

Social media use for patient care: an evaluation of health practitioners in Cross River state, Nigeria

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ABSTRACT

This study aimed to evaluate the extent to which health practitioners in Cross River state, Nigeria, use social media for patient care and to assess the barriers militating against its liberal use for patient care. The study adopted the cross-sectional survey design and used 550 respondents selected through the cluster, simple random and purposive sampling techniques, from selected secondary and tertiary health facilities. Furthermore, quantitative and qualitative methods involving the questionnaire and key informant interview respectively were used to elicit information from respondents. Quantitative data were analyzed using descriptive statistics while content analysis was used to handle qualitative data. The result of data analysis revealed that health practitioners in Cross River state, Nigeria do social media use for patient care very minimally and this is attributed to a wide range of factors, including the absence of a clear-cut regulatory framework governing social media use in health care delivery, and lack of institutionally provided resources for social media use. The study thus recommends that healthcare administrators must, as a matter of necessity, mainstream social media use into health care practice by flexible guidelines, regulations, and materials that would make social media use for patient care desirable by health practitioners in Nigeria.

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1. INTRODUCTION

The advent of social media seems to be the zenith of scientists' success in their concerted quest to transform the world into a global community. Within the last decade, the significant growth of social networking platforms has helped remove the barriers in time and space that hitherto slowed down people's ability to reach out to one another with ease [1]. Instead, it has provided them with more significant opportunities to preserve existing social ties and spread out of social networks. Social media has made the diverse people and communities of the world, which hitherto were far apart and separated by various artificial and natural barriers, closer to themselves [2]. It makes the creation, sharing, exchange, dissemination, and accessibility of information more accessible and communication more possible and faster [2]. Thus, social media is seen as computer-based or computer-mediated set-ups that enable people worldwide to generate, distribute or exchange information, thoughts, and pictures/videos in computer-generated or virtual communities and networks [3].

The adoption of social media in the health purview in modern society has gained unmatched popularity over the past years, and it shows excellent prospects [4]–[6]. Advocates of social media use in healthcare are of the view that technology makes for personalization, presentation and participation, which

are the basic ingredients that guarantee their effectiveness [7]. One of such prospects is its applicability to patient care by health practitioners [8], [9]. Dorland's Illustrated Medical Dictionary defines patient care as the prevention, treatment, and management of illness and the preservation of physical and mental well being through services offered by a health professional. It consists of various services carried out by health professionals (or non-professionals under their supervision) to benefit patients. In most developed societies, studies have revealed that healthcare has moved from the traditional patient care model to a patient-centred model, which is considered a more efficacious and auspicious healthcare approach [10], [11]. In the traditional model, healthcare providers and their collaborators are in charge of treatment and ongoing care decisions. At the same time, the patient is a mere recipient and consumer of healthcare services with little or no understanding of their problem and having little or no input into their care. However, in the patient-centred approach, patients can take very active parts in their care. They are being provided with adequate knowledge about their health problems and being involved in decisions concerning the care they are to receive from physicians and other caregivers in the healthcare industry.

Patients are the focus of health care services and improving patient care, which is inclusive of the physical, emotional, mental and medical care is the primary responsibility of the healthcare practitioners. Striving to improve patient care amid numerous challenges, particularly in low resource settings should be a priority for all health care practitioners and policymakers. The overall objective is to achieve patient satisfaction and better health outcomes. Utilizing social media to enhance patient care is an opportunity that needs to be extensively explored in low resource settings. Globally, social media use among health practitioners has become fashionable [12]–[14] and its application in healthcare delivery for patient care is gaining wider acceptability and patronage by the day.

Studies have shown that the emergence of social media has helped promote patient care and is seriously impacting health promotion in very favourable terms. Despite healthcare practitioners' initial lack of enthusiasm toward utilizing social media for the direct care of patients [15], [16] the phenomenon is changing over time as its use has gradually gained acceptance among practitioners and healthcare institutions. A typical instance is the Georgia Health Sciences University, which has developed a platform known as WebView. Patients can access their doctors online for questions or make requests for a refill of prescriptions [16]. Studies by [16], [17] also corroborated this when they revealed that physicians have started adopting social media for interaction with patients and that Twitter and Facebook are among the most commonly used. About 60% of physicians studied approved interaction with patients using social media for the sake of delivering patient education and health supervision, for promotion of behaviour modification and drug adherence, which they hope would result in better health outcomes [17]. Furthermore, [18] added that physicians also use social media to promote the education of patients concerning their health by making tweets, blogging, recording videos, and taking part in chat forums that deal specifically with disease and are directed towards the tutoring of patients. According to [12] such platforms enable physicians to spread factual (evidence-based) information to debunk certain erroneous materials existing online while also providing an opportunity for the public to partake in specific discussions.

Evidence from studies revealed that communicating with patients using social media has great potential for improving their care and health outcomes [17], [19], [20]. Studies have also shown that additional communication using social media enables physicians to emphasize their advice to patients and helps to improve their adherence to medical advice, especially for patients with chronic health conditions [19]. It can also promote patients' satisfaction by increasing the quality of time spent discussing with their physician and having answers to critical questions [19]. In a survey of outpatients in family practice clinics, 56% of the respondents strongly desired their healthcare practitioners to use social media for prompts (reminders), for planning appointments, for release of laboratory test results, giving notices regarding prescriptions, and provide answers to questions on a general note [21]. Research reported that some physicians also consciously decide to make friends with their patients on social media to relate with them even outside the facility [22], [23].

In Nigeria, social media use among health practitioners is commonplace, but the extent of its use for patient care, in particular, is unclear. Although there are few studies relating to social media use by health practitioners in Nigeria, they are mostly concerned with issues relating to professional development and academic pursuit [24] enhancement of visibility and corporate image [25] and medical information sharing [26], [27]. A close interface with health care professionals in the Nigerian healthcare system revealed limited utilization of social media technology and tools to enhance patient-centred care. It has also been observed that social media use despite its advantages is fraught with hazards if not used responsibly [28]. The rate of engagement of healthcare professionals with social media varies with location and time [29]. There is a dearth of literature on the extent to which social media is used for disease diagnosis, treatment and follow-up by medical professionals [30]. The issues highlighted in the foregoing prompted the research to raise the following specific questions: i) To what extent do health practitioners in Cross River state, Nigeria

use social media for patient care?; and ii) What are the possible factors that hinder their use of social media for patient care? This formed the motivation for this study, which was intended to explore how health practitioners in Cross River state, Nigeria, use social media for patient care and identify the challenges militating against the liberal use of social media for patient care. The result of the study could stimulate policy makers in mainstreaming social media use into health care practice through clear-cut guidelines regulating its use and making it desirable by health practitioners in Nigeria.

2. RESEARCH METHOD

2.1. Study setting

The study adopted the cross-sectional survey design and used a total of 500 respondents (doctors and nurses) drawn from selected secondary and tertiary health facilities in Cross River state, Nigeria, through the cluster, simple random, and purposive sampling techniques. It comprised of doctors 34.6% (n=173) and nurses 65.4% (n=327). Also, 38.6% (n=193) were males while 61.4% (n=307) were females. Furthermore, 48.8% (n=244) were from tertiary health facility and 51.2% (n=256) were from secondary health facility. In addition, 50 key informants were interviewed for in-depth information on pertinent issues. Consenting participants were recruited into the study after the purpose and intent of the study were made known to them and backed up with the ethical approval certificate from the ethical committee of Cross River state ministry of health.

2.2. Data collection tools

The questionnaire and key informant interview guide were the tools used for data collection in the study. The questionnaire was divided into two parts. The first part was designed to measure the extent to which social media was used by health practitioners for patient care and was designed in four-point Likert scale order. The second part was designed to evaluate the possible factors that inhibit their liberal use of social media for patient care. It was designed in the nominal order of Yes/No. The instrument was trial tested on 30 respondents for reliability and produced a reliability coefficient of 0.811. The key informant interview (KII) was equally designed to generate additional data to back up the questionnaire.

2.3. Data analysis

Data from the questionnaire were analyzed using simple percentages. In analyzing the extent of social media use for patient care; response options were designed as "Often", "Sometimes", "Rarely", and "Not at all". For reporting purposes, the response options given as "Often" and "Sometimes" were reported as "large extent" while the response options shown as "Rarely" and "Not at all" were reported as "little extent" to each of the statements in the sub-scales. Furthermore, to evaluate the factors militating against the liberal use of social media for patient care, response options were given as Yes/No and analyzed as such.

3. RESULTS AND DISCUSSION

As presented in Table 1, seven items in the sub-scale are used to measure the extent of social media utilization for patient care. Out of these seven items, most respondents (50% and above) reported that they utilize social media for patient care to a bit extent in five items (items 1,2,3,4 and 6). In contrast, most of the respondents (50% and above) reported that they utilize social media for patient care to a large extent in only two items (items 5 and 7). Item 1 shows how health practitioners use social media to educate their patients on managing certain health conditions or problems. The result revealed that out of the 500 respondents used for this study, 49.4% (n=247) of respondents reported that they used it to a large extent, while 50.6% (n=253) of the respondents said that they used it a little bit.

Furthermore, the report from item 2, which sought to find out the extent to which health practitioners used social media to answer patients' health-related questions, showed that 43.8% (n=219) of respondents reported that they used it to a large extent. In comparison, 56.2% (n=281) said that they used it to a small degree. Also, from item 3, which sought to know the extent to which health practitioners used social media to give prescriptions to their patients, 23.2% (n=116) of respondents reported that they used it to a large extent. In comparison, 76.8% (n=384) of respondents said they use it to a small degree. In the same vein, item 4 sought to determine the extent to which health practitioners used social media to monitor their patients' adherence to prescribed medication. Again, the report shows that 28.2% (n=141) of respondents used social media to a large extent, while 71.8% (n=359) of respondents used it a little bit.

Item 5 in Table 1 also sought to determine the extent to which health practitioners used social media to encourage patients to adopt healthy lifestyles. The report showed that 55.6% (n=278) of respondents stated that they used it to a large extent, while 44.4% (n=222), indicated that they used it to a low degree. In like manner, Item 6 sought to find out how health practitioners used social media to follow up with patients on the

progress of their health conditions. Again, the study revealed that 42% (n=210) of respondents affirmed that they used it to a large extent, while 58% (n=290), claimed they used it a bit. Also, item 7 sought to determine the extent to which health practitioners used social media to emphasize their health advice to patients with health challenges. Again, the result shows that 50.6% (n=253) of the respondents reported that they used it to a large extent, while 49.4% (n=247) of the respondents claimed that they used it a bit. Based on the result in Table 1, the study concluded that healthcare practitioners in Cross River state, Nigeria, utilized social media for patient care to a small extent. This finding of low-level social media use for patient care in Nigeria was affirmed [28]. Their study revealed that out of the total number of hospitals studied, only 30% had content specific to or generated by in-patients, outpatients, or their relatives and that such information concerns online booking bills settlement and referrals. However, it revealed a zero percent content regarding engagement/interaction with patients.

Table 1. Social media utilization for patient care

S/N	Statements	Often N%		Sometimes N%		Rarely N%		Not at all N%	
1	I use social media to educate my patients on managing specific health conditions/problems.	72	14.4	175	35.0	117	23.4	136	27.2
2	I use social media to answer my patients' health-related questions	48	9.6	171	34.2	128	25.6	153	30.6
3	I use social media to give prescriptions to my patients	34	6.8	82	16.4	115	23.0	269	53.8
4	I use social media to monitor my patient's adherence to prescribed medication	36	7.2	105	21.0	118	23.6	241	48.2
5	I use social media to encourage my patients to adopt healthy lifestyles	88	17.6	190	38.0	87	17.4	135	27.0
6	I use social media to follow up with my patients on the progress of their health conditions	60	12.0	150	30.0	115	23.0	175	35.0
7	I use social media to emphasize my health advice to patients with health challenges	74	14.8	179	35.8	106	21.2	141	28.2

The study also sought to investigate the challenges militating against the liberal use of social media for patient care. The researchers generated nine possible factors, and respondents were requested to choose between the Yes or No options provided for each factor. The results are displayed in Table 2. Item 1 was used by the researchers to find out whether the absence of clear-cut guidelines and policies governing social media use in healthcare delivery militated against their liberal use of social media for patient care. The result shows that out of 500 respondents 61% (n=305), agreed that this factor challenges them, while 39% (n=195) disagreed. Item 2 sought to explore whether patients' fear of information misuse/abuse also played a role in the high level of disinterestedness in social media use for patient care. The result shows that 59.2% (n=296), agreed to this factor as an impediment, while 40.8% (n=204) disagreed with it. In the same vein, item 3 was designed to investigate whether concerns relating to the violation of confidentiality rules contributed to the low patronage of social media for patient care. Result reveals that 60.4% (n=302) affirmed that it contributes to their low use of social media for patient care, while 39.6% (n=198) disagreed. Item 4 also was designed to find out if concerns about possible breaches in patients/practitioners' boundaries also contributed to their low use of social media for patient care. Results revealed that 57.8% (n=289) agreed that it affects their use of the technology for patient care, while 42.2% (n=211) disagreed.

Table 2. Obstacles to liberal use of social media for patient care

S/No	Item	Yes		No		Total (N%)
		N	%	N	%	
1.	Absence of clear-cut guidelines and policies governing social media use in healthcare delivery	305	(61)	195	(39)	500 (100)
2.	Patients fear of information abuse	296	(59.2)	204	(40.8)	500 (100)
3.	Fear of possible breach of confidentiality	302	(60.4)	198	(39.6)	500 (100)
4.	Concerns about possible breaches in patient/practitioners' boundaries	289	(57.8)	211	(42.2)	500 (100)
5.	Fear of consequences that may follow if a patient abuses information from practitioners through the social media	335	(67)	165	(33)	500 (100)
6.	Lack of time to engage patients on social media	191	(38.2)	309	(61.8)	500 (100)
7.	Absence of prepaid WIFI or data subscription plan to encourage health practitioners to use social media for patient care	261	(52.2)	239	(47.8)	500 (100)
8.	Network connectivity problem	62	(12.4)	438	(87.6)	500 (100)
9.	Poor power/electricity supply	184	(36.8)	316	(63.2)	500 (100)

Furthermore, item 5 was designed to determine whether concerns about the consequences that may follow if a patient abuses information from practitioners through social media contribute to their low patronage of the social media for patient care. Result reveals that 67% (n=335) agreed that this factor inhibits their use of social media for patient care, whereas 33% (n=165), disagreed. In like manner, item 6 was used by the researchers to examine if lack of time to engage patients on social media also contributed to practitioners' low use of social media for patient care. Results revealed that for this item 38.2% (n=191), agreed that it inhibits their use of social media for patient care while 61.8% (n=309), disagreed. Similarly, item 7 was designed to determine if the absence of prepaid wireless fidelity (WIFI) or data subscription plans for health practitioners discourages them from using social media for patient care. Result reveals that 52.2% (n=261), agreed that it impairs their use for that purpose, while 47.8% (n=239), disagreed. Item eight was also designed to investigate if network connectivity problems hinder their use of social media for patient care. Result reveals that for this issue, only 12.4% (n=62) agreed that this impedes their use of social media. However, a considerable percentage 87.6% (n=438), disagreed. Finally, item 9 was meant to explore whether poor power or electricity supply contributes to low interest in utilizing social media for patient care. The result reveals that 36.8% (n=184) agreed that it inhibits their use of social media for patient care, whereas 63.2% (n=316), disagreed. From the preceding, it is observed that out of the nine issues examined, six (1, 2, 3, 4, 5, & 7) constituted major impediments. In contrast, three (6, 8, & 9) constituted minor impediments to social media use for patient care.

The result of a study by [24] supported the above findings. In a section captured as impediments to realizing the full potential of social media in medical practice, certain constraints were identified, which include poor internet services (85.5%), inadequate electricity supply (55.4%), privacy and ethical issues (36.2%) and lack of alternative electricity supply (33.9%). Others include inappropriate use of medical information (26.9%), scarcity of image acquisition devices (19.4%) and lack of policy regulating social media in medicine [29].

On why most health practitioners in the study area are not willing to use social media liberally for patient care, key informant interviewees thought that deliberate or accidental breaches in ethics would be commonplace. For instance, a male neurologist from a tertiary health facility responded as follows:

"I use social media copiously for a lot of other practices that are of personal benefits to my career development and progression, but I do not use it for patient care for fear of breach of patient's confidentiality, which is a big offence in the healthcare enterprise. As you may be aware, disclosing, deliberately or accidentally, a patient's identity with details of their condition is actionable. I consider social media as a very easy avenue for such breach of patient's confidentiality, and I am not ready for any litigation."

Also, a female obstetrician and gynecologist from a secondary health facility maintained that:

"I think one of the reasons for the low use of social media for patient care among practitioners is the fear of going against medical ethics. As a practitioner, I know that concerns about losing control of a patient's information to a third party are very high. I know that some practitioners allow their loved ones access to their social media gadgets and this could be dangerous if a patient's information is used carelessly by such loved ones. So the highest I do to my patient gadgets, social media is to book appointments with them while other delicate issues are discussed one-on-one in the consulting room."

This concern has been identified by studies such as [15], [27] which reported that postings by physicians on their social media accounts could be copied by friends and disseminated without the physician's knowledge or approval.

Another issue pointed out in the interview session was an abuse of the practitioner-patient relationship boundaries, and some respondents expressed the same concern. The fear is that if they allow themselves to make extensive use of social media for patient care, there is every tendency to cross such relationships either by the patients or the health practitioner. For example, a male general practitioner in a secondary health facility stated that:

"The experience I have had with some patients who have chatted me up on WhatsApp and I responded, shows that if I go into extensive social media use for patient care, most patients would cross the borderline, especially in this our clime where a lot of people do not know when to keep communication professional. You have patients who go to the extent of making personal demands on you simply because they feel like a medical doctor; you are always boxed up. I had to unfriend a young lady (patient) some time ago when she started posting her pictures on my wall, apart from

making a financial request on me. I considered that a serious trespass to the boundaries of the practitioner-patient relationship. So, for me, doing extensive patient care via social media has a lot of temptations that may be equivalent to a breach of medical ethics. Although some practitioners are prone to initiating this breach, I see the Nigerian patients as having higher chances of violating such boundaries than health practitioners, especially since most Nigerian social media users hardly read privacy settings, including terms and conditions."

This result is inconsonant with the study of [21] who reported that physicians should avoid making friends or contacting patients through social media. Also, a female nurse from a secondary health facility noted that:

"I love the social media world for its numerous personal and professional advantages, but I have become reserved in its use for patient care because of a direct personal experience which I consider very unpleasant. As one in charge of the counselling and testing unit of the HIV/AIDS and Tuberculosis Management section of the facility, I try to follow up with my patients on their progress and adherence to medication, using phone calls, SMS and social media. However, a situation arose in which a client who absconded visits to the facility, nearly five months after her last visit, chatted with me on WhatsApp demanding to know what she should do to recover from shortness of breath at about midnight when I was fast asleep. I only woke up to find a follow-up chat saying, 'God would hold me accountable for her daughter's death because of my unresponsiveness.' This took me seriously aback and made me withdraw my interest in interacting with patients using Social media."

Furthermore, the healthcare practitioners interviewed raised another concern about their low-level use of social media for patient care, which centres on who bears responsibility for patients' decisions arising from communication with health practitioners via social media. Respondents expressed fear of being held responsible for any adverse outcome of patients' decisions from social media communication with health practitioners. A male family physician in the tertiary health facility put it thus:

"When patients are engaged on social media by health practitioners, it can be fascinating on the one hand and dangerous on the other hand. The danger is that when the health practitioner disengages from the interaction, he loses control of the patient's decisions and actions based on the information supplied by the practitioner. Suppose such information is misused by the patient and eventually produces a negative outcome or adverse events. In that case, there are very high chances that the practitioner would be held responsible. Therefore, health practitioners try to avoid this by reducing their involvement in social media for patient care"

The result is in line with findings from studies [24], [30] that found that one barrier to the effective use of social media in medical practice was the inappropriate use of medical information.

Another factor that impedes health practitioners' interest in extensive social media uses for patient care in Cross River state, Nigeria, is the absence of a clear-cut regulatory framework guiding its use. Reports of respondents revealed that most health practitioners who engage social media in healthcare delivery do so on personal discretion and not based on existing ground rules within healthcare settings. A female community health practitioner in a tertiary health facility highlighted it:

"Our hospital in particular and the Nigerian health care system, in general, do not seem to have any well-defined regulatory framework that can guide health practitioners who are interested in using social media for health care delivery in general and patient care in particular. It is a fact that many of us who use social media in medical practice do so highly on personal discretion and not based on existing ground rules. This situation places health practitioners in a position of responsibility, including for acquiring relevant social media resources (gadgets/devices, data, and internet connectivity) and for any adverse outcome arising from patients' decisions emanating from social media engagement with health practitioners. This makes some of us view social media as posing certain latent risks to health practitioners in our clime. Thus, many of us prefer to engage the social media for healthcare issues we define as less risky and avoid the perceived risky ones; including patient care."

This finding also agrees with the study of [24] who reported that there is no policy or guideline regulating social media use in medical practice in Nigeria.

4. CONCLUSION

Social media use in healthcare delivery is gradually gaining acceptability as revealed by the study, though its usage for patient care among health practitioners in Cross River State Nigeria is still low. This limited utilisation is associated with diverse factors highlighted in this study. Patient care is a significant component of healthcare delivery, and its continuous improvement is a priority in the modern orthodox healthcare system to enhance better health outcomes. This has inspired a shift from the traditional approach to the patient-centred approach, which sees and treats the patient as an active participant in the caregiving process. It is our considered opinion that for patient care to be effectively undertaken by healthcare practitioners in a patient-centred healthcare system, adoption of the social media technology cannot be over-emphasized. Despite the weaknesses and risks surrounding social media use, the tool and associated technology have robust benefits that various users in the healthcare industry should maximise. Consequently, the study recommends that Nigerian healthcare administrators, at different levels, should enhance the knowledge, capacity and utilisation of social media in healthcare practice. Clear-cut user-friendly guidelines and protocols that would regulate social media use in healthcare delivery will need to be enacted to enable the utilisation taking into cognizance acceptable ethical considerations by all stakeholders.

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