT and Advisory Services Be Considered as a Tool of Competitive Advantage in Agricultural Holdings? A Literature Review. *Agronomy*, 13(2), 530.
- Mugwisi, T., Ocholla, D., & Mostert, J. (2016). Is indigenous knowledge accessed and used by agricultural researchers and extension workers in Zimbabwe? *Innovation: journal of appropriate librarianship and information work in Southern Africa*, 2012(44), 101-125.
- Ochieng, J., Kirimi, L., & Mathenge, M. (2020). *Effects of climate-smart agricultural practices on household welfare of smallholder farmers in Kenya*. *Climate and Development*, 12(5), 471-482.
- Osokoya, A. A., Alabi, A. O., & Fagbola, B. O. (2014). *Farmers information literacy and awareness towards agricultural produce and food security: FADAMA III programs in Osun state Nigeria*
- Oxford Advanced Learner's Dictionary. (2nd-9th ed.). (1963-2015). Oxford: Oxford University Press.
- Patil, A., Lunge, H., & Kulkarni, R. (2020). AgriApp: A mobile application for agricultural information sharing. *International Journal of Computer Applications*, 174(1), 23-29.
- Riaz, M. (2010). The role of the private sector in agricultural extension in Pakistan. *Rural Development News*, 1(2010), 15-22.
- Santos, D., Peres, F., Campos, M., Ribeiro, M. L., & Oliveira, A. (2020). The use of digital technologies by farmers in Brazil. In *ICT adoption and application in the Brazilian agroindustry* (pp. 1-14). Springer, Cham.
- Sokoya, A. A., Alabi, A. O. & Fagbola, B. O. (2014). Farmers' information literacy and awareness towards agricultural produce and food security: FADAMA III programs in Osun state, Nigeria. *Paper presented at IFLA Conference in Lyon, July 21 – 25, 2014*.
- Suleiman, R. A., Ibrahim, H., & Bashir, M. (2019). Agricultural extension needs of rice farmers in Kano State, Nigeria. *Journal of Agricultural Extension*, 23(3), 132-144.
- Tanti, P. C., Jena, P. R., & Aryal, J. P. (2022). Role of institutional factors in climate smart technology adoption in agriculture: Evidence from an Eastern Indian state. *Environmental Challenges*, 7, 100498.

- Thapa, G. B., & Joshi, G.R. (2019). Socioeconomic factors influencing the adoption of modern rice varieties in Nepal. *Journal of Crop Improvement*, 33(4), 505-522.
- Wudil, A. H., Ali, A., Aderinoye-Abdulwahab, S., Raza, H. A., Mehmood, H. Z., & Sannoh, A. B. (2023). Determinants of food security in Nigeria: Empirical evidence from beneficiaries and nonbeneficiaries rice farmers of the Kano River Irrigation Project. *Frontiers in Sustainable Food Systems*, 7, 999932.
- Wudil, A. H., Ali, A., Hassan, S., & Mushtaq, K. (2021). Exploratory factor analysis of the perceived constraints affecting rice farmers of kano river irrigation (KRIP) kano state, Nigeria. *International Journal of Agricultural Extension*, 9(3), 485-492.
- Yunusa, M., Lawan, M. K., & Sanni, S. (2019). Access and use of information and communication technology (ICT) among extension agents and farmers in Kano State, Nigeria. *Journal of Agricultural Extension*, 23(1), 154-168.

**INFLUENCE OF SOCIAL MEDIA ON DRUG ABUSE AMONG YOUTHS IN
ANDONI LOCAL GOVERNMENT AREA OF RIVERS STATE**

By

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Abstract

This study on the prevalence and causes of drug abuse among young people in Andoni Local Government Area, Rivers State, was motivated by the increasing uncontrollability of the use of illicit drugs, alcoholism, and other controlled drugs, as well as their manifestations in crime, moral decay, health issues, poor academic interest, and a busy social life. The study used a descriptive, cross-sectional research design. The required data was collected using a structured questionnaire, with a sample size of 440 and a multistage sampling method. The findings revealed a connection between teenage drug usage and social media use in Rivers State's Andoni L.G.A. The findings indicated that social media had a 75 (29.5%) percent positive impact on the prevalence of drug abuse, and that juveniles' high drug abuse prevalence was associated with social media's 51 (33.3%) percent negative impact. The study's findings concluded that there is a link between social media and the high rate of drug usage among young people in Rivers State's Andoni L.G.A.

Keyword: social media, drug abuse, youths, Andoni Local Government, Rivers State

Introduction

The consumption of psychoactive substances is an age-long phenomenon. In all known history and culture, psychoactive substances like alcohol and kola nuts, among others, have been in use for several reasons: energizers, elevation of mood, reduction of hunger, stress, and anxiety (James *et al.*, 2019). Drug abuse, also known as substance abuse, is a pattern of drug use in

which the user consumes drugs in amounts or methods that are harmful to themselves or others. It is a form of substance-related disorder, as it contributes to a major public health and social problem worldwide (Shubi *et al.*, 2016). According to Manyika *et al.*, (2019), alcohol, marijuana, analgesics, tobacco, caffeine, codeine, and glue, among others, remain the most commonly used. These substances are used for medicinal, social, experimental, and religious reasons. Drug abuse may be defined as the arbitrary over dependence or misuse of one particular drug with or without a prior medical diagnosis from qualified health practitioner (Lakhanpal & Agnihotri, 2017). According to Asuka (2017), drug abuse is the harmful use of mind-altering drugs. It added that the term usually refers to problems with illegal drugs, which also include the harmful use of legal prescription drugs, such as in self-medication. According to Olushola (2019), Nigeria has a serious substance abuse problem. These psychoactive compounds (drugs) that have the potential to cause health and social problems, including substance use disorder (SUD), are categorised into three categories: alcohol, illicit drugs (including cannabis, heroin, and opioids), prescription drugs used for non-medical purposes, and over-the-counter drugs (OTC's).

The crude prevalence of harmful use of alcohol in Nigeria, as reported by Adeloje *et al.* (2019), has been shown to have many negative consequences for the wellbeing of its users. Several studies conducted in Nigeria have shown that drug abuse among Nigerian youth is associated with poor academic performance of students in Nigeria (Akanbi *et al.*, 2015), low self-esteem (Okafor, 2019), crimes (Ayodele *et al.*, 2018), chronic health conditions (UNODC, 2018), loss of potential manpower, low productivity, and the creation of an unfavourable environment for investors, which of course will affect gross national income as well as internally generated revenue. (Kawugana & Faruna, 2018). According to the United Nations Drug Control Programme (2010), there is an increasing menace of drug abuse prevalence. An estimate of 142-272 million people, which is 3.3%–6.0% of the world population annually, between the ages of 15 and 64, abuse drugs and substances, while a huge proportion (45%) are composed of students in colleges and universities. It was further reported that 2.5 million people die each year from drug and substance-related complications, and 30% of the cases are students from tertiary institutions.

Age is a factor that determines the abuse of drugs among students. Younger students or undergraduates who are faced with developmental tasks have a greater likelihood of using one or more illicit substances. Kiriru (2018) opined that alcohol and drug abuse were infiltrated into society, where youth and young adults are the potential risk groups. The United Nations Office on Drugs and Crime (2012) reported that drug abusers are between the ages of 16 and 28, with over 60% residing in urban areas and 21% living in rural areas in Kenya. According to several reports from the National Drug Law Enforcement Agency (2017), an increase in the use of drugs, especially illicit substances, was seen among youths, and suspected cases of drug trafficking were arrested in Lafia metropolis with 3,683kg of hard drugs, including 804.22kg of cannabis, 2,873.8kg of tramadol, 5.3g of cocaine, and 57.2 l of codeine syrup.

The prevalence of drug abuse varies by gender. The number of reported cases of drug abuse seems to be high among males as compared with female undergraduates in tertiary schools. Studies by Jaguany *et al.*, (2008) found that 41.5% of boys utilised alcohol, 39% smoked tobacco, and 28.7% used cannabis, while only 4.3% of girls reported the use of alcohol with a mean age of 20.57 years (17–26 years). WHO (2010) defined drug abuse as the harmful and/or hazardous use of psychoactive substances, including alcohol and illicit drugs. The World

Drug Report (2007) revealed that 21.5% of cases of drug abuse in Ghana aged 15–64 smoked marijuana, with males significantly higher than females.

Also, it was reported in a similar study by Chester (2016) that 62% of male students utilise illicit drugs and 38% of female students use any form of illicit substance. Bolakale & Marques (2015) added that male undergraduates used 10 different illicit drugs, whereas female counterparts abuse alcohol mostly; 74.2% use tobacco between the ages of 11 and 12, which was strongly significant ($df = 5$, $X^2 = 21.07$, $P = 0.001$). The studies also revealed that 19.4% started using sedatives at the age of 11–12 years, 31.8% use sedatives between the ages of 13–14 years, and 1.4% use cocaine for men only. Drug abuse is likely to be higher in male students than female students. Evidence showed a significant difference between male and female students regarding drug abuse, as observed among students in tertiary institutions (Adeoti, 2010). Drug misuse is becoming a major problem for worldwide public health. According to the United Nations Office of Drugs and Crime (UNODC, 2019), 271 million (5.5%) people worldwide (aged 15 to 64) reported using drugs in the preceding year. Additionally, it has been estimated that 35 million people will suffer from drug use disorders.

Most youth develop drug abuse habits from their parents. Students whose parents utilise any form of psychoactive substance, such as tobacco or alcohol, among others, have the likelihood of being victims of drug abuse. Sometimes, parents send children to buy cigarettes, beer, dry gin, Brandywine, etc. and drink in front of the child. Such a student or child will not see the use of those substances as anything dangerous to them. Studies by Adeoti (2010) found a strong and significant influence on the use of illicit drugs based on family setting ($P < 0.05$). In regard to this, students from separated families are prone to vices in society because of a lack of parental care and monitoring. Hence, the issues of poor parental guidance have contributed to social problems in society. Most individuals, especially younger adults, begin to head their families and involve themselves in taking wrong decisions that affect their future. For instance, some parents let their male child know that he is a man and can make his own decisions. To buttress this, studies by Mohasosa and Mokoena (2017) indicated undergraduates from single parents do not have enough moral support; thereby, evidence showed a significant positive difference in how male and female students regard drug abuse, as observed among students in tertiary institutions. Factors contribute to drug abuse among young people. Studies illustrated that 172 (59%) of siblings engage in drug abuse and 28% of fathers abuse drugs; also, 47% of family members are drug abusers as compared with 53% of non-abusers of drugs (Chester, 2016). Similar studies indicated that 99% of undergraduates who stay with their parents use drugs, and about 25% of those who live with their parents' smoke cigarettes; a significant association was observed between the use of alcohol and cigarettes and household structure (George, 2015). According to George (2015), 5.0% of parents introduce illicit drugs to their siblings due to a 14.5% lack of parental guidance in recent times. Therefore, parental factors may likely predict the abuse of drugs among individuals, especially undergraduates in Nigeria.

Friends as well as peer influence contribute to the menace of drug abuse, especially among young adults in tertiary institutions. Youths who keep more friends may likely use substances improperly as compared with those who are careful with their peers. Studies by George (2015) reported that 34.7% of drug abusers said that their friends introduced it to them. Most undergraduates are lured by friends to take substances in order to maintain their friendship, which gradually leads to addiction. Chester (2016) added that 35% of their best friends engage in drug use, most of whom copied the same from their trusted peers. Friends may likely be the commonest source of drug introduction among undergraduates. Studies by Jagnany *et al.*, (2008) reported that 10.5% of drug abusers were introduced by friends in the hostel to

substances such as cannabis, alcohol, tobacco, and cocaine, among others. Also, further studies by Al- Alawi and Shikh (2018) revealed that 28% take illicit drugs with friends and 55% take them alone that were introduced by their friends. Exposure to friends who abuse drugs could serve as a social risk of abusing drugs among students. Several studies indicated that undergraduates who are likely to be drunkards and smokers may have at least one friend who smokes and consumes alcohol (AlAlawi *et al.*, 2018). Peer influence plays a significant role in drug abuse habits, as seen among young adults (Foo *et al.*, 2015).

Drug use and abuse are the primary reasons why many youths have been incarcerated, as well as being a source of youth restiveness, health problems in our society, and the high crime rate and visits today, despite the activities of the National Drug Law Enforcement Agency (NDLEA). According to Oshikoya (2019), drug abuse is a global health and social problem that varies locally. Its use among Nigerian youths has become a subject of public concern worldwide, partly because of its potential to contribute to unintentional and intentional injuries, crime involvement, demotivation, cognitive values, and sexual defaulting.

Statement of the Problem

The quest to exist without solving problems of life seems unending, with the trend of youth involvement in the proliferation of crime, cultist activities, cognitive disabilities, dethronement of morals into murky waters, family destabilisation, poor academic interest and performances, and mental diseases ranging from manageable bearable situations to unbearable situations. Nevertheless, drug abuse—not only the use of illicit drugs but prescription drugs and over-the-counter drugs—has posed a great threat to the future generation as well as degenerating health conditions following social and experimental exhibitions and peer pressure groups. Capacity change and interference with health and productive life via the intake of drugs prohibited by law, harmful effects, or having taken drugs beyond the prescription of a qualified physician as examined pose a great threat to our unseen future.

Therefore, the study investigates the relationship between social media and drug abuse among youths in the Andoni Local Government Area of Rivers State.

Objective of the Study

The objective of the study was to investigate the relationship between social media and drug abuse among youths in Andoni Local Government Area of Rivers State. In specific terms, the following objective guided the study to;

1. Investigate the relationship between social media and drug abuse among youths in Andoni Local Government Area of Rivers State.

Research Questions

The following research question guided the study.

1. What is the relationship between social media and drug abuse among youths in Andoni Local Government Area of Rivers State?

Methodology

Descriptive cross-sectional research design was used for the study. The population of this study comprised of all youth in Andoni Local Government Area of Rivers State. According to National Population Commission (2022) there are about 152,214 youths in Andoni Local Government Area. The sample size for this study was 440 youths in Andoni Local Government Area. The sample size of the study was estimated using Taro Yamene method for finite population.

Formula: $S = N$

$1 + N(e)^2$

N = total number of population from each selected local government area. n = sample size

e = level of significance (0.05)

Adding 10% non-compliance, the sample size is 440

A multistage sampling procedure was adopted for the study.

Stage 1: Stratified random sampling was used to divide Andoni Local Government Area into 11 political wards.

Stage 2: cluster random sampling of the 11 political wards into 6 groups.

Stage 3: proportionate stratified sampling was carried out to select the number of respondents from the groups.

The instrument used for obtaining data for the study was a structured questionnaire. The instrument was validated. Split-half method was used to determine the degree of internal consistency of the instrument. Data was coded and analyzed using statistical product and service solution (SPSS) version 25.0. Statistical tools such as percentage, and mean, were used for the research questions.

Results

This chapter focused on the statistical data analysis and summary of major findings of the study.

Research Question 1: What is the relationship between social media and drug abuse among youths in Andoni L.G.A of Rivers State?

Table 1: showing frequency and percentage distribution of the relationship between

Social media	Prevalence of drug abuse		Total
	Low F (%)	High F (%)	
Negative impact	102(66.7)	51(33.3)	153(100)
Positive impact	179(70.5)	75(29.5)	254(100)
Total	281(69.0)	126(31.0)	407(100)

Decision guide: Likert's 2.5 (50%) and above high while below 2.5 (50%) is low.

Table 2 reveals the relationship between social media and drug abuse among youths in Andoni L.G.A. of Rivers State. The result showed that the positive impact of social media on the prevalence of drug abuse was 75 (29.5%), and the high prevalence of drug abuse was seen to be related to the negative impact of social media 51 (33.3%) on youths. Thus, this result showed that there is a relationship between social media and high drug abuse among the youths of Andoni L.G.A. in Rivers State.

Discussion of findings

The findings of the study were discussed below:

The result revealed that there was no significant (X^2 value = 0.647, df = 1, $P > 0.05$) relationship between social media and drug abuse among youths. The result further indicated that there was a relationship between the high prevalence of drug abuse and older youths of 25–29 years (42, 33.1%), male gender (45, 34.4%), high peer pressure (91, 39.1%), good type of parenthood (88, 32.2%), self-employed youths (30, 40.0%), and the negative influence of social media (51, 33.3%) among the youths. The finding of this study is similar to that of Adeoti (2010), whose study on factors influencing substance abuse among students in Osun State

revealed that societal factors, including social media use, accounted for the mean score of 13.90, far higher than the criterion-referenced mean (2.50), depicting that they are enticed by median advertisements. This similarity could be due to the homogeneity of the study population.

Conclusion

The study delved into the intricate relationship between social media usage and drug abuse among youths in the Andoni Local Government Area of Rivers State. The findings revealed a nuanced scenario. A notable portion of respondents, accounting for 29.5%, reported a positive impact of social media on their drug abuse habits. Conversely, a slightly higher percentage, comprising 33.3% of respondents, attributed their high prevalence of drug abuse to the negative influence of social media. These results provide significant insights into the complex interplay between social media engagement and drug abuse tendencies among the youth demographic in Andoni L.G.A. of Rivers State. It is evident that social media platforms play a pivotal role in shaping the behaviours and choices of young individuals in relation to substance abuse. This underscores the need for targeted awareness campaigns and interventions to promote responsible social media usage and counteract its potential negative influences on drug abuse behaviours.

Recommendations

The following recommendations were put forward based on the findings of the study:

- i. In order to maintain rationality in what is consumed on social media, there should be regulations regarding what should be shared.
- ii. Regular awareness of social media usage and its effects is necessary, especially when false information is spread via these channels.
- iii. Against the inappropriate use of social media by teenagers and younger adults, there should be a strong government, parental, and religious involvement.

References

- Adeloye D., Adebunke O. I, Asa A., Dewan, M. T., Omoyele, C., Ezeigwe (2019): Epidemiology of harmful use of Alcohol in Nigeria: a systemic review and meta-analysis. <https://doi.10.1080/00952990.2019.1628244>. *AMJ Drug Alcohol Abuse*. 2019;45(5)438-450
- Adeoti, Y. E. (2010). Factors influencing substance abuse among undergraduate students in Osun State. *African Research Review*, 4(4), 330-340.
- Akanbi, M. I., Godwin, A., Ajibola, A. S., (2015): Impact of substance abuse on academic performance among adolescent students of college of education in Kwara State, Nigeria. <https://www.semanticscholars.org>
- Al-Alawi, A. S. N. & Shaikh, J. (2018). Prevalence of substance abuse among the school students in Al-Dhabirah Governorate, Sultanate of Oman. *Madriage Journal of Nursing*, 3(1), 118-123. <http://doi.org:10.18689>.
- Asuka, G. (2017). *Fundamentals of pharmacology and drug management*. Pg 42 -45
- Ayodele, J., Habib, A. K., Babatunde (2018). Crime and adolescent drug use in Lagos State, Nigeria. <https://doi/10.15406/sij.2018.02.00034>

- Bolakale, A. S. &Markes, B. Y. (2015). Factors influencing drug use and abuse among undergraduate students of a tertiary institution in Nigeria. *International Journal of science and research*, 6(8), 388-397. <https://doi:10.14738/assrj.55.4357>.
- Chester, N. K. (2016). *Factors influencing drug abuse among students in public secondary schools: A case of Sirende Ward, Trans Nzola country, Kenya*. University of Nairobi Press.
- Foo, Y., Tam, C. & Lee, T. (2018). Family factors and peers influence in drug abuse. A study in rehabilitation centre. *International Journal of Collaborative Research on Internal Medicine and Public Health*, 3(4), 1150–1158.
<http://iomcworld.com/ijcrimph/ijcrimph-v04-n03-03.htm>
- George, K. (2015). *Drugs and alcohol can hijack your brain*.
<https://newsinhealth.nih.gov/biolo>
- George, A. (2015). Determinants of substance abuse among senior secondary students in Main local government, Lagos State, Nigeria. *Global Journal of Medicine and Public Health*, 4(5), 2277-9674.
- Jagnany, V. K., Murarka, S., Haider, S., Kashyap, V., Jagnany, A. K., Singh, S. B. & Lai, P. K. (2008). Pattern of substance abuse among the undergraduate student in a medical college hostel. *Health and Population Perspectives and Issues*, 3(3), 212-9.
<https://doi.org/10.4103/0971-5916.178617>
- James, B. O. (2019) Drug treatment presentation at a treatment center in southern Nigeria. *NPMJ*, 26, 211-215.
- Kawugana, A., Farina F. S., (2019). Effects of drugs on the Nigerian Economy. *Int J. Imo. Psychology and social Development*, 6(4), 31-38. <http://seahipaj.org>
- Kiriru, A. (2018). Effect of awareness on substance abuse among university students in a selected private university in Kenya. *African Research Journal of Education and Social Sciences*, 5(2), 27-37.
- Lakhanpal, P. Agnihotri, A. K. (2007). *Drug abuse and mental health*.
<https://thehealthcity.online.com>blog>
- Mahososa, I. & Moroena, S. (2017). Factors contributing to substance (drug) abuse among male, adolescents in South African public secondary schools. *International journal of social sciences and humanity studies*, 9(1), 108-111. <https://doi.org/1309-8063>.
- National Drug Law Enforcement Agency (2017): Annual report on drug use.
<https.ndlea.gov.org>files2017>.
- NDLEA (2019). *Drug abuse: NDLEA fakes campaign to motor parts*. *The punch newspaper*.
- Okafor, I. P, (2019). Causes and Consequences of Drug Abuse Among Youth in Kwara State, Nigeria. <https://doi.org/10.29173/cjfy29495>

- Olushola, O. (2019). Epidemic of substance abuse among Nigerian youths; A threat to our future, Lagos State University. <https://www.researchgate.net>3362>
- Oshikoya, K. A., Alli, A. (2019). Perceptions of drug abuse among Nigerian undergraduates, 2/16/23; <https://www.researchgate.net>2380>
- Shubi, J., Baderia, V. K., Agrawal, Y. K., Shanghi, S. K. (2019). *Fluorescence detection and identification of eight sulphonamides using capillary electrolysis on the released excipients in lake waters*. <https://doi.org/10.1016/j.arabjc.2014/0:039>
- United Nations Office for Drug and Crime (2010). Global developments in illicit drug production, trafficking and consumption. <https://www.unodc.org>WDR-2010>
- United Nations Office for Drug and Crime (2018). *Drug use in Nigeria, drug dependence and severity of dependence among drug users*. Chp4:36;<https://www.unodc.org>drugs>
- United Nations office on Drug and Crime (2012). *Characteristics, patterns and driving factors in world drug report*. <http://www.org//documents/dataanalysis/WDR-2012>.
- WHO (2019). Health topic: substance abuse: Privacy legal notice. www.who.int/topics/substance-abuse.
- World Drug Report (2007). *Drug and alcohol, possible method to better assess and monitor the role played by organized crime in transnational trafficking*. drugandalcohol.ie
- World Drug Report (2018). *Drug use in Nigeria. Federal Ministry of Health, Abuja, Nigeria*. Www.ncjs.gov/.ondcppuds/.

**INFORMATION LITERACY SKILLS AS A FACTOR INFLUENCING USE OF
ELECTRONIC INFORMATION RESOURCES BY UNDERGRADUATE
STUDENTS IN SELECTED FEDERAL UNIVERSITY LIBRARIES,
NORTH-WEST, NIGERIA
BY**

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Abstract

The study evaluated the influence of information literacy skills on the use of electronic information resources by undergraduate students in selected federal university libraries, North-West, Nigeria. Survey research design was adopted for the study. The population was 4,189 undergraduates of federal universities in North-West Nigeria. A sample size of 838 students was determined using Wimmer and Dominick's formula. Multistage sampling technique was used to select the respondents. Data were collected with a validated questionnaire. The Cronbach's alpha reliability coefficients for the constructs ranged from 0.79 to 0.92. A response rate of 76.4% was recorded. Data were analyzed using descriptive statistics. A self-structured questionnaire was used to elicit required information from the respondents. Data collected for this study was coded and analyzed through the use of SPSSV.21. The findings revealed that the revealed a generally high level of information literacy skills with weighted mean score of 2.92 on the scale of 4 points, the study concluded that information literacy skills are major predictors of use of electronic information resources by undergraduate students in selected federal university libraries, North-West, Nigeria. This study recommended that, student should be encouraged to sharpen their information literacy skills by putting it into more use.

Keywords: *information literacy skills, use of electronic information Resources, Undergraduates, University Library*

Introduction

Electronic information resources are needed for undergraduate students especially because they make information available, easier and provide faster access to information than information accessible via printed media (Ukachi, 2011). They serve as motivators for learners, as they give them the opportunity to deliver, obtain, transfer and circulate information resources on any topic of interest. EIRs, help to develop access, increase user ability and efficiency, and create new ways for students to use the available information in the university library. EIRs give users reliable information, and right information for the right user. In addition, the use of EIRs helps students to be well-informed and up-to-date in their respective thematic areas, unlike print information resources that are not updated regularly (Fabunmi, Paris & Fabunmi, 2016). EIRs have many advantages over printed materials because they can be accessed anytime, anywhere and they do not occupy much space like

printed materials. As Varghese (2008) asserted, the availability of information in electronic media has created opportunities for global access to information, enhanced the speed of service, increased the number of users served, increased the quality of information provided, and offered new opportunities for undergraduate students to find relevant information. Undergraduates are able to access current international literature as soon as it is published on the Internet from the libraries, student information technology (IT) centers, internet cafes, work places and their homes. It is therefore important that university students be equipped with their search tools necessary to access EIRs. Moreover, Yalman, Basaran and Gonen (2016) averred that knowledge of EIRs and related skills plays an important role in today's educational activities. Therefore, every undergraduate should possess these skills in order to be able to participate effectively and successfully as they make use of EIRs in university libraries. Use of EIRs in this new global economy implies that as information continues to grow exponentially, universities cannot remain mere avenues for the transmission of prescribed set of information from teacher to student over a fixed period of time but must promote learning as knowledge in more dynamic ways. The world is currently living in an information society where there is exponential growth in information accessible through Information and Communication Technology (ICT) especially the Internet which helps undergraduate students to use EIRs effectively. As a result, the use of electronic EIRs by undergraduate students in universities has become indispensable in this digital age where globalization of education is made possible through ICT. This development has given rise to global, current and up-to-date information with the advent of these technologies which aid the transmission of information through EIRs. Tofi (2019) averred that the use of EIRs and technological change have created a new global economy that is powered by technology, fueled by information and driven by knowledge.

Use of EIRs affords researchers and undergraduate students the opportunity to have access to global information resources, especially the Internet for their scholarly work. Undergraduate students in university libraries make use of EIRs for many purposes mostly for academic purposes that is, retrieving current literature for studies and preparing for examinations, doing class assignments, carrying out research projects, and communicating and collaborating with peers and teachers via the Internet on e-mail or by following blog discussions (Adeniran, 2013). Undergraduate students use e-books and e-journal articles to acquire knowledge and carry out research work (Ajayi, Shorunke & Aboyade, 2014). Course materials are provided on CD-ROM for students' use which helps them to use EIR at their convenient time. With the emergence of ICT, EIRs have become widely used and accepted among scholars and have increased tremendously in volume around the globe (Oyedapo & Ojo, 2013). All these resources have really improved the quality of education as this is evident in the literature. However, literature has revealed low usage of EIRs by undergraduates in Nigeria (Omoike, 2013).

Use of EIRs have become necessary in the academic environment (Ku, 2008). They serve as motivating factors to users as they provide them with opportunities to share, acquire, transfer and disseminate information on any subject of concern. Electronic information resources provision makes it possible for users to access new tools and applications for information seeking and retrieval. E-resources have become invaluable research tools that complement the print collection in the traditional library setting. These resources serve as veritable sources of information which students could tap in to aid their class assignments, write research and term papers, and search for information on their subject areas among other things. The manual system of searching for information resources does not permit multiple

access and usage of the same information resources by different user sun like on line services. It is worthy of note that,EIRs are of great importance to the academic and research needs of undergraduate students in university libraries since they are available in various formats (Fabunmi, Paris & Fabunmi, 2016).

In the same vain, due to the several advantages of EIRs such as their timeliness, search facilities, remote access and up-datedness, they have become more indispensable after the arrival of the Internet in the academic environment. The provision of EIRs in tertiary institutions of learning is a new way of gaining quick access to a great number of research information globally (Aina, Okunnu, & Dapo-Asaju, 2014). As a result of the potential benefits offered, they have been embraced by university libraries. Undergraduates, would benefit from the EIRs if they are well harnessed as they will provide excellent opportunities to access scholarly information which are beyond there acho flibraries due to geographical barriers and limited finances.

Ekenna and Ukapho (2016) noted that EIRs were very well accepted in other countries of the world, as against the situation in Nigeria. It is in evitable to conclude that perhaps the poor use of EIRs could be due to lack of or in adequate information literacy skills or poor computer self-efficacy. Studies have also shown that factors such as information literacy skills or computer self-efficacy are the determining factors that may influence users' ability to use EIRs (Prangya & Rabindra, 2017). Therefore, underutilization of electronic information resources could be attributed to the lack of information literacyskills which limits the ability to effectively locate and make ethical use of needed information or reduce computer self-efficacy which could hinder the zeal for making use of electronic information resources in the university library.

In the same vein, various studies have been carried out on the use of EIRs by different categories of users. Surveyed users include students, lecturers, researchers, expects of various profession and scientists. While some researchers claim that there are more studies that have reported high usage of electronic information resources, others have argued that the opposite is the case. Romanove and Aarnio (2016) have argued that there is low usage of EIRs on studies that have been undertaken mainly in Northern Nigerian. They have explained that factors that have led to the low usage of EIRs include lack of adequate ICT infrastructure, unaffordable online access and poor ICT skills of librarians to adequately serve their clients. Despite these differences between the two groups of researchers, most of them agree that online data bases have not been equally patronized by students due to lack of awareness of the available EIRs, lack of time to access them and the use of passwords (Ani, 2015).

Use EIRs can be measured using indicators provided by the unified theory of acceptance and use of technology (Venkatesh, Morris, Davis, & Davis 2003). This has four key indicators which are: performance expectancy, effort expectancy, social influence, and facilitating conditions which are direct determinants of usage intention. This study will adopt the Performance Expectancy (PE) which refers to the fact that undergraduate students' use of EIRs depends on how they perceive the usefulness of the electronic information resources. If an undergraduate student believes that using of electronic resources in research may have a positive effect on his academic performance, then he/she may likely to use them. The extent of use of electronic resources depends on the perceived usefulness of the electronic information environment. In addition, undergraduate students who believe using the system frequently will help him or her to use EIRs effectively and efficiently and also improve their academic performance will take advantage over those who do not use. PE also refers to the

degree to which an undergraduate believes that use of EIRs will help them to enhance their academic performance as well as their research output in the information era. To use the available electronic information resources, students must acquire and use the skills to explore them; this will help undergraduates to effectively search and have access to needed information.

Information literacy has as well been identified as a factor militating against students' optimum utilization of electronic information in academic institutions (Namugera, 2014). Whereas information in academic libraries was previously based upon the collection of physical library materials, it is now increasingly the case that academic libraries have moved into the virtual arena. It is in this light that students are expected to possess information literacy skills as they pursue academic success. In the field of library and information science (LIS), literacy skills are very vital to knowledge acquisition and its competence. These competencies are called 'information literacy' (IL). It is seen as the absolute critical literacy skill for the 21st century that fosters the realization of most personal, academic and professional goals as well as for economic development. It is believed that IL can help bridge the digital divide, strengthen the employability of a workforce, counter information overload, and support evidence-based policy and decisions in governments and the professions (Corrall, 2013).

UNESCO (2009) was of the view that information literacy deals with the knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand. It is a prerequisite for participating effectively in the information society, and is part of the basic human right of life-long learning. Information literacy is often viewed as an "ongoing process that is meant to be facilitated throughout a whole life, because it is a core educational goal that is "common to all disciplines, learning environments, and all level of education" (Boekhorst, 2013, cited in Virkus, 2016:28). For library users to be seen as competent, they must first be information literate. Being competent and information literate enhances personal growth, self-actualization, empowerment and social inclusion. Which means that information literacy is also an important factor in the workplace (Adeleke & Emeahara, 2016).

Information literacy involves a continuous learning process that cut across abilities and knowledge, values, several other terms and combination of terms. (Parang, Raine and Stevenson 2000, cited in Okiki O.C 2013) posited that information literacy skills enables individuals to recognize not only when information is needed, but also the different kinds of information that are needed. It provides users of information resources with methods by which they can cope with the huge quantity of information coming from all directions, through all varieties of information resources. It can then be assumed that information literacy skills are needed by Nigerian academics for quality research output. Julien and Williamson (2010) believe that an information literate person today should possess specific online searching skills such as the ability to select appropriate search terminology, logical search strategy and appropriate information evaluation skills. These are critically lacked by many undergraduates in Nigeria today. Considering the complexity associated with the use of use of EIRs, students require information literacy skills to access and use information. Adeleke and Emeahara, (2016) noted that growth in literature, its volume, variety and complexity has put severe constraints on users' ability to search for needed information. The complexity of use of EIRs has also led to tedious and rigorous searches, which tend to discourage the students who lack the requisite skills thereby leading to

low usage of electronic information and other automated library services in many parts of Nigeria. Although most students have their own laptops, iPads or mobile phones which exposes them to the use of technology, their use of such electronic devices do not guarantee knowledge of information literacy skills needed to access web-based resources from online library platforms as many students are not even aware that such platforms exist online. Therefore, being aware and acquiring requisite information literacy skills are essential for students, especially undergraduates as to enable thrive academically. This would not only give value to the result of their research work but also ensure that they do not engage in copying and pasting and other forms of plagiarism, which have characterized students' use of online resources (Trip, 2010).

Statement of the Problem

In many institutions of higher learning, undergraduate students constitute the greater percentage of library users and unrestricted access to library holding will not only increase their use of the electronic information resources but will also enhance their information literacy skills. The literature has revealed that undergraduates generally prefer to use the electronic information resources when compared with their interest in the traditional analogue library services (Adeniran 2013, Oluwabiyi, 2017; Adeleke & Emeahara, 2016; Ekwelem, et al, 2018). While this is expected considering the global transition from an analogue to the digital library services, undergraduates in many universities in Nigeria usually experience restricted access to and use of electronic information resources and services probably due to their low level of information literacy skills. Thus, access to these EIRs initially meant to enhance learning outcomes of the undergraduates now becomes unattainable and by extension has resulted in low use of the EIRs. This current study therefore aimed at investigating the influence of information literacy skills on the use of electronic information resources by undergraduate students in selected federal university libraries, North-West, Nigeria.

Objective of the Study

The general objective of this study is to investigate the influence of information literacy skills on the use of electronic information resources by undergraduate students in selected federal university libraries, North-West, Nigeria. The specific objective of the study is to:

1. Ascertain the level of information literacy skills on the use of electronic information resources undergraduates in selected federal universities in North-West, Nigeria?

Research Questions

The study provided answers to the following research question:

1. What is the level of information literacy skills on the use of electronic information resources undergraduates in selected federal universities in North-West, Nigeria?

Methodology

Survey research design was adopted for the study. The population was 4,189 undergraduates of federal universities in North-West Nigeria. A sample size of 838 students was determined using Wimmer and Dominick's formula. Multi stage sampling technique was used to select the respondents. The 1st stage: At first stage, the researcher adopted purposive sampling to select three (3) old generation universities from the seven (7) institutions, they are Ahmadu Bello University, Zaria, Bayero University, Kano and Danfodio University Sokoto. In the 2nd stage, proportionate stratified sampling technique using 20% fraction was used to select the registered undergraduate students from the three (3) university libraries in

the study area. In The final stage, simple random sampling technique was used to select respondents from the university libraries. he sample size for the study comprised of undergraduate students of in the study area. Data were collected with a validated questionnaire. The Cronbach's Alpha reliability coefficients for the constructs ranged from 0.79 to 0.92. A response rate of 76.4% was recorded. Data were analyzed using descriptive statistics. A self-structured questionnaire was used to elicit required information from the respondents. Data collected for this study was coded and analyzed through the use of SPSS V. 21.

Results

Analysis of Research Question

Research Question one: What is the level of information literacy skills of undergraduate in Abeokuta, Ogun State?

Column1	Very High level	High Level	Low Level	Very Low Level	Mean	Std Dev
I can define the information I need	83(29.5)	167(59.4)	31(11.0)	0(0.0)	3.19	0.61
I can select the information that is most appropriate to my needs	73(26.0)	177(63.0)	31(11.0)	0(0.0)	3.15	0.59
I have the ability to use information to answer questions and/or solve problems	62(22.1)	156(55.5)	53(18.9)	10(3.6)	2.96	0.74
I have the ability to identify different sources of information	72(25.6)	144(51.2)	44(15.7)	21(7.5)	2.95	0.84
I have the capability to organize, apply and communicate information to others	61(21.7)	155(55.2)	54(19.2)	11(3.9)	2.95	0.75
I can synthesize and build upon existing information	41(14.6)	164(58.4)	65(23.1)	22(7.8)	2.76	0.79
I can determine the authoritativeness, correctness and reliability of the information sources	50(17.8)	155(55.2)	55(19.6)	21(7.5)	2.83	0.8
I can initiate how and where to find the information I need	51(18.1)	145(51.6)	65(23.1)	20(7.1)	2.81	0.81
I can synthesize newly gathered information with previous information	41(14.6)	153(54.4)	65(23.1)	22(7.8)	2.76	0.79
I have the ability to select search strategies by date, subject and language	31(11.0)	186(66.2)	33(11.7)	31(11.0)	2.77	0.8
Weighted Mean Score = 2.92						

Mean of
3.5-4.0=Very high,
2.5 -3.49=High
2.0 -2.49= Moderate
1.0 -1.99=Low

Table revealed a generally high level of information literacy skills with weighted mean score of 2.92 on the scale of 4 points. The table further reveals that the highest level of information literacy skills were define the information needed (mean = 3.19), closely followed by selecting the information that is most appropriate to their needs (mean=3.15), ability to use information to answer questions or solve problems (mean =2.96), ability to identify different sources of information (mean = 2.95), capability to organize apply and communicate information to others (mean = 2.95), synthesize and build upon existing information (mean=2.84), determine the authoritativeness, correctness and reliability of the information sources (mean =2.83), initiate how and where to find the information needed (mean =2.81), synthesize newly gathered information with previous information (mean=2.77) and ability to select search strategies by date, subject and language (mean = 2.76).The implication of this result is that students level of information literacy skills seems to determine the extent to which undergraduates will explore the power of e-resources reference services

Discussion of findings

The study investigated the influence of information literacy skills on the use of electronic information resources by undergraduate students in selected university libraries in North-West, Nigeria. The discussion section is based on the major finding from the research questions.

As regards the level of information literacy skills, the finding revealed high level of information literacy skills with weighted mean score of 2.92. The table further reveals that the highest level of information literacy skills were define the information needed, selecting the information that is most appropriate to their needs, ability to use information to answer questions or solve problems, ability to identify different sources of information, capability to organize apply and communicate information to others, synthesize and build upon existing information, determine the authoritativeness, correctness and reliability of the information sources, initiate how and where to find the information needed, synthesize newly gathered information with previous information and ability to select search strategies by date, subject and language. The information literacy skills course equips students with the necessary skills and knowledge to enable them to use the library's information resources effectively, legally and ethically and also engage in lifelong learning (Sithole, Chisita & Jagero, 2015). Sithole, Chisita, and Jagero (2015) conducted a study on information literacy evaluation. The study aimed at evaluating the effectiveness of the information literacy skills course on the use of various information formats in an African university. The survey research design was employed by researchers.

Conclusion

The study also concluded that there is limited computer and ICT infrastructure to accommodate as many students that are willing to use the electronic information resources the same time. Hence, this calls for purchase of more computers to enhance effective use of the electronic information resources across the selected tertiary institutions. Lastly, the study

concluded that information literacy skills are major predictors of electronic information resources use by undergraduate students in selected university libraries in North-West, Nigeria.

Recommendation

The following recommendation is suggested for policy intervention:

1. Student should be encouraged to sharpen their information literacy skills by putting it in to more use.

References

- Abinew & Vuda (2013) Empirical survey on acceptance and use of electronic library services in universities.
- Adeniran, P. (2013). Usage of electronic resources by undergraduates at the Redeemers University, Nigeria. *Academic Journals*, 5(10), 319-324. <http://www.academicjournals.org/IJLIS>
- Ademodi, O. (2011). Reference service in academic libraries: Accommodation of international students. *Library Philosophy and Practice* (e-journal). <http://digitalcommons.unl.edu/libphilprac/1197>.
- Ademodi, D. T. (2004). Students awareness of reference services in Adekunle Ajasin University library, Akungba-Akoko. *Journal of Library and Information Science*, 1(1), 1 – 12.
- Adeleke, D. S. & Emeahara, E. N. (2016). Relationship between information literacy and use of electronic information resources by postgraduate students of the University of Ibadan. *Library Philosophy and Practice* (ejournal).
- Achebe, N. (2012). Current trends and challenges in reference information services in Nigerian Libraries. In Daniel, J. O., Ifidon, E.I & Okegbola, T. (eds). Trends in library and information science in Nigeria. Lagos: Elis Associates.
- ACRL, (2000) Information Literacy. Association of College and Research Libraries. <http://www.ala.org/ala/acrl/>
- Adam, L. & Wood, F. (2013). An investigation of the impact of information and communications technologies in Sub-saharan African. *Journal of Information Science*, 25(4), 307-318.
- Ademodi, D.T. (2015). Empirical study of awareness and use of reference sources by undergraduates in Adekunle Ajasin University Library. *Information and Knowledge Management* 5 (8). www.iiste.org

- Akpojotor, L.O. (2016). Awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria. *Library Philosophy and Practice*. <http://digitalcommons.unl.edu/libphilprac/1408>
- Akinbobola, O. I., & Adeleke, A. A. (2016). External variables as antecedents of users' perception in virtual library usage. *Interdisciplinary Journal of Information, Knowledge, and Management*, 11, 73-87. <https://doi.org/10.28945/3450>.
- Chirra, R. & Madhusudhan, M. (2009). Use of electronic journals by doctoral research scholars of Go a University, India. *Library Hi Tech News*, 26(10): 12-15.
- Ekwelem, V. O., Okpala, H. N., Igbokwe J. C. & Ekwelem, C. (2018). Evaluation of online reference services: Reflections from Nigeria academic libraries. *Library Philosophy and Practice (ejournal)*. 1777.
- Herget, J., & Hierl, S. (2017). Excellence in libraries: Asystematic and integrated approach. *New Library World*, 108(11/12), 526-544.
- Iroaganachi, M. A. & Ilogho, J. E. (2012). Utilization of reference books by students: A case study of Covenant University, Nigeria. *Chinese Librarianship: an International Electronic Journal*, 34. <http://www.iclc.us/cliej/cl34II.pdf>.
- Malik A. & Mahmood, K. (2014). Readiness for digital reference service (DRS) in university libraries: A survey in the Punjab, Pakistan. *Information Development*, 30, 181 – 188.
- Oketunji, I. (2014). Reference services: Its functions and importance in libraries and information centres. Paper presented at the 2005 national interactive library seminar on application and utilization of ICT to reference services in libraries and information held in Jos, 26-28 April.
- Okiki, O. C. (2013). Information literacy skills and availability of information resources as factors influencing research productivity of academic staff of federal universities in Nigeria.
- Okiki, O. C. (2011). Information communication technology support for an e-learning environment at University of Lagos, Nigeria. *Library Philosophy and Practice*, 610.
- Oluwabiyi, M.O. (2017). Digital reference services: an overview. *Information Impact. Journal of Information and Knowledge Management*, 8 (1), 66 – 75

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KNOWLEDGE OF ELECTRONIC HEALTH RECORDS (EHRs) SYSTEM IN PATIENT CARE
AMONG PRIMARY HEALTHCARE WORKERS IN PORT HARCOURT LOCAL
GOVERNMENT AREA

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Abstract

The study investigated the Knowledge of Electronic Health Records (EHRs) system in patient care among Primary Healthcare workers in Port Harcourt Local Government Area. The study adopted the cross-sectional descriptive design and population was used has sample size which gave rise to 362 for the study. The instrument for data collection was a self-designed questionnaire. The data collated were analyzed using frequency count and simple percentage. The findings revealed that majority of the primary health care workers have knowledge on the use of EHRs; 195 (53.9%) of the primary health care workers disclosed that EHRs not same as manual records system, 185 (51.1%) have receives training on EHRs, 202 (55.8%) said that they preferable EHRs more than manual health records practice, 173 (47.8%) agreed that server is necessary for the use of EHRs. The study concluded that the electronic health records (EHRs) if properly implemented will improve the quality healthcare services. In order for electronic health records to reach their full potential, it will be important to consider how to encourage and support health care organization to continually modify and optimize their statement to meet the needs of the organization, their staff, and ultimately the quality of services rendered. The study recommended that electronic health records should be implemented and utilize in proving quality health care services.

Key words: *Knowledge, Electronic Health Records, patient care, Primary Healthcare workers*

Introduction

Electronic Health Records has long been expected to transform the delivery of health care services in developed nations, saving costs, reducing medical errors, improving service quality, increasing patients' safety, decision-making, saving time, data confidentiality, and sharing medical. However, current medical practice embracing the use of electronic health

record systems have been studied for over a decade and despite its benefits in other knowledge domains, progress has been slow in healthcare (Jane, 2021).

Electronic Health Records (EHRs) is the core of e-healthcare system. The main functions of the EHR are to store health information and data, to enable electronic communication and connectivity, to patients support, decision support, administrative processes and report, and to perform entry management and report management (Tang, 2020).

Electronic Health Records (EHRs) are computerized health information system that collect, store and display patient's information (Ada, 2020). Effective use of EHRs by healthcare workers have great potentials of optimizing the process of healthcare service delivery, especially in clinical sites (Adeleke et al., 2015). EHR is an essential healthcare tool for improving the safety, quality, efficiency and effectiveness of health care delivery.

The health care systems around the world have a significant rise in the use of Electronic Health Records (EHRs) as an essential tool for improving the safety, quality, efficiency and effectiveness of health care. In health care institutions it automates the medication as well as examination, ordering process ensuring readable and complete orders (James, et al, 2021). Thus facilitating communication between health workers and patients (Gusen, *et al.*, 2016). The electronic health record is rapidly replacing paper documentation of health care activities in hospitals across the world and its adoption is a major reform component and cost saving tool. The intent of initiating computerized documentation systems is to improve efficiency, safety and quality of patient care (Jha *et al.*, 2019).

Despite the benefits of EHRs, the practice of EHRs in patient centred institution still faced concern challenges that may be attributed to both availability of structure, knowledge and attitude of the healthcare service providers toward using of electronic health records and technology in patient care (WHO, 2018). Therefore, it is necessary to investigate health care workers' knowledge as well as recognize the perceived barrier that hinder the successful use of EHRs in the health care system.

The use of Electronic Health Records has been proven to improve the quality of health care worldwide by increasing productivity, reducing workload, minimizing costs and creating a sustainable link between health care providers (Noh, 2016). This has contributed to its increasing use by healthcare organizations globally including Nigeria, a country where Electronic Health Records have been prioritized by its government (Tang & McDonald, 2016). In some institutions of the country, electronic health records have been in use however, published research on the pre-implementation stages is scarce (Geoffrey, 2019).

Electronic Health Record (EHR) is considered as the backbone integrating various information tools (e.g. computerized physician order entry, clinical decision-support, clinical documentation, digital imagery, patient portals, tele medicine (Adeleke *et al.*, 2019). However, in primary healthcare centre, an EHR has a specific importance. It improves the management of chronic diseases, facilitates continuity of care, enables reporting of population health, improves preventive care, and allows for the development of patient portals (e.g. personal health records) and adaptive awareness programs for patients (Tang, & McDonald, 2016). Therefore, implementing EHRs in primary healthcare centre has the potential to improve the population health, and to enhance the overall healthcare system of the country.

Electronic Health Records is a record in digital format that is theoretically capable of being shared across different health care settings. In some cases, this sharing can occur by way of network-connected, enterprise-wide information systems and other information networks or exchanges (De-Veer & Francke, 2021). EHRs may include a range of data, including demographics, medical history, medication and allergies, immunization status, laboratory test results, radiology images, vital signs, personal statistics like age and weight, and billing information. The system allows for an entire patient history to be viewed without the need to track down the patient's previous medical record volume and assists in ensuring data is accurate, appropriate and legible (Desroches, *et al.*, 2019).

However, despite the widespread adoption and use of electronic health record system only about 6% of hospitals met all criteria of stage 2 meaningful use. Thus, implementing and developing meaningful use for Electronic Health Record is still an ongoing process in the Nigerian healthcare billing purposes not for research and quality improvement efforts (Stefen, 2022).

Packard, (2016) stipulated that the initial applications of electronic health records as the primary data source is envisioned for observational studies, embedded pragmatic or post-marketing registry-based randomized studies, or comparative effectiveness studies. Advancing this approach to randomized clinical trials. Electronic Health Records may potentially be used to assess study feasibility, to facilitate patient recruitment, and streamline data collection at baseline and follow-up. Ensuring data security and privacy, overcoming the challenges associated with linking diverse systems and maintaining infrastructure for repeat use of high-quality data, are some of the challenges associated with using Electronic Health Records in clinical research. Collaboration between academia, industry, regulatory bodies, policy makers, patients, and electronic health record vendors is critical for the greater use of electronic health records in clinical research (Qurban, *et al.*, 2018).

Williams *et al.*, (2021) demonstrated the feasibility of using EHRs for aspects of clinical research, particularly comparative effectiveness. The success of these endeavors is connected to careful planning by a multi-stakeholder group committed to patient privacy, data security, fair governance, robust data infrastructure, and quality science from the outset. The next hurdle is to adapt the accrued knowledge for application to a broader base of clinical trials.

Knowledge can be seen as the fact or condition of knowing something with familiarity gained through experience or association or the acquaintance with or understanding of a science, art, or technique. In the context of this study, knowledge is a familiarity or awareness of application, benefits and use of EHR in patient care by health workers such as facts, skills, or objects contributing to one's understanding towards modern healthcare delivery (Mood, *et al.*, 2020).

The purpose of knowledge is to sharpen our skills and develop reasoning and problem-solving abilities. Knowledge also improves the reasoning and critical thinking that health workers need in all fields. It helps us survive far longer (Mole, *et al.*, 2016). The application of Electronic Health Records knowledge is the key to successful quality healthcare delivery, to power, to respect in high societies, moreover, the key to one's personality. Based on knowledge, one gets a job, earns a living and gains respect among fellow people. This definition incorporates three basic conditions, fact for which some authors call it the tripartite account of knowledge. According to Oviawe and Oshio, (2019) these conditions are the following:

- The truth condition: it requires that if one knows a proposition then that proposition must be true. If the proposition is not true, then that person does not

know what he claims to know. The truth condition makes the difference between opinion and knowledge.

- The belief condition: that condition demands that if one knows a proposition then he believes that proposition.
- The justification condition: that condition requires a practical way of justifying that the belief one has is true.

Putting together these conditions for knowing, one may conclude that “the necessary and sufficient conditions for knowing that something is the case are first that what one is said to know be true, secondly that one be sure of it, and thirdly that one should have the right to be sure” (Appari *et al.*, 2020). The right to be sure can be earned in different ways which are culturally and contextual dependent. These conditions are usually synthesized in a logical format. considering *s* to be the subject or the knower, *p* to be the proposition the subject is supposed to know, one may write (Gilbert, 2019) knows that *p* is true, *s* believes that *p*, and *s* is justified in believing that *p*.

However, by doing this switch the authors show that, in practice, the emergence of new knowledge should be evaluated with usefulness metric and not with a logical one: “justification involves the process of determining if the newly created concepts are truly worthwhile for organization and society” (Nonaka & Takeuchi, 2016). They go further giving as practical justification criteria like cost, profit margin, and degree to which a product can contribute to the company's economic performance. Also, by means of this switch, they changed the very nature of justification from a logical construct to an economic one, implemented by managers. Top managers would ask for a concordance with the strategic vision of the company, while the middle managers would be looking for some practical requirements (Tang and McDonald, 2020). In conclusion, the approach of Nonaka and Takeuchi clearly changed the nature of the problem and offered solutions for the practical organizational context instead of solving the original truthfulness problem formulated by Plato and refined by the western epistemology. It is like Alexander the great who not being able to unfold the famous Gordian knot cut it with his sword and changed the history of the world.

Up to 45% of current Primary Healthcare Workers in the Nigeria were in the workforce before the proliferation of EHR technology (Fawdry, *et al.*, 2017). Therefore, a lack of knowledge and/or training, preparation with computer skills hinder the adoption and use of EHRs and lead to cognitive and attitudinal barriers (De-Moor *et al.*, 2015). The addition of EHRs to the existing workload without adequate training affects productivity and the use of the EHRs technology (Courtney, *et al.*, 2015).

Harcourt (2022) opined that adoption and use barriers to EHRs center on situational, knowledge/cognitive, physical structure, legal and/or attitudinal barriers. The degree to which the EHRs technology is perceived to be of benefit is recognized as relative advantage, which is the first characteristic of innovation in the Digital Object Identifier process. The acceptance and use of EHRs can depend on the interaction and social dynamics of coworkers and the culture of the organization (Lopez, 2018). The relevance of the influence of peers and the organization toward the use of EHRs cannot be overlooked or underestimated. Health workers more readily use EHRs if it is perceived to be a fit with healthcare practice, improves patient outcomes, and decreases the workload of the health workers (Chiang, 2018; De-Veer & Francke, 2021).

However, to reach this potential, healthcare providers must be willing and able to use the EHRs technology. Moving from a paper-based milieu to EHRs is often a disruptive process that requires training on multiple levels. Many current healthcare workers received their educational training before the EHR explosion and lack basic computer skills to successfully navigate an EHR (Bredfeldt *et al.*, 2021). Due to the lack of computer skills, multiple training sessions are necessary to overcome the new users' initial feeling of being overwhelmed (Courtney *et al.*, 2015). These training sessions should be spaced prior to an implementation to reinforce the new users' beginning skills. This can continue to reduce anxiety related to the use of EHRs and allow the time needed to become knowledgeable or acquainted with the EHRs technology (Campbell, *et al.*, 2018).

Addressing the possible problems to its successful implementation. Previous studies have categorized a number of these problems into functional structures, organizational, technical, training, political, ethical and financial; the most common of which is related to the unwillingness of its users to accept the transition (Tornvall, 2018). This has contributed to the failure rates of many EHRs adoption (Packard & Randall, 2016). It is therefore necessary to have a roadmap before adopting EHRs to prevent wastage of resources and patient time.

It was in light of the above that the researcher has highlight the Knowledge of Electronic Health Records (EHRs) system in patient care among Primary Healthcare workers in, Port Harcourt Local Government Area.

Objectives of the study

The objective of this work is to assess the Knowledge of Electronic Health Records (EHRs) system in patient care among Primary Healthcare workers in, Port Harcourt Local Government Area.

In specific term, the study sought to:

- a. Ascertain the level of knowledge of EHRs system in patient care among Primary Healthcare workers in Port Harcourt Local Government Area

Research Questions

The study was guided with the following questions in specific terms, the study sought to:

- a. What is the level of knowledge of EHRs system in patient care among Primary Healthcare workers in Port Harcourt Local Government Area?

Methodology

This study adopts a cross sectional descriptive design. The population of the study was made up of all primary healthcare workers in Port Harcourt Local Government City Council of Rivers State. The Council has 15 public primary health centres and a total number of two hundred and sixteen health staff and one hundred and eighty-four health volunteer/casuals which gives a total population of 384. The source population was the current health care workers retrieved from staff nominal roll as at August, 2022. The inclusion criteria in this study includes all primary healthcare workers employed by Port Harcourt Local Government Area whose schedule of duty involved in patients care present at the time of the study and had spent at least one year on the jobs who had given consent for participation. A proportionate sampling technique was used for this study and a census method (total enumeration) of 356 was also use as sample size since the total population of the study area is minimal. The instrument used in the collection of data for the study was structured questionnaire. Frequency and percentage were used to present categorical data, and mean

and standard deviation were used to present quantitative data at the univariate level.

Results

Research Question one: What is the level of knowledge of Primary Healthcare workers working in Port Harcourt Local Government Area regarding using EHR system in patient care

Table 1: *Knowledge of Primary Healthcare workers in Port Harcourt Local Government Area on the Use Electronic Health Records in patient care*

Items	Yes N (%)	No N (%)
Is EHRs same as manual health records system?	195 (53.9)	167 (46.1)
Have you ever received any training on EHRs?	185 (51.1)	177 (48.9)
EHRs is more preferable than manual health records practice	202 (55.8)	160 (44.2)
Is server necessary for the use of EHRs?	173 (47.8)	189 (52.2)
Do we need a personal computer at all point of service delivery	250 (69.1)	112 (30.9)
Is necessary for all departments/units in the facility to connect EHRs system?	258 (71.3)	104 (28.7)
Do you make use of EHRs in your healthcare service EHRs system?	173 (47.8)	189 (52.2)
Does EHRs practice important in-patient healthcare?	229 (63.3)	133 (36.7)
Level of knowledge	N	%
Poor (0-3)	69	19.1
Fair (4-6)	194	53.6
Good (7-9)	99	27.3
Mean (Standard Deviation)	2.08	0.68

In Table 1 above, majority of the primary health care workers have knowledge on the use of EHRs; 195 (53.9%) of the primary health care workers disclosed that EHRs not same as manual records system, 185 (51.1%) have receives training on EHRs, 202 (55.8%) said that they preferable EHRs more than manual health records practice, 173 (47.8%) agreed that server is necessary for the use of EHRs, 250 (69.1%) of the respondents agree that there is need for a personal computer at all point of service delivery, 258 (71.3%) of the respondents agreed that there need for all departments/units in the facility to connect EHRs system, 189 (52.2) of the study population said they donot make use of EHRs in your healthcare service delivery while, 229 (63.3%) of the respondents agreed that EHRs practice important in patient healthcare.

Also, in Table, the table showed that the mean score of knowledge the primary health care workers is 2.08 5 ± 0.68 , reflecting fair level of knowledge (54%). This means that there is a fair level of knowledge of Primary Healthcare workers working in Port Harcourt Local Government Area regarding using EHR system in patient care.

Discussion of Finding

Research question revealed that, the knowledge of Electronic Health Records is not available for patient care in Primary Healthcare of Port Harcourt Local Government Area, Rivers State.

The finding is in accordance with the findings of Oviawe and Oshio (2019) record in Primary Health Care Centres in Edo State. Their main aim was to investigate the availability of electronic health record in Primary Health Care Centres in Edo State. The data collected were analyzed using simple percentage and chi-square. Their findings revealed that there is low availability of electronic health record (EHR) which in Primary Health Care Centres in Edo State.

Conclusion

From the study, it could now be deduced that the electronic health records (EHRs) if properly implemented will improve the quality healthcare services. In order for electronic health records to reach their full potential, it will be important to consider how to encourage and support health care organization to continually modify and optimize their statement to meet the needs of the organization, their staff, and ultimately the quality of services rendered. Electronic Health Records, for it to have a position impact on quality improvement in health care services, health workers must be able to utilize these systems effectively after they are made available and trained.

Recommendations

Based on the result of this study, the following recommendation were suggested:

1. That electronic health records should be implemented and utilize in providing quality health care services.

References

- Ada, G., (2020). *Fundamentals of Electronic Health Records*. Gifted hand, Port Harcourt.
- Adeleke, I.T, Salami, A. A., Achinbee, M., Anamah, T. C., Zakari I. B., & Wasagi, M. H., (2015). ICT knowledge, utilization and perception among healthcare providers at National hospital Abuja, Nigeria. *American journal of health research*, 3(1-1), 47-53,
- Adeleke, I. T., Lawal, A. H., Adio, R. A, & Adebisi, A., (2018). Information technology skills and training needs of health information management professionals in Nigeria: A nationwide study. *Health Information Management Journal*.
- Afolaranmi, T. O., Hassan, Z. I., Dawar, B. L., Wilson, B. D., Zakari, A. I., Bello, K. K., Ofakunrin, A. O. D., & Ogbeyi, G. O., (2020). Knowledge of electronic medical records system among frontline health care workers in Jos university teaching hospital, Plateau State Nigeria. *International journal of research in medical sciences*, 8(11), 3837-3843. <https://dx.doi.org/10.18203/2320-6012.ijrms20204867>.
- Ajayi, A. D., Adeola, R. S, Daniel, O. C., Stephen, N., & Gusen, N. J., (2015). Knowledge and utilization of standardized nursing language among nurses in Jos university teaching hospital plateau state, Nigeria. *Int prof nurse j.*, 14(3), 18-28
- Ajala, F., (2015). Development of an electronic medical record system for a typical Nigerian hospital. *Journal of multidisciplinary engineering science and technology (JMEST)*.
- Ajuwon, G. A., (2019). *Computer and internet use by first year clinical and nursing students in Nigeria teaching hospital*. BMC Med.

- Ammenwerth, E., Mansmann, U., Iller, C., & Eichstadter, R., (2015). Factors affecting and affected by user acceptance of computer-based nursing documentation: Results of a two-year study. *Journal of the American Medical Informatics Association*, 10(1), 69–84
- Aremu, H. B., (2018). *Introduction of health records management 1*. Decency printers & stationeries ltd.
- Appari, A., Eric, J. M., & Anthony, D. L. (2020). Meaningful use of electronic health record systems and process quality of care: evidence from a panel data analysis of U.S. acute-care hospitals. *Health services*. 48, 354–375.
- Braveman, P., & Tarimo, E. (2022) *Screening in primary health care: Setting priorities with limited Resources*.
- Brennan, L., Watson, M., Klaber, R., & Charles T., (2022). The importance of knowing context of hospital episode statistics when reconfiguring the nhs. *BMJ*, 344, e2432.
- Chiang, M. F. (2018). Evaluation of electronic health record implementation in ophthalmology at an academic medical center (An American ophthalmological society thesis). *Transactions of the American ophthalmological society*, 111, 70-92.
- Cochran, W. G. (1977). *Sampling techniques (3rd ed.)*. New York: John Wiley & sons.
- Curtis, L. H., Brown J., & Platt, R. (2018). Health data networks illustrate the potential for a shared National Multipurpose Big-data network. *Health aff (millwood)* 33, 1178–1186.
- Doods, J., Botteri, F., Dugas, M., & Fritz, F., (2018) a European inventory of common electronic health record data elements for clinical trial feasibility. *Trials*. 15(18).
- Eagly, A., & Chaiken, S. (2019). *Attitude structure and function*. Handbook of social psychology. Boston: McGraw Company.
- Evans, R. S. (2016). Electronic health records: Then, now, and in the future. *Yearbook of medical information*, 25(S01), S48–S61.
- Gusen, J. M., Berjame, A., Moquiala, K. S., & Galido, A., (2016). Barriers to electronic health record system implementation and information systems resources: A structured review. *Procedia Computer Science*, 124, 544–551.
- Greenhalgh, T., K., Stramer, T., Bratan, E., Byrne, J., Russell, E., & Potts, H. W., (2020). Adoption and non-adoption of a shared electronic summary care record in England: A mixed-method case study. *British Medical Journal*, 340, c3111.
- Gunter, T. D., & Nicolas, P., (2015). The emergence of national electronic health record architectures in the United States and Australia: models, costs, and questions. *Journal of medical internet research*.

- Hayrinen, K., Saranto, K., & Nykanen, P. (2019). Definition, structure, content, use and impacts of electronic health records: a review of the research literature. *Int j med inform.* 77, 291–304.
- Hoffman, S., & Podgurski, A., (2018). Finding a cure: The case for regulation and oversight of electronic health record systems. *Harvard Journal of Law and Technology*, 22(1), 107.
- Krumholz, H. M. (2017). Big data and new knowledge in medicine: The thinking, training, and tools needed for a learning health system. *Health aff (millwood)*, 33, 1163–1170.
- Kurtz, G., (2015). EMR confidentiality and information security. *J health information management*, 4(17), 41-48.
- Laerum, H., G. Ellingsen, B., & Faxvaag, A., (2021). Doctors' use of electronic medical records systems in hospitals: cross sectional survey. *British Medical Journal*, 323, 1344–48.
- Laramee, A. S., Bosek, M., Shaner-Mcrae, H., & Powers-Phaneuf, T. (2012). A comparison of nurse attitudes before implementation and 6 and 18 months after implementation of an electronic health record. *Computers, Informatics, Nursing*, 30, 521–530.
- Moody, L. E., Adeyemi, E., Balogun, B., & Jackson, D. (2020). Electronic health records documentation in nursing. *Computers, Informatics, nursing*, 22(6), 337-344.
- Ministry of Health Kenya (2011) *Report on the Review of EMR Systems towards standardization kenya ministries of health*. Nairobi: Ministry of health.
- New, J. P., Bakerly, N. D., Leather, D., & Woodcock, A. (2016) Obtaining real-world evidence: *The salford lung study*. *Thorax*. 69,1152–1154.
- Nick, G., (2021). *Initial Evaluation of Patient Interaction with the Electronic Health Record; South & West. Devon Health Community Erdip Project, " Version 1.0,*
- Overhage, J., (2020). A randomized controlled trial of clinical information shared from another institution. *Ann. Emerg. Med.*, 30(1), 14–23.
- Oviawe, J. I., & Oshio, J. E. (2019). Availability of electronic health record in primary health care centres in Delta State. *BMC Medical Informatics and Decision Making*, 2(1), 126-133.
- Roeder, J. (2019). The electronic medical record in the surgical setting. *AORN Journal*, 89, 677-686.
- Price, M., Lau, F., & Blumenthal, D. (2021). The clinical adoption meta-model: A temporal meta-model describing the clinical adoption of health information systems. *BMC medical informatics and decision making*, 14(1),
- Packard, R. (2016). A history of global health. *Baltimore: Johns Hopkins Journal*, 44, 227–229.

PEER PRESSURE AS A DETERMINANT FACTOR OF DRUG ABUSE AMONG YOUTHS IN ANDONI LOCAL GOVERNMENT AREA OF RIVERS STATE, NIGERIA

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Abstract

The study assesses the relationship between peer pressure and drug abuse among youths in the Andoni Local Government Area of Rivers State. A cross-sectional descriptive survey research design was adopted for the study. A structured questionnaire was used to get the needed data, with a sample size of 440 and a multistage sampling procedure. The results revealed that there was a significant (X^2 -value = 16.719, $df = 1$, $P < 0.05$) relationship between peer pressure and drug abuse among youths in Andoni Local Government Area of Rivers State. The results further showed the relationship between peer pressure and drug abuse among youths in Andoni L.G.A. of Rivers State. The result revealed that 91 (39.1%) of the respondents who experienced high peer pressure had a high prevalence of drug abuse, while those with low peer pressure, 35 (20.1%), also had a high prevalence of drug abuse. Thus, this result implies that there is a relationship between high peer pressure and a high prevalence of drug abuse among the youths of Andoni L.G.A. of Rivers State. The study concluded that there was a significant relationship between peer pressure and drug abuse among youths in the Andoni Local Government Area of Rivers State.

Keyword: Peer pressure, Drug abuse, Influence, Youths.

Introduction

The use of psychoactive substances has been around for a very long time. Alcohol and kola nuts, among other psychoactive substances, have been used throughout all of recorded history and culture for a variety of purposes, including energising, elevating mood, reducing hunger, stress, and anxiety (James, 2019). Drug abuse, sometimes referred to as substance abuse, refers to a pattern of drug usage in which the person consumes substances in ways or doses that are damaging to them or to others. As it contributes to a significant public health and social issue on a global scale, it is a type of substance-related disorder. The most frequently used substances, according to Shubi et al. (2019), continue to be alcohol, marijuana, analgesics, tobacco, caffeine, codeine, and glue, among others. These chemicals are utilised for social, experimental, religious, and medical purposes. According to Ijie et al. (2020), drug abuse is the willful overuse or abuse of a single drug, with or without a prior medical diagnosis from licenced healthcare professionals. Lakhanpal and Agnihotri (2007) defines drug abuse as the destructive use of mind-altering substances. The word, according to the author, typically relates to issues with illegal drugs, but it can also refer to problematic uses of legal prescription medications, such self-medication.

Asuka (2017) claims that Nigeria has a significant problem with substance misuse. These psychoactive substances (drugs) are divided into three groups: alcohol, illegal drugs (such as cannabis, heroin, and opioids), prescription drugs used for non-medical purposes, and over-the-counter (OTC) drugs. These psychoactive substances (drugs) have the potential to cause health and social problems, including substance use disorder (SUD). According to Olushola (2019), the crude prevalence of hazardous alcohol use in Nigeria has a number of detrimental effects on its consumers' wellbeing. Drug abuse among Nigerian youth is linked to poor academic performance of students in Nigeria (Adeloye et al., 2019), low self-esteem (Akanbi et al., 2015), crimes (Okafor, 2019), chronic health conditions (United Nation Office for Drug and Crime, 2018), loss of potential manpower, low productivity, and the creation of an unfavourable environment for investors, all of which will naturally affect gross national income and internally generated revenue.

Literature indicated that in 2010, the United Nations Drug Control Programme reports an increase in the threat of drug abuse. Between the ages of 15 and 64, an estimated 142- 272 million people, or 3.3%–6.0% of the global population each year, abuse drugs and substances; a significant majority (45%) of these individuals are college and university students. According to further reports, 2.5 million individuals each year pass away from complications caused by drugs and other substances, and 30 percent of these deaths involve university students. More so, the age of a student is a factor in determining if they abuse drugs. When given developmental tasks, younger pupils or undergraduates are more likely to use one or more illicit substances.

According to Kiriru (2018), alcohol and drug abuse have crept into society, with youth and young adults being the most likely risk groups. Drug abusers in Kenya are aged 16 to 28, with almost 60% living in urban areas and 21% in rural ones, according to the United Nation Office for Drug and Crime (2012). In Nigeria, the Nigerian Drug Law Enforcement Agency (2019) reported in a number of reports that youth drug use, particularly the use of illicit drugs, was on the rise. Additionally, in the Lafia metropolis, suspected drug traffickers were apprehended with 3,683kg of hard drugs, including 804.22kg of cannabis, 2,873.8kg of

tramadol, 5.3g of cocaine, and 57.2 l of codeine syrup. By gender, drug misuse is more or less common. Male undergraduates in tertiary institutions appear to have a higher rate of reported drug addiction cases than female undergraduates. According to studies by Jagnany et al. (2008), with a mean age of 20.57 years (17-26 years), guys used alcohol 41.5% of the time, cigarettes 39% of the time, and cannabis 28.7% of the time, while only 4.3% of girls reported using alcohol. Drug abuse, according to World Health Organisation (2019), is the harmful and/or dangerous use of psychoactive substances, such as alcohol and illegal narcotics. According to the 2007 World Drug Report, male drug users in Ghana aged 15 to 64 smoked marijuana at a rate of 21.5%, much higher than female users.

Additionally, a comparable survey by Chester (2016) found that 38% of female students use any type of illicit substance, compared to 62% of male students who use illicit drugs. According to [19], male undergraduates utilised 10 different illicit drugs, compared to their female counterparts who primarily abuse alcohol; between the ages of 11 and 12, 74.2% of smokers were male, and this difference was highly significant ($df = 5$, $X^2 = 21.07$, $P = 0.001$). According to the studies' findings, 19.4% of people began taking sedatives between the ages of 11 and 12, 31.8% started using them between the ages of 13 and 14, and 1.4% of men only used cocaine. Dependence on drugs is more common among male students than female students. As shown among students at tertiary institutions, there was evidence of a considerable difference between male and female students with regard to drug consumption (Bolakale & Markes, 2015).

The abuse of drugs is becoming a serious issue for global public health. In the previous year, 271 million (5.5%) persons worldwide (ages 15 to 64) reported using drugs, according to the United Nation Office for Drug and Crime (2010). In addition, 35 million people are anticipated to experience drug use disorders. Most young people pick up their parents' drug-using habits from them. Students who have parents who abuse alcohol, cigarettes, or other psychoactive substances are more likely to become drug abuse victims. Parents occasionally send kids out to get cigarettes, beer, dry gin, or Brandywine, which they then consume in front of the kid. Such a pupil or child won't consider using those substances to be harmful in any way. According to research by Adeoti (2010), family environment has a strong and significant impact on the use of illicit drugs ($P < 0.05$). Due to a lack of parental supervision and care, students from divided families are more likely to engage in vices in society.

As a result, social ills in society have been exacerbated by concerns with poor parental guidance. The majority of people, especially younger folks, start their families and get involved in making poor judgements that will damage their future. Some parents, for instance, will let their male child know that he is a man and has the ability to make his own decisions. Evidence showed a significant positive difference in how male and female students view drug abuse, as observed among students in tertiary institutions (Mahososa & Moroena, 2017), which serves as support for this claim. Studies by George (2015) indicated undergraduates from single parents do not have enough moral support. Drug misuse among young people is a result of various factors. Studies have shown that 28% of fathers and 172 (59%) of siblings consume drugs and that 47% of family members abuse drugs compared to 53% of non-users (Bolakale & Markes, 2015).

Similar research found that 25% of undergraduates who live with their parents' smoke

cigarettes and that 99% of them use drugs; Al-Alawi and Shaikh (2018) found a substantial correlation between the use of alcohol and cigarettes and household structure. Al-Alawi and Shaikh (2018) further claimed that because there has been a 14.5% decline in parental supervision in recent years, 5.0% of parents now provide their children access to illegal narcotics. As a result, parental characteristics may predict drug usage among people, particularly Nigerian undergraduates. Friends and peer pressure both play a role in the drug addiction epidemic, which is particularly prevalent among young adults at post-secondary institutions. In comparison to youth who are cautious around their peers, those who maintain more friendships are more likely to use substances inappropriately.

According to Bolakale and Marques (2015) study, 34.7% of drug users claimed that their friends had first exposed them to the drug. Most college students are persuaded by peers to use drugs in order to keep their friendships intact, which over time results in addiction. Bolakale and Marques (2015) also established that 35% of their closest friends use drugs, with the majority of them modelling their behaviour after that of their dependable peers. Friends may likely be the commonest source of drug introduction among undergraduates. According to Jagnany et al. (2008) study, 10.5% of drug abusers were exposed to substances like cocaine, alcohol, tobacco, and cannabis by acquaintances they made at the hostel. Foo et al. (2018) conducted more investigations that showed 28% of people use illicit substances with friends and 55% of people use drugs alone that friends introduced them to. Students who are exposed to friends who take drugs may be more likely to do so themselves.

According to several research, college students who are more likely to be smokers and drinkers are also more likely to have at least one friend who does both, according to Al-Alawi and Shaikh (2018). According to Foo et al. (2018), young individuals, peer pressure has a big impact on drug usage behaviours and despite the efforts, drug use and abuse remain the main causes of young restlessness, health issues in our community, and the high crime rate and visitation that plague our society today. Drug misuse is a localised social and health issue, according to Oshikoya and Alli (2019). Because of its potential to induce unintended and intentional harm, involvement in crime, demotivation, altered cognitive values, and sexual defaults, its use by Nigerian young has drawn attention from the general public across the globe.

With the trend of youth involvement in the growth of crime, cultist activities, cognitive disabilities, the dethronement of morals into murky waters, family destabilisation, poor academic interest and performances, and mental diseases ranging from manageable bearable situations to unbearable situations, the quest to exist without solving problems of life seems unending. However, drug abuse including the use of prescription medicines, over-the-counter medications, and illicit drugs has created a serious threat to the next generation, as well as to deteriorating health conditions as a result of social and experimental exhibitions and peer pressure groups.

Our unforeseeable future is greatly threatened by capacity change, interference with health and a productive life, and the use of illegal medicines, pharmaceuticals with negative side effects, or drugs taken beyond the advice of a certified doctor. Sleeplessness (insomnia), increased aggression, paranoia, hallucinations, panic disorder, depression, anxiety, slurred speech, change in appetite, loss of coordination, momentary sense of euphoria, increased heart rate, and changes in cognitive ability are just a few of the short- and long-term effects of drug abuse or improper use of prescription medications. The deliberate abuse of drugs, whether

they are legal or illegal, for amusement, convenience, or a sense of need that leads to addiction is still amirage.

Health, social freedom, and the attempts of individuals to participate in society continue to be threatened by the rise of social interest groups with various nomenclatures and by the open use of illegal substances at the expense of the defenseless populace. As a result, the study's objective was to evaluate the connection between peer pressure and drug abuse among young people in Rivers State's Andoni Local Government Area.

Objectives of the Study

The aim of the study was to assess the relationship between peer pressure and drug abuse among youths in the Andoni Local Government Area of Rivers State. In specific terms, the objective that guided the study is to assess the relationship between peer pressure and drug abuse among youths in Andoni Local Government Area of Rivers State.

Research Questions

One research question guided the study:

1. What is the relationship between peer pressure and drug abuse among youths in the Andoni Local Government Area of Rivers State?

Hypothesis

One research hypothesis was formulated to guide the study and tested at the 0.05 level of significance.

Ho: There is no significant relationship between peer pressure and drug abuse among youths in the Andoni Local Government Area of Rivers State.

Methodology

A descriptive, cross-sectional survey research design was adopted for the study. A structured questionnaire was used to get the needed data, with a sample size of 440 and a multistage sampling procedure.

Results

This chapter focused on the statistical data analysis and summary of major findings of the study. In addition, there is no conflict of interest in the study.

Research Question 1: What is the relationship between peer pressure and drug abuse among youths in Andoni L.G.A of Rivers State?

Table 1: showing the frequency and percentage distribution of the relationship between peer pressure and drug abuse among youths in Andoni L.G.A of Rivers State.

Peer Pressure	Prevalence of drug abuse		Total
	Low F (%)	High F(%)	
Low	139(79.9)	35(20.1)	174(100)
High	142(60.9)	91(39.1)	233(100)
Total	281(69.0)	126(31.0)	407(100)

Decision guide: Likert's 2.5 (50%) and above high while below 2.5 (50%) is low.

Table 1 shows the relationship between peer pressure and drug abuse among youths in Andoni L.G.A. of Rivers State. The result revealed that 91 (39.1%) of the respondents who experienced high peer pressure had a high prevalence of drug abuse, while those with low peer pressure, 35 (20.1%), also had a high prevalence of drug abuse. Thus, this result implies that there is a relationship between high peer pressure and a high prevalence of drug abuse among the youths of Andoni L.G.A. of Rivers State.

Hypothesis 2: There is no significant relationship between peer pressure and drug abuse among youths in Andoni L.G.A of Rivers State?

Table 2: Chi-square table showing the relationship between peer pressure and drug abuse among youths in Andoni L.G.A of Rivers State.

Peer Pressure	Prevalence of drug abuse		Total	df	X ² -value	P-value	Decision
	Low F (%)	High F (%)					
Low	139(79.9)	35(20.1)	174(100)	1	16.719	.000*	Rejected
High	142(60.9)	91(39.1)	233(100)				
Total	281(69.0)	126(31.0)	407(100)				

*Significant

Table 2 shows the relationship between peer pressure and drug abuse among the youths of the Andoni Local Government Area of Rivers State. The result revealed that there was a significant (X^2 -value = 16.719, $df = 1$, $P < 0.05$) relationship between peer pressure and drug abuse among youths in Andoni Local Government Area of Rivers State. Therefore, the null hypothesis, which states that there is no significant relationship between peer pressure and drug abuse among youths in Andoni Local Government Area of Rivers State, was rejected.

Discussion of findings

The findings of the study were discussed below:

The result showed that there was a relationship between a high prevalence of drug abuse and high peer pressure (39.1%). The result further revealed that there was a significant (X^2 -value = 16.719, $df = 1$, $P < 0.05$) relationship between peer pressure and drug abuse among youths. The finding of this study is similar to that of Adeoti (2010), whose study on factors influencing substance abuse among students in Osun State revealed peer factors influencing substance abuse because most undergraduates affirm that they behave like their friends. Peer influence is contributing to substance abuse among undergraduates. The results aligned with Foo et al.'s (2015) findings that showed that peer influence plays a significant role in drug abuse habits among young adults. The findings are to some extent affirmed by Mekonem et al.'s (2017) investigation on drug abuse among tertiary students and youth that is associated with personal pressure and poor academic achievement. More so, the findings of this study are in line with those of Maithya (2009), whose study on drug abuse in secondary schools in Kenya revealed that a variety of factors contributed to drug abuse, with the majority of students citing curiosity and acceptance by peers as the main reasons. The findings of this study are in keeping with those of Amosun *et al.*, (2010), whose study on causative factors of substance abuse among selected secondary school students in Ibadan revealed that the causes of substance abuse were numerous, including influence by peers. Findings from a separate study showed that peer pressure (19.5%) and desire for enjoyment

(13.3%) were the major causes of drug abuse among the respondents. The most commonly abused substances by the respondents include tobacco (29.2%), codeine (17.7%), marijuana, also known as Indian hemp (14.3%), and cola nut (3.4%). The majority of the respondents perceived the negative effects of drug abuse to be poor mental health (55.2%) and aggressive behaviours (18.5%) (Adamson *et al.*, 2015).

The finding of this study corroborates that of Al-Alawi and Shaikh (2018), whose study on the prevalence of substance abuse among school students in Al-Dhahirah Governorate, a suitemate of Oman, revealed that the influence of friends led to drug abuse. This finding is in line with that of Kobiowu (2010), whose study on the social and academic implications of drug abuse among undergraduates at Obafemi Awolowo University, Ile-Ife, revealed that peer influence was a major factor associated with drug abuse. It is in keeping with Abdu-Raheem (2013), who showed that there was a significant relationship between peer group influence ($r\text{-cal} (0.562) > r\text{-table} (0.195)$) and drug abuse. This supports Lateef and Ibrahim (2016), who showed that peer influence ($\hat{\alpha} = .289$; Sig. value = .000; $P < .05$) was a significant determinant of drug abuse. This is in line with the report of Oshodi *et al.*, (2010), which found that the primary reason for drug abuse among young people is peer group influence.

Conclusion

The study's findings illuminate a significant and noteworthy relationship between peer pressure and drug abuse among youths in the Andoni Local Government Area of Rivers State. The statistical analysis ($X^2\text{-value} = 16.719$, $df = 1$, $P < 0.05$) robustly confirmed this association. Delving deeper into the data, it became evident that 91 respondents (39.1%) who reported experiencing high levels of peer pressure also exhibited a high prevalence of drug abuse. Intriguingly, even among those with low levels of peer pressure, 35 individuals (20.1%) displayed a notable incidence of drug abuse. This underscores the pervasive impact of peer pressure on substance abuse behaviours in this context. In essence, the results strongly suggest that high levels of peer pressure contribute significantly to the prevalence of drug abuse among youths in Andoni Local Government Area. This conclusion is not only statistically supported but also carries important implications for targeted intervention and prevention strategies in addressing substances abuse issues in this region.

Recommendations

The following recommendations were put forward based on the findings of the study:

1. Drug education should be included by curriculum designers at all educational levels to help youths be aware of the danger.
2. Government, community leaders, opinion leaders, and religious organisations should always engage teenagers in meaningful activities that will limit peer pressure, inimical of causing dangers to them and the society at large.

References

Adeloye, D., Adebanye, O. I., Asa, A., Dewan, M. T., & Omoyele, C. E. (2019). Epidemiology of harmful use of alcohol in Nigeria: A systemic review and meta-analysis. *AMJ Drug Alcohol Abuse*, 45(5), 438-450. <https://doi.10.1080/00952990.2019.1628244>

Adeoti, Y. E. (2010). Factors influencing substance abuse among undergraduate students in

- Osun State. *African Research Review*, 4(4), 330-340.
- Akanbi, M. I., Godwin, A., & Ajibola, A. S. (2015). Impact of substance abuse on academic performance among adolescent students of College of Education in Kwara State, Nigeria. <https://www.semanticscholars.org>
- Al-Alawi, A. S. N., & Shaikh, J. (2018). Prevalence of substance abuse among the school students in Al-Dhabirah Governorate, Sultanate of Oman. *Madriaga Journal of Nursing*, 3(1), 118-123. <http://doi.org:10.18689>
- Asuka, G. (2017). Fundamentals of pharmacology and drug management. 42-45.
- Ayodele, J., Habibat, A. K., Babatunde (2018). Crime and adolescent drug use in Lagos State, Nigeria. <https://doi/10.15406/sij.2018.02.00034>
- Bolakale, A. S., & Markes, B. Y. (2015). Factors influencing drug use and abuse among undergraduate students of a tertiary institution in Nigeria. *International Journal of Science and Research*, 6(8), 388-397. <https://doi:10.14738/assrj.55.4357>.
- Chester, N. K. (2016). *Factors influencing drug abuse among students in public secondary schools: A case of Sirende Ward, Trans Nzola country, Kenya*. University of Nairobi Press.
- George, A. (2015). Determinants of substance abuse among senior secondary students in Main local government, Lagos State, Nigeria. *Global Journal of Medicine and Public Health*, 4(5), 2277-9674.
- Ijie, L. J., Babalola, A., & Yelwa, M. (2020). Effect of substance abuse on Nigeria's economic performance. *International Journal of Social Sciences and Economic Review*, 02(02), 35 - 46. <https://doi.org/10.36923/ijsser.v2i2.63>
- Jagnany, V. K., Murarka, S., Haider, S., Kashyap, V., Jagnany, K. A., Singh, S. B., & Lai, P. K. (2008). Pattern of substance abuse among the undergraduate student in a medical college hostel. *Health and Population Perspectives and Issues*, 3(3), 212-219. <https://doi.org/10.4103/0971-5916.178617>
- James, B. O. (2019). Drug treatment presentation at a treatment center in southern Nigeria. *NPMJ*, 26, 211-215.
- Kiriru, A. (2018). Effect of awareness on substance abuse among university students in a selected private university in Kenya. *African Research Journal of Education and Social Sciences*, 5(2), 27-37.
- Lakhanpal, P., & Agnihotri, A. K. (2017). *Drug abuse and mental health*. <https://thehealthcity.online.com>blog>
- Okafor, I. P. (2019). Causes and consequences of drug abuse among youth in Kwara State,

Nigeria. <https://doi.org/10.29173/cjfy29495>

Mahososa, I., & Moroena, S. (2017). Factors contributing to substance (drug) abuse among male, adolescents in South African public secondary schools. *International Journal of Social Sciences and Humanity Studies*, 9(1), 108-111, 2017. <https://doi.org/1309-8063>.

Olushola, O. (2019). Epidemic of substance abuse among Nigerian youths; A threat to our future. Lagos State University.

Oshikoya, K. A., & Alli, A. (2019). *Perceptions of drug abuse among Nigerian undergraduates*. <https://www.researchgate.net>238>

Shubi, J., Baderia, V. K., Agrawal, Y. K., & Shanghi, S. K. (2019). Fluorescence detection and identification of eight sulphonamides using capillary electrolysis on the released excipients in lake waters. <https://doi.org/10.1016/j.arabjc.2014/0:039>

The National Drug Law Enforcement Agency (2019). *Drug abuse: NDLEA fakes campaign to motor parts*. The punch newspaper, 2019.

United Nations Office for Drug and Crime (2010). Global developments in illicit drug production, trafficking and consumption. <https://www.unodc.org>WDR-2010>

United Nations office for Drug and Crime (2012). *Characteristics, patterns and driving factors in world drug report*. <Http//www.org//documents/dataanalysis/WDR-2012>.

United Nations Office for Drug and Crime (2018). Drug use in Nigeria, drug dependence and severity of dependence among drug users. Chapter 4, page 36, 2018, <https://www.unodc.org>drugs>

World Drug Report (2007). *Drug and alcohol; possible method to better assess and monitor the role played by organized crime in transnational trafficking*. drug and alcohol.ie

World Health Organisation (2019). *Health topic: substance abuse: Privacy legal notice*. <www.who.int/topics/substance-abuse>.

Foo, Y., Tam, C., & Lee, T. (2018). Family factors and peers influence in drug abuse. A study in rehabilitation centre". *International Journal of Collaborative Research on Internal Medicine and Public Health*, 3(4), 1150-1158. <Http://iomcworld.com/ijcrimph/ijcrimph-v04-n03-03.htm>

TEACHER PREPAREDNESS IN A DEPRESSED ECONOMY

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Abstract

The study investigated the preparedness of the teacher in a depressed economy. It is a survey research intended to assess the implications of the teacher's preparedness in achieving the set objectives for the educational growth in a depressed economy as the case of Nigeria. Two research questions were proposed. The instrument used is questionnaires. The findings demonstrated that teachers preparedness can make or mare the success of the students in the classroom situation. It is recommended that every teacher must be duly qualified and prepared for the advancement of academic success despite the depressed economy.

Keywords: *Teacher Preparedness, Depressed Economy, Expected Objectives Educational Development, Teacher Education.*

Introduction

This study investigates the preparedness of the teacher in a depressed economy. It is a survey research intended to assess the implications of the teacher's preparedness in achieving the set objectives for the educational growth in a depressed economy as the case of Nigeria. Two research questions were proposed. The instrument used is questionnaires. The findings demonstrated that teacher preparedness can make or mare the success of the students in the classroom situation. It is recommended that every teacher must be duely qualified and prepared for the advancement of academic success despite the depressed economy

Introduction

A professional is a member of a profession or any one that earns his living from articular professional activity. Professionalism explains the standards of education and training that prepare members of the profession with the particular knowledge and skills necessary to perform their specific function within a particular profession. In every field of study, a professional is subjected to strict codes of conduct, enshrining rigorous ethical and moral obligations. Professionalism also limits itself to those professions that serve some important aspect of public interest and the general good of the society (Mbu, 2016).

Professional standards of practice and ethics for a particular field are typically agreed upon and maintained through widely accepted professional associations. There are multiple of profession like law, medicines, nursing, banking, engineering, accounting, teaching etc. All professions are geared toward the development of the person and the society at large

(Akinsola, 2010).

Teacher Education

A teacher according to Amaele (2012) is one who knows his subject well, and will be able to stir the imagination of those entrusted to him. A teacher is the one who must be current with the developments in the field of his specialization. The teacher should have full knowledge of the learners. He should always seek, obtain and sustain the learners' interest. The teacher should be well equipped as a resourceful, dedicated and committed person who will encourage and inculcate into the learners the attitude of self-expression, enthusiasm, self-respect, self-confidence, self-discipline such other positive qualities. The teacher must not only build good character but must be a role model for the learners.

- i. The ability to arouse and maintain students' interest.
- ii. The ability to communicate ideas in clear, lucid, logical and organized manner.
- iii. The ability to assist learners develop appropriate skills
- iv. The ability to help learners develop their thinking process.
- v. The ability to motivate learners towards academic achievement
- vi. The ability to be enthusiastic, flexible, friendly and altruistic.
- vii. The ability to show good perception and knowledge of his subject matter.
- viii. The ability to create a conducive learning environment
- ix. The ability to implement proper evaluation of the learners.
- x. The ability to be properly healthy and physically sound.

The ability to be morally upright

According to Amaele (2012), a prepared teacher is both born and made. This is to say that only those who have the potentials to teach should be educated to teach. The negligence of this vital ingredient has thrown our education industry into chaos. Many people who teach in the classrooms are not prepared. They only sought for job and when they could not get it resorted to manage teaching. Teaching is a profession like law, medicine, engineering etc. Do not manage teaching. Many manage teaching for the sake of patronizing it and end up destroying the educational process (Ituen, 2014).

The prepared Teacher on Lesson Preparation and Presentation

All successful work is a product of good master plan. A good plan has an order, sequence and pattern. The plan is extremely systematic and purposeful. It embraces very coordinated efforts: what is required to be done first, it is done gradually from one level to complex, easy to difficult and from general to specific (Adeyemi, 2010).

In line with the above, Darling-Hammon (1998) recognizes that teaching like any other official activity requires a master plan which the teacher is the master planner. The master plan is the teacher's lesson plan. The lesson plan is the professional guide to a successful classroom teaching.

A prepared teacher is someone who is both knowledgeable and desires to know more. The

prepared teacher is the architect or master planner of the lesson plan. The teacher is mainly responsible the performance of the learners.

Depressed Economy

A depressed economy refers to such an economy that is very weak and bad. It does not have prospect. It affects all facet of the national development of the country. Specifically, the educational development is retarded and suffers a great loss. According to Alvoir (2014), a depressed economy is when a drastic decline in the gross domestic product (GDP). In this regards there is a dramatic downfall which affect individuals, society and the nation in general.

Statement of the Problem

The general assertion is that the standard of education is drastically falling. According to Otagburuagu (2004), the falling standard of education is closely associated with the high level of unpreparedness on the part of the teacher who is always being accused of not being qualified, not keeping the ethics and not of good conducts of a professional teacher. In the light of the above, it becomes imperative to know, what constitute a prepared teacher? What are expected of a prepared teacher? Whether every class roomteacher is a prepared teacher or not is the major issue of this study.

Purpose of the Study

The purpose of this study is to find out:

- i. Who is a prepared teacher?
- ii. What is expected from a prepared teacher?

Aim and Objectives of the Study

The aim of this study is to find out who a prepared teacher really is as to achieve the basic expectation of education development. Specifically, the study is to ascertain:

- i. What are the requirements of a prepared teacher?
- ii. What are expected of a prepared teacher in relation to educational development?

Research Questions

This study is guided by the following research questions:

- i. What are the requirements of a prepared teacher as to educational development in a depressed economy?
- ii. What are the expected results of a prepared teacher in relation to educational development in a depressed economy?

Methodology

This study adopted the descriptive survey research design. Administrative staff, teachers and students of 20 public senior secondary schools in Rivers State. A total of 200 respondents were drawn through the stratified random sampling technique. Ten respondents from each school that included the principal, four management staff and five students.

A self-structured questionnaire entitled: Teacher Performance Questionnaire (TPQ) was used

to elicit information from the respondents. The instrument was properly validated by research experts in Educational Foundation Department of the Rivers State

University of Science and Technology, Port Harcourt. The instrument was also subjected to reliability testing through the test-retest approach. This yielded a correlation index of 0.70 via Pearson Product Moment correlation statistics. The instrument was personally administered with the help of five trained research assistants. The complete copies of the questionnaire were collected and analysed through the use of mean ranking order to answer the research questions.

Data Analysis/Results Research

Question One:

What are the requirements of a prepared teacher as to educational development in a depressed economy?

Table 1: Requirement of a prepared teacher

S/n	Statements	3 Agreed	2 Disagreed	Mean	Std Dev.
1	All prepared teachers must have professional academic qualification	160	40	2.8	19.6
2	A prepared teacher strictly keeps to professional ethics	130	70	2.7	16.9
3	Moral uprightness proves a prepared teacher	170	30	2.8	11.9
4	Every prepared teacher must keep to all responsibilities	120	80	2.6	16.3
5	Punctuality and regularity to duty demonstrate a prepared teacher	150	50	2.8	18.6

Standard reference Mean $(\bar{x}) = 2.5$

Table 1 shows that all the mean ratings obtained for the various attributes measured are greater than the standard reference mean of 2.5. This indicates that the requirement of a prepared teacher as to affect educational development in a depressed economy are as indicated in table one from statement 1 to statement 5.

Research Question Two:

What are the expected results of a prepared teacher in relation to educational development in a depressed economy?

Table 2: The expected results of a prepared teacher

s/n	Statements	3 Agreed	2 Disagreed	Mean	Std Dev.
1	A prepared teacher is expected to produce academically sound students.	190	10	28.6	19.9
2	A prepared teacher is expected to produce morally sound students.	115	85	18.1	12.8
3	A prepared teacher is expected to attend to learners' needs.	150	50	23.0	15.8
4	A prepared teacher is expected to create student-created learning.	120	80	18.8	13.8
5	A prepared teacher is to use a variety of effective instructional approaches to ensure that all students are successful in learning .	180	20	27.3	264.5

Standard reference $\text{Mean}(\bar{x}) = 2.5$

Table 2 shows that the various mean ratings as obtained for the various attributes measured are greater than the standard reference mean of 2.5. This demonstrates that the result expected prepared teacher as to affect the educational development in a depressed economy are as indicated in table two from statement 1 to statement 5.

Summary of Findings

- i. A prepared teacher is a professional who has the academic qualification and has enough teaching experiences that are needed in a classroom situation. He is a carrier professional who has the teaching prerequisite with passion not only for the growth of the teaching profession but for the academic development of both the learners and the society at large.
- ii. The performance of a prepared teacher in the classroom situation is to arouse and maintain the learner's interest, to communicate clear ideas to learners, to assist learners develop good skills and thinking process, to motivate learners towards academic achievement and to largely contribute to the national education advancement even in the face of a depressed economy.

Discussion of Findings

The findings of this study reveals that a prepared teacher should have the academic qualification and be ready for the teaching job with passion and commitment. This agreed with the view of Amaele (2012) who notes that the profession of teaching should not be neglected by bringing in quacks who only resolve to teaching to sustain or earn a living in the interim.

The study also revealed that as long as a teacher is prepared, he is saddled with the responsibilities of contributing to the academic success of the learners. The learner is motivated, encouraged and assisted to focus on the expected goal until a success is

achieved. This is in one accord with the observation of Peretomode (1992) who recognizes that a prepared teacher has the ability to motivate learners towards their academic achievement.

Conclusion

Every teacher in the classroom should not be regarded as a prepared teacher because most of them have result to manage teaching profession since they could not get job in their respective profession. The prepared teacher is the one who is academically qualified and have all it takes to discharge the teaching professional responsibilities. In the era of economic depression, it is only the prepared teacher that through his discharge of duties that can still keep academic development on the upward direction.

Recommendations

1. Every classroom teacher should be judged on the level of preparedness to encourage academic success.
2. The teaching employment in both the public and private schools should be based on the level of teaching preparedness.

References

- Adeyemi, B. (2010). Teacher related factor as correlates of pupils' achievement in social studies in South West. Nigeria. *Electronic Journal of Research in Education psychology*, 8(1), 313-332.
- Akinsolu, A. O. (2010). Teacher and students' academic performance in Nigeria Secondary Schools: Implication for planning. *Florida Journal of Educational Administration and Policy*, 3(2), 86-103.
- Alvior, M. G. (2014). The meaning and importance of curriculum development in simply Teduateme retrieved from importance-of-curriculum-development.
- Amaele, S. (2012). *Moral Values in Nigeria Education*. Port Harcourt: Minson Publishers.
- Darling-Hammon, L. (1998). Teacher and Teaching: Testing policy hypotheses for anational commission report. In *Educationist Research*, 7(1) 5-15.
- Ituen, S. A. U. (2014). *Element of Teaching*, Ugo: Abigals Associates.
- Mbu, M. D. (2016). Trends in Educational Studies. *Journal of the Institute of Education University of Port Harcourt*. 9 (1 and 2), 182-186.
- Otagburuagu, E. J. (2004). English language literacy instruction in Nigeria as a multilingual society. *Literacy and reading in Nigeria*, 9(1), 194-205.
- Peretomode, V. F. (1992) *Introduction to teaching profession in Nigeria*. Owerri: Nigeria. Tolan Publishers Limited

**ETHICAL ISSUES IN ELECTRONIC HEALTH RECORDS MANAGEMENT: A
GENERAL OVERVIEW**

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Abstract

The complexities of the emergence of the electronic health record system, has brought about the need to understand what the health information system has been, is now, and what it is to become. Clinical teams, doctors, and patients can all benefit from electronic health records (EHRs), but there are ethical concerns as well. An evaluation of the EHR's effects on patient care and the patient-physician interaction is necessary when figuring out how to deliver healthcare in the digital age. EHRs should complement the patient-physician interaction and make patient care easier, as they are a crucial part of that care. EHRs are now better equipped to fulfill external responsibilities like as billing, regulation, research, documentation, and administrative duties that are dictated by the operational requirements of payers, health care systems, and others than they are to guarantee that patient care needs are addressed. It is the profession's duty to recognize and resolve this mismatch. However, studies have not consistently shown that EHRs are accurate, that access is available to underprivileged individuals, that they increase productivity, or that costs are reduced. If beneficence is universally accepted, then it contradicts with other moral precepts. When patients' health records are connected or shared without their consent, autonomy is put in danger.

The disclosure of thousands of patients' medical records due to errors or theft is a breach of fiduciary duty. Patients may conceal important information if they have misgivings about the security of their health data.

Keywords: *Ethical issues, Electronic health records management, Health records management.*

Introduction

In order to understand the complexities of the emerging electronic health record system, it is helpful to know what the health information system has been, is now, and needs to become. The medical record, either paper-based or electronic, serves as a communication tool that supports clinical decision making, coordination of services, evaluation of the quality and efficacy of care, research, legal protection, education, and accreditation and regulatory processes. It is the business record of the health care system, documented in the normal course of its activities. The documentation must be authenticated and, if it is handwritten, the entries must be legible (Harman *et al.*, 2012).

An electronic health record (EHR) is a record of a patient's medical details (including history, physical examination, investigations and treatment) in digital format. According to the National Alliance for Health Information Technology a more standardized definition of an Electronic Health Records had been adopted, thus it is being defined as, "An electronic record of a health-related information on an individual that conforms to nationally recognized interoperability standards that can be created, managed and consulted by authorized clinicians and staff across more than one healthcare organization". The obvious need for clinicians to have patients' information for improved efficiency and productivity has necessitated Physicians and hospitals implementing EHRs because they offer several advantages over paper records. They increase access to health care, improve the quality of care and decrease costs (Jamshed *et al.*, 2015)

Potential Benefits of Electronic Health Records

According to Entzeridou *et al.* (2018), Electronic Health Record (EHR) systems have a number of advantages for the medical field, but they also carry some concerns. As a result, a deeper comprehension of the attitudes influencing the general support for EHRs is necessary. However, using EHRs comes with privacy risks, legal ramifications, and societal challenges. These include: a) privacy risks, like identity theft and data falsification; b) ownership and management of the stored health data; and c) other issues; the risk of stigma associated with employers' access to health information (c), the access to health information that private insurance companies have (d), the practical obstacles to the adoption of EHRs in clinics and practices (e), and the lack of standardization in EHRs that prevents the exchange of clinical data.

A medical record in the past was information documented on paper for research, clinical, administrative and financial purposes. Its major drawback was in terms of accessibility, and it was available to one user at a time. Its completion was always delayed and takes time for it to be updated as it was usually done manually (Jamshed *et al.*, 2015). The purpose of documentation through electronic media remains the same even today relative to paper records, that is to support patient care. EHRs have several advantages over paper records. Such as:

- Production of legible records that reduces many problems of wrong prescriptions, doses and procedure.
- Adverse drug reactions can be reduced substantially when the EHRs are connected to drug banks and pharmacies. This can be done by not permitting prescription and order for drugs for which a known adverse reaction is known for a certain patient.
- Easy accessibility from anywhere at any given time is also beneficial.

- They require less storage space and can be stored indefinitely. They reduce the number of lost records, help research activities, allow for a complete set of backup records at low cost, speed data transfer and are cost-effective.
- Hence, EHRs have been shown to improve patient compliance, facilitate quality assurance and reduce medical errors.

Electronic Health Records (EHRs) improve all aspects of patient care, including safety, effectiveness, patient-centeredness, communication, education, timeliness, efficiency, and equity.

Other benefits of EHRs include:

- Enhancing collaboration
- Enabling patient-centered care
- Targeting therapies for increased success
- Harnessing the power of big data
- Facilitating a team-based approach

McBride *et al.* (2018), posited that Electronic health record (EHR) is increasingly being implemented in many developing countries because it improves the quality of health care and is also cost-effective, although technologies can introduce some hazards, hence safety of information in the system is a real challenge. They further averred that recent news of security breaches has put a question mark on this system despite its increased usefulness, and increasing enthusiasm in its adoption, not much attention is being paid to the ethical issues that might arise and that securing EHR with an encrypted password may likely be a probable option.

Ethical Model

The study of ethics has been present throughout centuries as ethics assist individuals in reaching moral choices that conform to standards of conduct. Multiple approaches to ethical reasoning exist, each of which apply to the health care field. According to Mcway (2010), making morally right decisions is one of life's most routine and difficult tasks at the same time. Ethics is so ingrained in daily life that many people are unaware that moral considerations play a significant role in many of the decisions they make. Certain decisions—like figuring out whether there is a conflict of interest or whether knowing what defines ethics necessitates learning about numerous modes, concepts, and theories—are made with relative ease, while others need significant worry.

Ethics defined: - The formal study of moral choices that conform to standards of conduct, such as listening to one's conscience and making judgements between right and wrong.

- i. **Morals:** - derived from Latin word-mores, are the principles or fundamental standards of “right” conduct that an individual internalizes. Right moral conduct is often based on traditional religious teachings and personal moral choices.
- ii. **Etiquette:** It bears a relationship with ethics and refers to how human beings relate to one another under certain circumstances. In other words, etiquette is a social code of customs and rituals.
- iii. **Law:** By contrast, is a body of rules of action or conduct prescribed by a controlling authority that has binding legal force. Laws are created as a means to control behavior and protect the public from danger. Law and ethics are closely related.
- iv. **Values:** - The building block on which the four concepts are based (ethics, morals, etiquette and law). Values are concepts that give meaning to an individual's life and serves as the framework for decision making, e.g. hard work, honesty, cleanliness.

Ethical Concepts

Ethics often touches upon individual's principles of living and it is best understood by learning it at the abstract level while applying it to a personal level. Looking at it in the abstract, ethics underscore the decision that guides human reasoning which include the followings; Autonomy, Beneficence, Best-Interest Standard, Fidelity, Justice, Rights and Veracity. McWay (2010), studied various ethical concepts and concluded that autonomy, which could be defined as independence, self-determination, or freedom, is a concept that many people can easily understand. It comes from the Greek words *autos*, which means "self," and *nomos*, which means "government." The hallmarks of autonomy, according to her, are respect for the individual and the belief that the individual will make decisions in line with their plan of choice. As a result, in order for autonomy to exist, three prerequisites must be met: the capacity for decision-making, the authority to carry out or execute a decision, and the recognition of the autonomy of others.

The privilege information that patients provide to doctors during consultations strengthens their relationship and is particularly private and confidential when applied to EHRs. In applying this to EHR, the privilege information offered by patient to the doctor that cement their bond of relationship during consultation is extremely private and confidential and carry along greater ethical values. Within the health care field, autonomy is embedded in the concept of informed consent, which requires the healthcare providers to disclose to patients, adequate information in a manner the patient can understand. Although autonomy is viewed as a freedom or individualism, some restrictions do exist in instance where such action may jeopardize the interest of others. Privacy and confidentiality are major ethical priorities for EHRs that guaranteed that only relevant information that justifies patient's care are documented and shared by health-care providers.

- **Beneficence/Non-maleficence:** EHRs are seen as beneficent because of alleged increased access to health care, but research has not consistently demonstrated access for disadvantaged persons. The Hippocratic Oath contain multiple examples of beneficence and non-maleficence, stating in part that the physician will apply measures to benefit the sick, creating obligation to promote the health and welfare of the patient above other considerations. While for non-maleficence the Oath considered that the physician will keep the patient from harm and injustice as well as refraining from all intentional injustice.
- **Fidelity:** Security is a major ethical priority for EHRs. This emphasizes the obligation on the part of health care providers to keep confidential all vital information pertaining to the patient in the course of their contact. The Hippocratic Oath stresses on this as it asserts that “what I may see or hear in the course of the treatment or even outside or the treatment in regard to the life of men, in which on no account one must noise abroad, I will keep to myself holding such thing shameful to be spoken about.
- **Best-Interest Standard:** Determining what is in the best interest of an individual when the individual cannot make a decision alone is the essence of the Best-Interest Standard. Within the health care field, the best-interest standard is most often seen when decision must be made about the direction of a patient's healthcare treatment and the patient is unable to make such decision or provide informed consent. In such instances health care providers look to past evidences of patient's expressed wishes such as living will or power of attorney for healthcare. In the absence of this the health care providers may resort to family guidance or turn to the judicial system for help.
- **Justice:** Data integrity and availability are major ethical priorities for EHRs. In the context of healthcare distributive justice applies to issues of access to scarce resources, requisite healthcare providers and health plan to provide an individual recipient with

care and services he or she deserves ensuring data availability and integrity. This concept posits that all persons have equal opportunity to proper health information that is required of the treatment to be provided as at the point of need as being provided for others in all fairness. The concept encompasses six criteria to be regarded as just distribution when faced with scarce resources; need, equity, contribution, ability to pay, effort and merit.

- i. Need refers to required health information not elective or doctored data
 - ii. Equity refers to ensuring easy access and distribution of such information as a proper means of communication amongst health care providers.
 - iii. Ability refers to the competence of the patient to provide succinct information that will aid treatment.
 - iv. Effort refers to the willingness to comply and cooperate in giving evidence based fact that will facilitate care without undue inference.
 - v. Merit refers to the potential for benefit considering treatment end-point based on available health records.
- Right, refers a just claim and entitlement based on law. In the context of health, patient right is an obligation addressed in terms of privacy and confidentiality of his privileged communication which must be protected from unlawful divulgence.
 - Veracity. Refers to habitual truthfulness and honesty. In the health information context, veracity is seen in the special relationship between patient and the health care providers. It is important that the patient inform the health care providers of all relevant information pertaining to his care (McWay, 2010).

Ethical Issues in Electronic Health Records

Ethical issues related to EHRs confront health personnel, when patient's health data are shared or linked without the patients' knowledge. According to Layman (2020), Ethical issues such as, beneficence, autonomy, fidelity, and justice related to electronic health records (EHRs) confronts health personnel, health leaders, and health policy makers. She averred that EHRs are seen as beneficent because of alleged increased access to health care, but research has not consistently demonstrated access for disadvantaged persons. Autonomy on the other hand is jeopardized when patients' health data are shared or linked without the patients' knowledge. Fidelity is also breached by the exposure of thousands of patients' health data through mistakes or theft. Lack of confidence in the security of health data may induce patients to conceal sensitive information, and as a consequence, patients' treatment may be compromised. Justice is breached when persons, because of their socioeconomic class or age, do not have equal access to health information resources and public health services (Layman, 2020).

i. Patient-Doctor Relationship

Sulmasy *et al.* (2017), posited that disruptive innovations are a double-edged sword, bringing both opportunity and risk. The electronic health record (EHR), has simultaneously facilitates and complicates the delivery of health care, and provide benefits for patients, physicians, and clinical teams, but also raise ethical questions. They averred that navigating how to provide care in the digital age also requires an assessment of the impact of the EHR on patient care and the patient–physician relationship. In their view, EHRs should facilitate patient care and, as an essential component of that care, support the patient–physician relationship. Billing, regulatory, research, documentation, and administrative functions determined by the operational requirements of health care systems, payers, and others, that are better able to satisfy such external functions than to ensure that patient care needs are met.

Enhanced portability and accessibility of EHR data raises ethical questions regarding ownership of protected health information (PHI) and clinicians' responsibility to prevent and inform patients of the potential for privacy breaches. According to Layman(2020), there is an increased risk of unauthorized PHI disclosures via EHRs. These concerns may be valid through the careless acts of several EHR vendors that may have sold de-identified copies of their patient databases to pharmaceutical companies, medical device makers, and health services researchers. She further opined that de- identified data sets can often be re-identified using publically available external data sources and these and related have caused concerns where several patient privacy advocacy groups have called for a right to “opt-out” of having one's PHI stored in EHRs, which will cause new ethical and financial dilemmas. This situation may jeopardize patient's smooth care as compliance with opt-out provisions will likely require additional clinic time and resources to maintain separate paper based records, and clinicians may be less inclined to care for these patients. Clinicians might not be able to collect “meaningful use” medical payments on these patients.

EHR Use for Clinical Reasoning and the Development of Cognitive and Diagnostic Skills.

Computer use does not change how clinicians think and teach and how trainees learn clinical reasoning. Using EHR, patient is treated based on test results, reports, and EHR data and where indeed, first inpatient encounters are often electronic, it leads to the “flipped patient” phenomenon in a world, where history-taking as a rich dialogue can be lost and simple, validated, effective high-value care may be overlooked.

Features in EHRs may encourage learners to make medical decisions or deliver medical care without having to interact directly with patients which can undermine the student's development of patient-centered care practices. Adequate interaction with patient provides psychosocial, cultural, and emotional clues to understanding the patient's symptoms, health, and goals, which are critical not only to information-gathering, but communication and relationship-building. Caring for and learning from a patient and not primarily an electronic representation of the patient is essential to the “joy, excitement, intellectual pleasure, pride, disappointment, and lessons in humility that trainees might experience and in respecting the dignity and uniqueness of each patient.

Clinical Reasoning

EHRs use “smart phrases,” templates, and drop-down menus to facilitate documentation. Cognitive science research is beginning to explore the impact of “discrete field thinking” on patient care. Some features of electronic documentation may encourage superficial clinical thinking and interaction. Clinical decision support (CDS) tools, prompts, reminders, and medication and allergy alerts can be a helpful use of structured data. However, there can be problems in implementation. Templates and check-boxes may not always be relevant to current care, but require a box to be checked to close a note, calling into question the physician's honesty. Honesty is an ethical responsibility. EHRs should always provide a “not asked” choice. Clinically unhelpful tools may result in “alert fatigue” and false documentation or up-coding, whether inadvertent or not. Billing for services not provided is unethical.

Documentation: Copy-and-Paste and Note Bloat

EHRs encourage “copy-and-paste” (C&P)—copying previous entries into the current note. This might save time, but may not reflect current thought processes, leading to unhelpful, repetitive entries.

It also prevents opportunities for trainees to learn and practice critical cognitive skill development. Focusing on features in the patient's initial presentation early in the diagnostic process can lead to the cognitive bias of “anchoring”, where the initial impression is not

adjusted, even given new information. Although also a risk with paper documentation, smart phrases and templates may prompt a narrowing of the diagnostic horizon. Copy and Paste, without attribution may perpetuate inaccuracies and even constitute fraud. EHRs also suffer from “note bloat,” or lengthy extraneous information from previous entries and copy and paste exacerbates note bloat as does template-driven importation of data (old laboratory or other results), burying relevant information. In as much as illegible paper records contained disorganized notes, EHRs can capture large amounts of repetitive information.

It is pertinent to note that accurate complete information in the medical record—paper or electronic, is an ethical responsibility.

ii. EHRs and Information Security

The increasing concern over the security of health information stems from the rise of EHRs, increased use of mobile devices such as the smartphone, medical identity theft, and the widely anticipated exchange of data between and among organizations, clinicians, federal agencies, and patients. The National Institute of Standards and Technology (NIST), the federal agency responsible for developing information security guidelines, defines information security as the preservation of data confidentiality, integrity, availability (commonly referred to as the “CIA” triad). The federal legislations such as the Health Insurance Portability and Accountability Act (HIPAA) and the Health Information Technology for Economic and Clinical Health (HITECH) Act also mandate health information protection. Violating these regulations has serious consequences, including criminal and civil penalties for clinicians and organizations. If patients' trust is undermined, they may not be forthcoming with the physician and for the patient to trust the clinician, records in the office must be protected. Medical staff must be aware of the security measures needed to protect their patient data and the data within their practices (Harman *et al.*, 2012).

Computer-based personal health information breaches also raise complex ethical and legal issues regarding the appropriateness of current methods to address them. For instance, currently, institutions use audit logs as evidence to justify firing personnel who deliberately access EHRs without authorization. Although privacy breaches certainly occurred with paper-based records, they are limited in scope and almost impossible to detect. There are also unavoidable violations of EHR with the use guidelines, for instance, an employee is pulled away from their workstation for an emergency while logged in, and a bystander surreptitiously accesses multiple patient records. This is a situation that can lead to unethical violation of EHR. There are also ethical dilemmas attached to the implementation of EHR that require a redesign and rationalization of the healthcare and payment system, such as;

- Who will oversee the data aggregation, verification and validation, and analysis;
- Who will have data access;
- Who will make the final data interpretations; and
- Assuming that everyone agrees they are correct, who will adjudicate the ethical disagreements that inevitably surface when data are used to inform new healthcare policies.

Sittig and Singh (2011), posited that there are many ethical dilemmas surrounding privacy and control of electronic information that remained unresolved with increased availability of personal health records. That the rights of adolescents in light of their parents' proxy access to their data must be carefully maintained. Although adolescents are allowed to protect information from their parents and consent to treatments for certain sensitive conditions in

which a need for parental involvement may inhibit care, consent to other therapies still requires parental involvement. The averred that other than having a separate confidential EHR, there still exist ethical dilemma and there require adequate measures as to how personal health records will restrict parental access to such sensitive information when adolescents reach adulthood or are emancipated and how such records are transferred.

Harman *et al.*, (2012), postulated that another potential threat is that data can be hacked, manipulated, or destroyed by internal or external users, so security measures and ongoing educational programs must include all users. In their view some security measures that protect data integrity include fire walls, antivirus software, intrusion detection software and that regardless of the type of measure used, a full security program must be in place to maintain the integrity of the data, and a system of audit trails must be operational. Security breaches threaten patient privacy when confidential health information is made available to others without the individual's consent or authorization. Keeping records secure is a challenge that doctors, public health officials and federal regulators are just beginning to understand. Cloud storage, password protection, and encryption are all measures health care providers can take to make portable EHRs more secure

Privacy and Confidentiality

According to Tariq and Hackert (2023), ensuring the security, privacy, and protection of patients' healthcare data is critical for all healthcare personnel and institutions, especially in this age of fast-evolving information technology. This is truer than ever before as in the past, healthcare workers often collected patient data for research and usually only omitted the patients' names. This is no longer permitted, now any protected health information (PHI) that can identify a patient or the patient's relatives, employers, or household members, must be omitted before being used for research. The health insurance portability and accountability act (HIPAA) public law 104-191, was enacted into federal law to ensure that patient-specific health information or patient medical data remains private and secured.

They further opined on the two main sections of the law which bothered on, the privacy rule which addresses the use and disclosure of individuals' health information, and the security rule which sets national standards for protecting the confidentiality, integrity, and availability of electronically protected health information. The privacy rule specifies 18 elements that constitute Personal Health Information (PHI). These identifiers include demographic and other information relating to the past, present, or future physical or mental health or condition of an individual, or the provision or payment of health care to an individual.

The health insurance portability and accountability act (HIPAA) was enacted to encompass three areas of patient care:

- i. Portability of insurance or the ability of a patient/worker to move to another place of work and be certain that insurance coverage is not denied
- ii. Detection and enforcement of fraud and accountability
- iii. Simplify administrative procedures in health care and other professions (this is an area where communication and transmission of records are done electronically).
With improved technology, the role of wearable technology and androids to disclose PHI is now under scrutiny (Tariq & Hackert, 2023).

According to Harman *et al.*, (2012), Justice Samuel Dennis Warren and Justice Louis Brandeis defined privacy as the right "to be let alone." The other definition given by Richard Rognegaugh is as the right of an individual to keep information about themselves from being disclosed to others; the claim of individuals to be let alone, from surveillance or interference

from other individuals, organizations or the government. Information of a patient should be released to others only with the patient's permission or allowed by law. When a patient is unable to do so because of age, mental incapacity the decisions about information sharing should be made by the legal representative or legal guardian of the patient. Information shared as a result of clinical interaction is considered confidential and must be protected.

Confidentiality is rarely challenged in itself. It is accepted by most doctors and patients as one of the main planks of a relationship of trust between doctors and patients, although close examination of what confidentiality is for, why it is necessary, and what it means in practice, reveals some deep and fundamental divisions in understanding and expectations, doctors still have ethical and legal duty to respect patient confidentiality. They averred that enabling patients to decide how information about them is disclosed is an important element in autonomy and helps patients engage as active partners in their care (O'Brien & Chantler, 2003).

McWay (2010), posited that confidentiality refers to the obligation of the health-care provider to maintain patient information in a manner that will not permit dissemination beyond the health-care provider. She averred that the concept of confidentiality from its origin in professional practice to its development into legal protections, this concept has served to protect patient-specific health information from disclosure. The obligation to protect patient-specific health information has been the sole responsibility of the health information managers and all those involved in patient care. Health care institutions, insurance companies and others will require access to the EHRs data if it is to function as designed, but the key to preserving confidentiality is to allow only authorized individuals to have access to such information. The user's access is based on pre-established role-based privileges. The administrator identifies the user, determines the level of information to be shared and assigns usernames and passwords. The user should be aware that they will be accountable for the use and misuse of the information they view. They have access to the information they need to carry out their responsibilities.

Assigning user privileges is a major aspect of medical record security that streamlined controlling access to health information which is very important, but is not sufficient for protecting the confidentiality of health information. Additional security steps such as strong privacy and security policies are essential to secure patient's information. Piasecki *et al.* (2012), posited that managing accessibility consists of interconnected and overlapping issues, such as streamlining research access to EHRs, minimizing risk, engaging and educating patients, as well as ensuring trustworthy governance of EHR data and that most of the ethical problems concerning EHR-based research arise from rapid cultural change. They asserted that the framing of concepts of privacy, as well as individual and public dimensions of beneficence, are changing and that human emotions and mental habits, as well as laws, are lagging behind technological developments. In the medical tradition, individual patient's health has always been in the center. They also observed that transformation of healthcare care, its digitalization, seems to have some impacts on our perspective of health care ethics, research ethics and public health ethics.

Easy access for information retrieval and exchange through EHRs improve care, but also create the risk of unauthorized use, access, and disclosure of private patient information, raising confidentiality and privacy concerns. Unauthorized access could also have implications for patient family members if genetic information is involved, thereby jeopardizing respect for patient autonomy which requires that patient encounters and

information are kept confidential and private, fostering trust and improving communication.

However, this may inadvertently may prevent patients disclosing important information or avoid seeking care, fearing denial of insurance, loss of employment, or stigmatization. While this is also true of paper records, concerns are heightened with EHRs because information is so readily transmitted and system breaches are not uncommon, despite security measures. Breaches may occur accidentally, through cyberattacks, or due to lapses in professional conduct, such as searching for test results of a family member or celebrity.

Access to Information

As a matter of law and ethics, patients have a right to the information in their medical records. EHRs can increase participation and engagement in health care through patient access, empowerment, and improved communication. The knowledge that a patient may read a note may improve documentation, but full access can also challenge the physician's ability to write candid notes, especially regarding sensitive information (e.g., about mental health, substance abuse, sexual behavior, or appearance).

The Digital Divide

Patient access to electronic information presents opportunities to meld the “digital culture” with personal responsibility for health. The non-availability of internet access to all health seekers might be exacerbated by EHRs thus creating a “digital divide” between those with and without Internet access, contributing to health disparities. Patients lacking Internet access are more likely to have lower socioeconomic status, educational levels, and health literacy and to be elder, resulting to poorer health outcomes.

System Implementation

Akwaowo et al. (2022), posited that the behavioural intentions of healthcare professionals to accept and use a new health information technology, influenced the success of health information systems, which revolves around system quality attributes like ease of use, response time, usability; information quality attributes like completeness, accuracy of data, legibility; Usage attributes like number of entries, frequency of use, duration of use; User attributes like user satisfaction, attitude, user friendliness; Individual impact attributes like changes to work patterns, documentation frequency, time of day for documenting; and organizational impact attributes such as impact on patient care, communication and collaboration, reduction of staff as well as time saving.

Health care organizations encounter major challenges in the course of EHR implementation, and these challenges result in wasted resources, frustrated providers, loss of confidence by patients and patient safety issues. The development, implementation, and maintenance of EHRs requires adequate funds and the involvement of many individuals, including clinicians, information technologists, educators, and consultants. Hospitals and health care institutions are making improvements without significant clinician engagements. Many EHR implementation projects fail because they underestimate the importance of one or more health-care providers to serve as opinion leaders for providers in the clinic. Thus, clinician must guide colleagues in understanding their roles in the implementation and enlisting their involvement in tasks as EHR selection, workflow design, and quality improvement.

Clinical personnel often have little knowledge of the clinic's workflow and the roles others play in care delivery. This has often resulted in inadequate planning for successful implementation of EHR. Without identifying a standardized best practice method to do the

work, every user is left to struggle. It is therefore pertinent that a well mapped out standardized workflows is done by the clinic before EHR selection. When any two systems are integrated, an interface is created. By the user interface, we mean an interface between the user and the computer system. These interfaces are critical to the overall success of the implementation process.

Interface issues are the greatest system risk because these failures can be invisible initially. Lack of systemic consideration of users and tasks often results in poor user interface, and poorly designed user interface accounts for unintended adverse consequence leading to decreased time efficiency, poor quality of care and increased threat to patient safety, failure to deliver the much needed quality of care, leading to user dissatisfaction and occasionally abandonment of EHR. Maintenance and testing of these interfaces on a routine basis is essential in controlling this major risk. Practice disruption during EHR implementation can negatively impact the quality of care or endanger patient safety along with financial loss.

Data Inaccuracies

Integrity assures that the data is accurate and has not been changed. EHRs serve as a way to improve the patient's safety by reducing healthcare errors, reduce health disparities and improve the health of the public. However, concerns have been raised about the accuracy and reliability of data entered into the electronic record. Inaccurate representation of the patient's current condition and treatment occurs due to improper use of options such as "cut and paste". This practice is unacceptable because it increases the risk for patients and liability for clinicians and organizations. Another feature that can cause a problem in the data integrity is the drop down menu and disposition of relevant information in the trash. Such menus limit the choices available to the clinician who in a hurry may choose the wrong one leading to major errors. Clinicians and vendors have been working to resolve software problems to make EHRs both user- friendly and accurate.

Loss or destruction of data occurs during data transfer; this raises concerns about the accuracy of the data base as patient care decisions are based on them. A growing problem is of medical identity theft. This results in the input of inaccurate information into the record of the victim. The person's insurance company is billed for medical services not provided to the actual policy holder and the patient's future treatment is guided by misinformation that neither the patient nor provider immediately recognize.

CONCLUSION

The usage of EHRs and apparent advancements in implementation techniques notwithstanding, benefits are still not being realized to the full extent that was anticipated. EHRs present significant hurdles for doctors because of their end users, which limits their ability to support clinicians' work and raise the standard of patient care. It's still debatable whether or not using EHRs increases practitioners' productivity (i.e., "saves time"). Even while some people think that using EHRs has improved patient care, more has to be done. To get at a more certain conclusion, it is specifically necessary to identify the intricate process underlying the measurement of patient outcomes associated with the adoption of EHRs (Tsai *et al.*, 2020)

Computers are tools. They do not fundamentally alter the goals of medicine or the ethical responsibilities of the profession. EHR development, however, has focused not on capturing the patient's story and physician's thought processes and care plans, but on billing, administrative, and regulatory elements. Documentation requirements have led to check-box and drop-down menu shortcuts; repetitive and sometimes inaccurate information is

perpetuated.

While some functions can enhance the speed and structure of documentation, unreasonable requirements can impose their own burdens. Although policy bodies have recognized the potential for health information technology (HIT) to improve care, they have also cautioned that HIT does not effectively support the diagnostic process and may contribute to errors. For example, “challenges include problems with usability, poor integration into clinical workflow, difficulty sharing a patient's health information, and a limited ability to support clinical reasoning and identification of diagnostic errors in clinical practice.

These challenges give rise to ethical concerns that are not just the problem of health information technology (HIT) professionals, and must be addressed by the medical profession. “The adoption of EHRs causes significant changes in the day-to-day experience of those practicing medicine. To realize the promise of EHRs, more work is needed, and moving forward, we would do well to remember the words of T.S. Eliot: “Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?”

Recommendations

Today, technologies that aid the delivery of care through the use of EHR are ubiquitous. Although EHRs have demonstrated value in features such as legible information, accurate prescriptions, remote access to information, and prevention reminders, EHR has also brought unintended consequences.

The primary goal of EHR-generated documentation is to ensure conciseness, history-rich notes, with a technology that supports care goals in the most efficient manner possible without losing the humanistic elements of the record that support doctor-patient relationships.

The following measures should be considered for the enhancement of adequate ethical consideration.

- There should be adequate leadership supports to enhance continuity and growth.
- Enthusiasm for EHR adaptability and sustenance
- Flexibility of the system for easy operation
- Proper funding for safety equipment.
- Support for teamwork for improve usability of EHR.
- Adherence to ethical principles and standards
- Built in security for protection, privacy and confidentiality
- Provision for continuous back up
- Standard operational procedures and protocols.
- Adequate provision of internet connectivity and power supply.
- Restriction to information access through use of protective passwords.

Reference

Akwaowo, C. D., Sabi, H. M, Ekpenyong, N., Isiguzo, C. M., Andem, N. F., Maduka, O., Dan, E., Umoh, E., Ekpın. V., & Uzoka, F. M. (2022). Adoption of electronic medical records in developing countries—A multi-state study of the Nigerian healthcare system. *Front. Digit. Health 4*.

- Entzeridou, E., Markopoulou, E., & Mollaki, V. (2018). Public and physician's expectations and ethical concerns about electronic health record: Benefits outweigh risks except for information security. *International Journal of Medical Informatics*, *110*(1), 98–100.
- Jamshed, N., Ozair, F. F., Sharma, A., & Aggarwal, P. (2015). Ethical issues in electronic health records: A general overview. *Perspectives in Clinical Research*, *6*(2), 73.
- McBride, S., Tietze, M., Robichaux, C., Stokes, L., Weber, E., (2018). Identifying and addressing ethical issues with use of electronic health records. *OJIN: The Online Journal of Issues in Nursing*, *23*(1), 5.
- McWay, D. C. (2010). Legal and ethical aspects of health information management, Delmar, 5 Maxwell Drive, Clifton Park.
- Harman, L. B., Flite, C. A., & Bond, K. (2012). *Electronic health records: Privacy, confidentiality and security*. *Virtual Mentor*, *14*(9), 172.
- Layman, E. J. (2020). *Ethical issues and the electronic health record*. *The Health Care Manager*, *39*(4), 150–161.
- O'Brien, J., & Chantler, C. (2003). Confidentiality and the duties of care. *Journal of medical ethics*, *29*(1), 29. <https://doi.org/10.1136/jme.29.1.36>
- Piasecki, J., Walkiewicz-Żarek, E., Figas-Skrzypulec, J., Kordecka, A., & Dranseika, V. (2021). *Ethical issues in biomedical research using electronic health records: A systematic review*. *Medicine, Health Care and Philosophy*, (), –. doi:10.1007/s11019-021-10031-6
- Sittig, D. F. & Singh, H. (2011). Legal, ethical, and financial dilemmas in electronic health record adoption and use. *PEDIATRICS*, *127*(4), e1042–e1047.
- Sulmasy, L. S., López, A. M., Horwitch, C. A., & American College of Physicians Ethics, Professionalism and Human Rights Committee (2017). Ethical implications of the electronic health record: In the Service of the Patient. *Journal of general internal medicine*, *32* (8), 935–939. <https://doi.org/10.1007/s11606-017-4030-1>.
- Tariq, R. A., & Hackert, P. B. (2023). Patient Confidentiality. In *StatPearls*. StatPearls Publishing.
- Tsai, C. H., Eghdam, A., Davoody, N., Wright, G., Flowerday, S., & Koch, S. (2020). Effects of electronic health record implementation and barriers to adoption and use: A scoping review and qualitative analysis of the content. *Life (Basel, Switzerland)*, *10*(12), 327.