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Social Media Messages and Knowledge on Sickle Cell Disease Among Teachers in Ilorin West Local Government, Kwara State

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Abstract

This study aims to provide an overview on social media messages and knowledge on sickle cell disease among teachers in Ilorin west local government in Kwara state. Sickle cell disease is a genetic blood disorder that affects a significant portion of the population in Nigeria, including the Ilorin West Local Government area. The assessment focused on understanding the extent to which media platforms, such as television, radio, and social media, have been utilized to disseminate information about sickle cell disease to teachers in the local government area. The study aimed to determine the level of awareness among teachers, identify the preferred social media platform for receiving information about sickle cell disease. A quantitative approach was employed to gather data from 379 teachers selected public secondary schools in Ilorin West Local Government. The theoretical framework which guided the study was the Health Belief Model. The study found that social media platforms such as face-book and Instagram were the most preferred media channels for receiving information about the disease. The assessment concludes that social media platforms have the potential to play a significant role in creating awareness about sickle cell disease among teachers in Ilorin West Local Government. However, there is a need for more strategic and tailored social media campaigns to effectively reach and educate this target audience.

Keywords: Sickle Cell, Disease, Social Media, Teachers, Ilorin

1. Introduction

The rise of digital media has transformed how health information is been accessed. Medical personnel, healthcare institutions, policy makers and NGOs' have cued in to these digital platforms to continue to provide accessible knowledge, advocacies, medical advice and promote awareness campaigns through digital technologies such as computers, smart phones and other digital gadgets targeted at people living with all forms of disease (Boadu & Addoah, 2018).

Social media offers a novel perspective to healthcare because it provides unique communication channels to patients, healthcare professionals, and general public. Patients often intend to achieve different goals from participation in social media, including acquiring or sharing disease-specific knowledge or information, getting support from peer patients, sharing personal experience with healthcare providers, treatments, and drugs, engaging in social interactions, receiving online patient education and empowerment (e.g. network building, acceptance and belonging in society, understanding and validation), etc. (Dosemagen & Aase, 2016). Social media also provides a low-cost means for patients to engage with health care professionals.

In recent years, social media has emerged as a powerful tool for raising awareness and fostering support among adolescents living with chronic illnesses, including sickle cell disease (SCD) (Obeagwu & Adias 2024). These platforms not only increase disease awareness but also foster supportive networks among individuals living with or at risk of SCD (Oji et al., 2025). However, despite its numerous benefits, in tackling health related issues, social media platforms possess lots of challenges from cyber bullying to misinformation and privacy concerns. Moreover, disparities in access to technology and digital literacy may exacerbate existing inequalities, limiting the reach and effectiveness of social media interventions.

The unpredictable nature of SCD-related symptoms, including pain crises, fatigue, and complications such as stroke or organ damage, can disrupt daily activities, school attendance, and social stigmatisation while in school. Other challenges of children with SCD include school absenteeism and poor academic performance. These challenges require teachers who are responsible for the activities of these children to be well informed about the signs and symptoms of this disease at presentation and also have knowledge of first aid care and associated psychosocial factors to curb this trend children tend to fare better when the teacher is knowledgeable of their underlying clinical condition (Koontz et al., 2014).

Teachers, who have SCD patients as students in their classes, ought to be knowledgeable about SCD especially the natural history, complications, and psychosocial aspects. Adequate knowledge of the psychosocial aspect of the disease may not only reduce the risk of stigmatisation on school children living with SCD but may also aid in the timely detection of associated clinical symptoms which in turn facilitate the prompt management of complications while in school. As a result of this, it is therefore important to assess teachers' knowledge on SCD.

Research has shown that majority of people in the Nigerian lack awareness and education on how to prevent and manage the disease (Okere, & Morka, 2020), (Oji, et al., 2025). Despite global advancements in health care, the prevention control and of SCD in Nigeria continue to face significant challenges especially in rural areas and low resource communities such as inadequate awareness, inadequate health education, and socio-cultural barriers

have hindered effective prevention strategies such as premarital screening and genetic counselling (Ezugwu et al., 2019; Dilli et al., 2024).This study therefore seeks to assess the impact of social media health information about sickle cell disease among teachers in Ilorin West Local Government of Kwara State, Nigeria

2. Literature Review

2.1 Sickle cell disease

Sickle cell disease (SCD) is an inherited blood disorder caused by abnormal hemoglobin (Arishi, et al., 2021). Sickle cell disease limits the oxygenating role of hemoglobin, resulting in the damaging or the "sickling" of the red blood cells (Rab et al., 2021). This disorder affects all parts of the human body and differs widely among individuals.

John Hopkins Medicine (2021) posits that the red blood cells with normal hemoglobin are smooth, disk-shaped, and flexible, like doughnuts without holes. They can move through the blood vessels easily. Cells with sickle cell hemoglobin are stiff and sticky. When they lose their oxygen, they form into the shape of a sickle or crescent, like the letter C. These cells stick together and can't easily move through the blood vessels. This can block small blood vessels and the movement of healthy, normal oxygen-carrying blood. The blood clots in sickle cell can cause extreme pain in the back, chest, hands and feet. The disrupted blood flow can also cause damage to bones, muscles and organs. People with sickle cell disease often feel weak, tired and look pale. The whites of the eyes and skin often have a yellowish tint with jaundice. (WHO 2022).

For many generations, sickle cell disease has been a prevalent disorder in Africa. Reports show that sickle cell disease was a well-known disorder in West Africa and that the West African natives had several local names for this disease before it was discovered in America (Musa et al., 2021). According to Ugwu (2016) there are various mistaken beliefs associated with sickle cell disease amongst the youth. Prior to the advent of modern technology and various scientific discoveries in Africa, several names were given to children with sickle disease. In Southeast Nigeria, SCD is referred to them as "*Ogbanje*" some referred to them as "*Abiku*" in Yoruba language meaning "children who are birthed to die again within a short period". Mobolade (1973) also quoted Soyinka as he described the Abiku as the wanderer child who dies to return to plague its mother.

The Abikus are believed to bring untold hardship to their parents who spend all their resources in ensuring that they don't die prematurely and go back to the spiritual realm they believe to have come from. Their departure from the world is usually characterized by signs of strange illness, paleness and convulsion. The pattern of sickness and subsequent death of *Abiku* children is closely related to sickle cell disease which is also characterized by several episodes of illness paleness, high mortality and high financial spending to procure drugs and hospital visitations. But, the lack of scientific and technological methods of medical diagnosis of the disease gave reasons for the myth and misconception about sickle in ancient Africa.

Similarly, Achebe (1959) in his novel titled "Things fall apart" described an '*Ogbanje'* as a wicked child who continually re-enters its mother's womb only to die again and again causing its parents grief. The pattern of sickness that was described by Achebe in his work is closely related to the symptoms of sickle cell disease but due to ignorance and lack of technological facilities in the early Africa societies, sickle cell and other major health problems which results to the increased under five (5) death and high mortality rates were regarded as spiritual.

Adebola (2020) argued that people were generally ignorant about the medical issues of sickle cell, thus, it may have been very rampant in the past because men and women got hooked with no knowledge of the blood group of their intending spouses. Although, some studies found that among all racial groups, individuals of African descent have the highest prevalence (Masese, et al., 2021). The prevalence of SCT varies widely from region to region and reaches up to 40% in parts of West Africa (Ugwu et al., 2021).

In Nigeria, the prevalence of sickle cell trait is estimated at 24%. It is estimated that there are more than 40 million individuals who carry the sickle cell trait and more than 150,000 children born each year with Sickle Cell Anemia (SCA) (Adegbite, 2021). About four million people are suffering from sickle cell disease with the country been regarded as the epicenter of the disease because it carries more than half of the total population of people with sickle cell (Alabi & Adebowale, 2021).

2.2 Benefits of Social media in Sickle cell Disease

Social media platforms offer a virtual space where people living with SCD can connect with others, share experiences, and access information in real-time, thereby fostering a sense of belonging and empowerment. Social media also serves as a platform that enables access reliable information about SCD, treatment options, and self care strategies, while also challenging misconceptions and promoting positive health behaviours (Obeagwu and Adias 2024). Social media platforms enables people with SCD to share health related information, find solidarity, share experiences, and seek support from others facing similar challenges. Through online support groups, blogs, and social media campaigns, adolescents with SCD can connect with a global community, exchange tips for managing their condition, and advocate for their healthcare needs. This is important as it erase societal stigmatization and stereotype they experience on daily basis (Chen & Wang 2021; Obeagwu & Adias 2024).

Social media platforms also defy logistical challenges compared traditional media, allowing for accelerated and cost-effective data collection (McDonald, et.al. 2019).

However, despite its numerous benefits in health care, social media also present challenges such as cyber bullying, privacy concern, misinformation and disinformation, and digital access disparities (Obeagwu & Adias 2024). Individuals from low income household and marginalized communities may lack access to internet connections, smart-phones, or computers, which will limit their ability to engage and participation in online support networks or access health information, these digital disparities may accelerate inequalities among people with SCD.

2.3 Theoretical Framework

The Health Belief Model was originally developed in the 1950s by Hochbaum Rosenstock and others who were working in the US public service to explain the failure of people participating in programs to protect and prevent disease and was updated in the 1980s. The model is based on the theory that a person's willingness to change their health behaviors is primarily due to their health perceptions (Boskey, 2022). The Health Belief Model proposes that the perception of a personal health behavior threat is influenced by at least three factors, general health values, which include interest and concern about health; specific health beliefs about vulnerability to a particular health threat; and beliefs about the consequences of the health problem. The theory posits that individual's health behavior changes are based on six components which include perceived severity, perceived susceptibility, perceived benefits, perceived barriers, cues to action and self-efficacy.

HBM is relevant to this study because it can be applied to raise awareness about sickle cell disease by addressing the perception and beliefs of individuals regarding the disease. It is assumed that since people are likely to change their health behavior because of perceived importance and consequences arising from making such health decisions, people would likely not go for genotype testing to know their genotype status if there are no risk factors arising from genotype incompatibility. HBM can also boost self-efficacy by providing information and resources on managing SCD, connect individuals to support groups and sharing success stories of other individuals managing the conditions effectively.

3. Methods

The study was carried out among teachers in Ilorin West Local government of Kwara state. The study was conducted using a multi-stage sampling technique to select teachers from public and private secondary schools within Ilorin west local government. A sample of 385 respondents were selected from the total population of 1,540 respondents from the fifteen 15 selected secondary schools in Ilorin West Local Government Area of Kwara State. The study adopted 95% confidence interval to calculate the margin or degree of error.

z = confidence levels.
p = sample proportion (square root of n).
n = sample size
The confidential interval is 95% = 1.96,
The population for the study is approximately 385
The margin of error is 1.96/ (2 √ 385 = 1.96/40= 0.050 equivalent to 5%
Therefore, the margin of error was 5%

4. Results and Discussion of Findings

Majority of the respondents, 41.6% (n= 158) have NCE, while 35.8% (n=136) respondents have B.Ed., 12.6% (n=48) respondents have PGDE and 9.7% (n=48), while those with M.Ed. have 9.7 (n=37). This is suggestive that majority of the teachers have attained professional qualifications. This is in correlation with the findings of Nabors et.al. (2008), which suggest in their findings that, educational attainment have been shown to affect teachers' knowledge of certain chronic illnesses including SCD.

Research Question one: What is the level of knowledge about SCD among teachers in Ilorin west local government?

Findings from the study on teachers' knowledge about SCD revealed that 89.3% of respondents (n=334) have heard about SCD, while 11.7% (n=45) have not heard about the disease. This indicates that majority of the teachers have knowledge about SCD.

More than 48.0 (n=182) of the respondents responded that they know about SCD through Face-book, while 25.5% (n=98) responded that they know about the disease through Instagram, 15% of respondents (n=56) said that they heard through Tik-tok while , 11% (n=42) knew about the disease through other social media platforms (X, You-tube). This indicates that Face-book is the most prominent social media platform where teachers heard about SCD. This is in accordance with the findings of Oji,et.al. (2025) whose finding revealed that the increase influence of digital and online platforms has helped a lot in accessing information about SCD prevention. This finding also in agreement with reports of Boadu and Addoah (2018), suggested that internet-based learning is effective in health awareness creation among young adults. The widespread use of digital platforms shows a significant shift in information-seeking behavior from traditional to modern communication channels, particularly among individuals with tertiary education (Oji,et.al. 2025)

What types of SCD related information do teachers come across on Social media platforms?

50.3% (n=191) of the respondents said they received awareness creation and educational posts on social media platforms, 49.7% (n=188) respondents said that they received personal experience stories of SCD patients on social media platforms. This finding is suggestive that social media platforms are used to share educative and personal experience stories about SCD.

68.1% (n=258) strongly agreed that social media platforms are effective in creating awareness and educated about SCD, while 16.8% (n=64) agreed that social media platforms are effective in creating awareness and educated about SCD and 15% (n=57) disagreed that social media platforms are effective in creating awareness and educated about SCD. This shows that social media platforms can be effective in creating awareness about SCD. This is in contrast with the findings of Slick et.al., (2023) which revealed that majority of medical information posted on interactive platforms included inaccurate information about SCD.

What are the challenges encountered in utilizing social media platforms for awareness creation and education about SCD?

58% (n=220) of the respondents mentioned that limited data is a major challenge to accessing SCD messages on social media, 23.5% (n=89) responded that network fluctuations is a major challenge to accessing SCD messages on social media and 18.5% (n=70) said that access to smart phones as a challenge to accessing SCD messages on social media. Obeagu, and Adias (2024) also posits that limited access to internet in remote or

underserved areas may hinder the adoption of online platforms.

5. Conclusion

Findings from the study showed that social media plays a significant role in disseminating information about sickle cell disease (SCD). Social media platforms, especially Facebook, Instagram, and Tik-tok serve as key sources of health information for teachers due to their accessibility and ease of sharing content. Despite its numerous benefits social media present lot of challenges such as cyber bullying and privacy concern. However, efforts should be made to bridge the digital divide so as to accelerate digital literacy to ensure equitable access to social media resources.

6. Recommendation

Teachers play a crucial role in shaping students' educational experiences through various responsibilities, including classroom management, ensure mental and physical wellness of each student and fostering a positive learning environment.

The study therefore recommends that there is the need for an enhanced social media campaign on SCD that are well designed and consistent this will enable unlimited access to SCD related information among teachers. Multimedia approach, through the use short videos, infographics, testimonials, and live Q&A sessions to improve understanding should be properly harnessed to improve SCD awareness creation and education. It is also important to improve verified health information that will promote transparency, authenticity, and responsible communication to combat misinformation and misconceptions regarding SCD among teachers.

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