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Patients' Comprehension and Satisfaction With MRI and CT Scan Result Communication at Teaching Hospitals in Anambra State, Nigeria

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Abstract

Effective communication of diagnostic results, particularly Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scans, is essential for improving patient comprehension, satisfaction, and overall healthcare outcomes. This study assessed patients' understanding and satisfaction with the communication of MRI and CT scan results at two teaching hospitals in Anambra State, Nigeria: Nnamdi Azikiwe University Teaching Hospital (NAUTH) and Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH). A mixed-methods design was employed, combining quantitative surveys administered to 387 outpatients with qualitative interviews conducted with six medical doctors. Results indicated that patients generally exhibited a moderate level of comprehension and satisfaction with the communication process. Key barriers identified included time constraints, limited health literacy, language differences, emotional responses, and scan-related anxiety. Thematic analysis of physicians' perspectives revealed systemic and institutional challenges impacting communication efficacy. The study concludes that the delivery of diagnostic results extends beyond technical explanation and must be approached as a relational practice requiring clarity,

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empathy, and sufficient time. Recommendations include the integration of patient-centred communication training for healthcare professionals, the use of interpreters and visual aids, reorganization of physician workloads, and the implementation of structured feedback mechanisms. These strategies are vital for improving diagnostic communication practices and enhancing patient-centered care in resource-limited hospital settings.

Keywords: Patient-Doctor Communication; Diagnostic Understanding; MRI; CT Scan; Health Literacy; NAUTH; COOUTH

INTRODUCTION

Communication plays central to human existence from time immemorial. No society or group of people can live without communication. It is the means through which people share ideas, express emotions, build relationships, and solve problems. Therefore, communication is what makes life, it is the thread that binds people and ensure understanding. In every aspect of life—social, educational, political, and professional—effective communication enhances understanding and improves decision-making. This more important in the in healthcare sector. Within the health care sector or health delivery in hospitals and clinics, clear, compassionate, and accurate communication is necessary and impact patient outcomes and by extension contribute to quality of health delivery system (Malenfant et al, 2022; Sharkiya, 2023). Communication between healthcare providers and patients is indispensable (Danaher et al, 2023). It involves explaining diagnoses, discussing treatment options, offering emotional support, and ensuring that patients are active participants in their care (Ha & Longnecker, 2010; Mohd Salim et al, 2023). Historically, patient-doctor communication relied heavily on face-to-face communication where medical practitioners used lay terms, gestures, and empathy to ask patients about their health conditions and determine the health challenge (Akinkurolere, 2022). However, recent development in medical technology are reshaping how healthcare is delivered and how communication within it occurs.

Innovations such as Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scans have become essential tools for diagnosing a wide range of health conditions with high precision. MRI uses strong magnetic fields and radio waves to generate detailed images of organs and tissues, while CT scans employ X-rays and computer processing to

produce cross-sectional images of the body (Islam et al, 2023). These technologies have revolutionised diagnostic medicine by providing visual evidence that supports clinical decisions. However, it is important to stress that as medical technologies like CT scans and MRI take centre stage in diagnosis, the communicative role of healthcare professionals becomes increasingly complex. While machines detect and present the physiological facts, it is still the responsibility of the medical practitioner to interpret these findings and convey them meaningfully to patients. This interpretive role is critical, as patients have the right to understand their health conditions, including the nature, severity, and implications of what the scans reveal. The quality of this communication can influence how patients respond emotionally and whether they follow through with treatment plans.

Despite the growing use of imaging technologies in diagnosis and treatment, research into how these tools influence doctor–patient communication remains limited. Much of the existing literature has focused on the technical efficiency of MRI and CT-scan machines, with less attention given to the communicative processes that surround their use. There is a gap in understanding how medical imaging affects interpersonal communication in healthcare. This raises important questions: To what extent are patients satisfied with the meanings or explanations provided about their MRI and CT-scan results? Do they leave consultations with a clear understanding of their health status? What barriers do medical professionals encounter when trying to explain machine-generated diagnostic findings to patients? These questions are the thrust of the current study with focus on patient and medical doctors in two select teaching hospitals within Anambra State, Nigeria.

Statement of the Problem

Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scan technologies have become integral to diagnostic procedures in modern hospitals. At Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, and Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Amaku-Awka, in Anambra State, these imaging tools are widely employed to diagnose a broad range of medical conditions. The increasing use of these technologies presents a critical communication challenge for healthcare providers, who are expected to effectively interprete complex, machine-generated data and convey same in a manner that is clear and understandable to patients. When healthcare professionals are unable to communicate scan results clearly and empathetically, it can

negatively affect patient understanding, satisfaction, emotional wellbeing, and treatment compliance.

Communicating scan result may be daunting particularly at NAUTH and COOUTH because the two facilities, serve a diverse population drawn from both rural and urban areas. Many of these patients have limited formal education and may not be fluent in English, the official language commonly used in healthcare communication in Nigeria. In addition, the medical terminologies associated with MRI and CT scans are often technical and difficult for laypersons to comprehend. Despite the growing reliance on MRI and CT scans in Nigerian hospitals and in particular NAUTH and COOUTH in Anambra State Nigeria, there is a noticeable lack of empirical studies examining how scan results are communicated to patients. Specifically, there is insufficient knowledge regarding the level of patient satisfaction and the communication barriers faced by medical professionals. This gap in the literature necessitates the current study

Specific Objectives

This study seeks to examine the following:

1. To assess the level of patient understanding of the communication of MRI and CT scan results in NAUTH and COOUTH, Anambra State, Nigeria.
2. To ascertain the level of patient satisfaction with healthcare professionals' communication of MRI and CT scan results in NAUTH and COOUTH, Anambra State, Nigeria.
3. To identify the major communication barriers faced by healthcare professionals in explaining MRI and CT scan findings to patients in NAUTH and COOUTH, Anambra State, Nigeria.

Review of Previous Studies

Effective patient-provider communication (PPC) has attracted a plethora of studies globally. Murugesu et al. (2022) investigated healthcare providers' challenges in communicating with patients who have low health literacy. The study, which combined online surveys and interviews, found that patients' limited capacity to comprehend health information significantly hampered effective communication. Similarly, Cubaka et al. (2018) explored the perceptions of primary healthcare providers on communication practices. Through semi-structured interviews, they revealed that providers often lacked formal

communication training and faced constraints such as time pressure and workload, which impaired effective patient engagement. Extending the discussion to patient-specific barriers, Rathiram et al. (2022) focused on healthcare students managing adults with communication disorders. The qualitative findings identified expressive and receptive language difficulties as the most critical obstacles. Communication challenges are not limited to clinical interactions but extend to the dissemination of diagnostic results. Litchfield et al. (2014), for instance, examined how laboratory test results are communicated in UK primary care. They identified inconsistencies in methods across practices, ambiguity about responsibility, and systemic failures such as the absence of feedback mechanisms to confirm whether results reached patients. In rural healthcare contexts, the consequences of poor communication are even more pronounced. Gao et al. (2024) found that provider-patient communication skills in rural China were generally low, and strongly correlated with reduced patient satisfaction and perceived healthcare quality.

Similarly, Okamura et al. (2024) reported that only a minority of patients in Japan perceived their providers as consistently patient-centred communicators. Older age, higher education, and frequent visits were associated with more positive perceptions, suggesting that patient demographics influence how communication is experienced and evaluated. In the Malaysian context. Azizam and Shamsuddin (2015) found high levels of satisfaction with healthcare communication overall, though satisfaction varied by ethnic group and education level. Notably, those with lower education levels reported higher satisfaction, perhaps due to differing expectations or interpretive frameworks—a finding that raises questions about whether satisfaction always reflects communication adequacy. Furthermore, Ismail et al. (2020) explored the association between communication style and patient satisfaction in Malaysian outpatient clinics. The study revealed a positive correlation between affiliative communication and satisfaction, while controlling communication styles showed no such relationship. This suggests that collaborative, patient-inclusive approaches may be more effective in fostering positive health outcomes and experiences. In the same vein, Abeid et al. (2024) offered an account from Libya, showing that patients at Benghazi Medical Center rated their satisfaction with provider communication skills as moderate. Although the study identified no strong correlation with sociodemographic factors, it points to persistent challenges in achieving high-quality, consistent communication in outpatient settings. The relational dimension of PPC is further illustrated in Mehra and Mishra's (2021) study in India, where physician empathy

and compassion significantly influenced patients' willingness to recommend their doctors. This reinforces the idea that affective aspects of communication—such as listening, empathy, and interpersonal warmth—can shape not just satisfaction, but loyalty and compliance.

Several studies in Nigeria have examined the dynamics of patient-provider communication (PPC), highlighting its implications for healthcare delivery. Mary (2024) employed a mixed-methods design to investigate the role of effective patient-doctor communication in enhancing healthcare outcomes at the University of Abuja Teaching Hospital, Gwagwalada. The study combined in-depth interviews with 15 doctors and cross-sectional survey data from 222 patients. The findings underscore that effective communication facilitates accurate diagnosis, improved treatment outcomes, greater patient satisfaction, and early detection of health issues. Key strategies employed by doctors included patient-centred communication, active listening, and collaborative care. Nevertheless, systemic barriers such as language and cultural differences, long patient queues, delayed appointments, disorganised workload, and poor record-keeping were identified as major impediments to effective communication. Ngene et al. (2022) further explored doctor-patient communication in selected public and private medical centres in Lagos State using a qualitative approach. Their findings corroborated Mary's (2024) conclusions by identifying culture, language, and patients' belief systems as significant factors affecting therapeutic rapport. In a related study, Thanny et al. (2013) assessed patients' perceptions of the communicative behaviour of healthcare providers in public hospitals in Lagos State. Using purposive sampling, 150 patients completed structured questionnaires. Results indicated that although patients perceived providers as clinically competent, they viewed them as lacking in communicative responsiveness and emotional engagement. Bako et al. (2022) examined client satisfaction with health worker-client communication among pregnant women attending antenatal clinics (ANC) in selected primary healthcare centres in Nasarawa State. The study revealed that only 29.3% of respondents reported being completely satisfied with the communication they received.

The existing body of literature on patient-provider communication (PPC) provides substantial insights into the interpersonal, structural, and contextual barriers that affect communication within healthcare systems globally and in Nigeria. However, gaps still remain, which make the current study instructive. For instance, most studies often concentrate on doctor-patient interactions in general, ignoring the crucial communicative

roles associated with the interpretation and delivery of scan results. Additionally, most Nigerian PPC studies are concentrated in geographical areas such as Abuja and Lagos, with minimal representation of teaching hospitals in southeastern Nigeria, particularly in Anambra State. By focusing on teaching hospitals in Anambra State, the current study adds regional diversity to PPC research in Nigeria.

Social Interaction Theory

This study is anchored on the Social Interaction Theory**,** initially conceptualised by German sociologist Max Weber and later adapted in healthcare communication research by scholars such as Ben-Sira (1976, 1980) and Swedlund et al. (2012). The theory provides a useful lens for understanding the dynamics of interpersonal interactions, especially how disparities in knowledge and power influence communication behaviours and outcomes. At its core, Social Interaction Theory explores how individuals interpret and respond to the actions of others, particularly in contexts where there is an imbalance in knowledge or authority. In healthcare settings, such disparities are evident in the patient-provider relationship, where the provider typically possesses greater medical knowledge and decision-making power. The way this knowledge is communicated—especially in high-stakes scenarios such as the delivery of MRI and CT scan results—plays a critical role in shaping patient experiences and outcomes.

In the context of this study, healthcare professionals engage with patients not only during routine consultations but also in the communicative process that follows diagnostic imaging procedures. Given that most patients lack detailed medical knowledge, there is a significant need for providers to interpret and clearly explain scan results, treatment options, and implications. This requires a communication approach that is not only informative but also emotionally sensitive and patient-centred. A key dimension of the Social Interaction Theory relevant to this study is the affective component of communication style, as emphasised in Ben-Sira's work (1976, 1980). This component refers to the emotional and interpersonal behaviours that accompany clinical interactions. The affective dimension includes behaviours such as allocating sufficient time for patient engagement, demonstrating genuine interest, and offering empathetic support for patients' concerns. This study applies Social Interaction Theory to examine health professional communication MRI and CT scan to patients at NAUTH and COOUTH.

METHODS

Study Design

This study employed a mixed-methods design, integrating both quantitative and qualitative approaches. The quantitative component involved surveying patients who had consultations with doctors following their MRI or CT scan procedures. The survey assessed patients' comprehension of the doctors' explanations regarding their scan results, as well as their satisfaction with the doctors' communication styles and skills. Complementing this, the qualitative component consisted of in-depth interviews with doctors to explore their perspectives on the challenges encountered when conveying MRI and CT scan results to patients.

Target Population of the Study

The study population comprised patients aged 18 years and above attending the General Outpatient Department (GOPD) at the two selected hospitals, (NAUTH and COOUTH) as well as the medical doctors providing care to these patients within the same hospitals and department.

Sample Size and Sampling Technique

For the quantitative survey, a target sample size of 400 patients was initially set; however, only 387 respondents consented and participated (NAUTH=201 and COOUTH=186), resulting in a response rate of 96.8%. For the qualitative component, six medical doctors took part in the study. Purposive sampling was used to select both patients and doctors. Specifically, only outpatients who had undergone MRI or CT scans and subsequently engaged in consultations with doctors about their scan results were included. Likewise, only doctors who attended to patients with MRI or CT scan-related issues at the General Outpatient Department (GOPD) were selected. This sampling approach is appropriate for studies with specific research objectives, as it enables the selection of participants possessing particular characteristics relevant to the investigation.

Instrument for Data Collection

The data collection instruments for this study included a questionnaire with closed-ended items. The questionnaire was adapted and refined from previously validated instruments used in earlier studies (Mary, 2024; Bako et al. 2022 etc) to align with the specific objectives of the current research. It gathered information on patients' level of understanding and

satisfaction regarding communication of MRI and CT scan results. The interview guide was reviewed and approved by experts in health communication from Nnamdi Azikiwe University, Awka, and Chukwuemeka Odumegwu Ojukwu University, Igbariam. The interviews focused on exploring the challenges medical doctors encounter when communicating MRI and CT scan results to patients. Both the questionnaires and interviews were conducted face-to-face within the selected hospitals. Data collection was completed over a period of three weeks.

Data Analysis

The quantitative data collected from the copies of questionnaire administered were analyzed using descriptive statistics. Meanwhile, the qualitative data were examined through thematic analysis, whereby key themes were identified from the interview responses. These themes were supported by direct quotations and detailed descriptions to effectively address the research questions and objectives of the study.

RESULTS

Table 1: Demographic Characteristics of Respondents (N = 387)

Items	Responses	Frequency (f)	Percentage (%)
Gender	Male	180	46.5%
	Female	207	53.5%
Age	18–25 years	92	23.8%
	26–35 years	140	36.2%
	36–45 years	85	22.0%
	46 years and above	70	18.1%
Education Level	No Formal Education	28	7.2%
	Primary Education	50	12.9%
	Secondary Education	125	32.3%
	Tertiary Education	184	47.6%
Marital Status	Single	162	41.9%
	Married	193	49.9%
	Widowed	20	5.2%
	Divorced/Separated	12	3.1%

The demographic data presented in Table 1 shows that the majority of the respondents were female (53.5%), while males constituted 46.5%. In terms of age distribution, most participants were between 26–35 years (36.2%), followed by those aged 18–25 years (23.8%), 36–45 years (22.0%), and those above 46 years (18.1%). Educationally, a

significant proportion of respondents had tertiary education (47.6%), while 32.3% had secondary education, 12.9% had primary education, and only 7.2% had no formal education. Marital status revealed that nearly half of the respondents were married (49.9%), 41.9% were single, 5.2% were widowed, and 3.1% were divorced or separated. This distribution indicates a relatively youthful, educated, and marital-diverse population, which may influence their understanding and satisfaction with communication of MRI and CT scan results.

Table 2: Level of Patient Understanding of MRI and CT Scan Results Communication (N = 387)

S/N	Items	Strongly agree	Agree	Neutral	Disagree	Strongly disagreed	M	Decision
1	I clearly understood the scan result as explained by the doctor.	48 (12.4%)	85 (22.0%)	90 (23.3%)	102 (26.4%)	62 (16.0%)	2.88	Moderate Understanding
2	I understood the purpose of the scan as explained by the doctor.	45 (11.6%)	77 (19.9%)	89 (23.0%)	110 (28.4%)	66 (17.1%)	2.81	Moderate Understanding
3	I understood the implications of the scan results.	42 (10.9%)	72 (18.6%)	94 (24.3%)	113 (29.2%)	66 (17.1%)	2.77	Moderate Understanding
4	I understood the next steps in my treatment as explain by the doctor by on my scan result.	40 (10.3%)	70 (18.1%)	98 (25.3%)	118 (30.5%)	61 (15.8%)	2.77	Moderate Understanding
	Grand Mean						2.82	Moderate Understanding

Decision criterion: 3.5 & above=High; 2.5-299=Moderate; 0-2.49=Low

The results presented in Table 2 indicate a moderate level of patient understanding of MRI and CT scan results communication among the respondents. Across all four items assessed, the mean scores ranged from 2.77 to 2.88 on a 5-point scale, with a grand mean of 2.82**,** suggesting that many patients neither fully agreed nor fully disagreed that they clearly

understood the information communicated by their doctors. While a proportion of the respondents acknowledged understanding the scan results, their purpose, implications, and the next steps in treatment, a relatively higher percentage remained neutral or disagreed, reflecting communication gaps.

Table 3: Patient Satisfaction with Communication of MRI and CT Scan Results (N = 387)

S/N	Satisfaction Item	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	M	Decision
1	Clarity of doctor's explanation	41 (10.6%)	66 (17.1%)	72 (18.6%)	130 (33.6%)	78 (20.2%)	2.64	Moderate Satisfaction
2	Doctor's willingness to answer questions	39 (10.1%)	60 (15.5%)	64 (16.5%)	140 (36.2%)	84 (21.7%)	2.51	Moderate Satisfaction
3	Time given for discussion	34 (8.8%)	55 (14.2%)	63 (16.3%)	148 (38.3%)	87 (22.5%)	2.47	Low Satisfaction
4	Doctor's empathy and attitude	40 (10.3%)	59 (15.2%)	58 (15.0%)	145 (37.5%)	85 (22.0%)	2.54	Moderate Satisfaction
5	Use of understandable language	45 (11.6%)	63 (16.3%)	60 (15.5%)	142 (36.7%)	77 (19.9%)	2.64	Moderate Satisfaction
6	Overall satisfaction with communication	42 (10.9%)	58 (15.0%)	66 (17.1%)	141 (36.4%)	80 (20.7%)	2.59	Moderate Satisfaction

Decision criterion: 3.5 & above=High; 2.5-299=Moderate; 0-2.49=Low

The table reveals that patient satisfaction with the communication of MRI and CT scan results in the selected teaching hospitals (NAUTH and COOUTH) in Anambra State is generally low to moderate. Most respondents reported dissatisfaction or neutrality across key communication indicators such as clarity of doctors' explanations (M = 2.64), willingness to answer questions (M = 2.51), time given for discussion (M = 2.47), empathy and attitude (M = 2.54), and the use of understandable language (M = 2.64). Although a small proportion of patients expressed satisfaction, the majority either felt neutral or dissatisfied, especially with the time allocated for discussion and the doctors' willingness to

engage, which recorded some of the lowest mean scores. The overall satisfaction level with communication (M = 2.59) affirming moderate level of satisfaction with the general communication of MRI and CT scan result by medical doctors in the selected hospitals.

The qualitative aspect of the study involved in-depth interviews with six medical doctors drawn from the General Outpatient Departments (GOPD) of Nnamdi Azikiwe University Teaching Hospital (NAUTH) and Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH) in Anambra State. The participants comprised experienced healthcare professionals actively engaged in patient consultation, particularly in interpreting and communicating MRI and CT scan results. They held varying years of professional experience, ranging from mid-level to senior consultants, and included both male and female doctors. Their insights provided a rich understanding of the communication challenges they encounter as provided in the table below.

Table 4: Major communication barriers faced by healthcare professionals in explaining MRI and CT scan

Emergent Theme	Description	Number of Participants	Supporting Direct Quotes
Time Constraints	Limited time during consultations restricts thorough explanation of scan results to patients.	5	"Sometimes, we have too many patients to see, so I can't spend as much time as I want explaining the results." NAUTH_1 "The pressure of a busy clinic means explanations can be rushed or incomplete." COOUTH 3
Low Patient Health Literacy	Patients often have limited understanding of medical terms, making communication difficult.	6	"Many patients don't understand medical jargon, so I have to find simpler ways to explain complex scan results." NAUTH_ 2 "I often notice patients nodding without really understanding what I'm telling them." COOUTH_1
Emotional Reactions	Patients sometimes react emotionally to scan results, which complicates communication efforts.	4	"When patients get bad news, they become anxious or upset, and it becomes hard to keep them focused." COOUTH_2 "Some patients break down in tears and it's difficult to

			continue explaining after that." NAUTH 2
Language Barriers	Differences in language or dialect hinder clear communication between doctors and patients.	3	"Not all patients speak English fluently, and some prefer their local language, which we don't always speak." NAUTH_1 "Sometimes, I have to rely on family members to interpret, which is not always accurate." COOUTH_3
Patient Overwhelm and Anxiety	Patients may feel overwhelmed by medical information and scan results, limiting comprehension.	3	"Some patients are overwhelmed by the information and stop asking questions, which affects their understanding." NAUTH_1 "The anxiety caused by hearing scan results makes it difficult for patients to process what I say." COOUTH_1

The analysis of interview data above revealed several key challenges medical doctors face when communicating MRI and CT scan results to patients in NAUTH and COOUTH, Anambra State. A dominant theme was time constraints**,** reported by five doctors, highlighting that high patient volumes often limit the duration of consultations, thereby affecting the depth of explanation. Low patient health literacy emerged as the most frequently mentioned challenge, with six doctors noting that many patients struggle to understand medical terminology, which hinders effective communication. Emotional reactions to scan results, such as anxiety and distress, were also commonly reported and noted to disrupt the communication process. Additionally, language barriers were identified by three doctors, indicating that differences in language or dialect often lead to miscommunication, especially when informal interpreters like family members are used. Finally, patient overwhelm and anxiety was cited by three participants, showing that the complexity and emotional weight of scan results often leave patients too distressed to comprehend further explanations.

DISCUSSION

The first objective of this study was to determine the level of understanding of MRI and CT scan results among patients at NAUTH and COOUTH. Findings indicated a moderate level of comprehension across the board, with the grand mean score falling within the 2.8 range. This aligns with earlier findings by Murugesu et al. (2022), who noted that low health literacy significantly hampers patients' capacity to grasp medical explanations. Similarly the findings reechoes Gao et al.'s (2024) findings in rural China, where low communication competence reduced patient satisfaction and comprehension. However, unlike the high levels of understanding reported in Azizam and Shamsuddin's (2015) Malaysian study, the present study suggests regional and systemic differences may influence patient comprehension in southeastern Nigeria.

The second objective examined patient satisfaction with how MRI and CT scan results were communicated by doctors in the selected hospitals. Results again revealed a moderate level of satisfaction, consistent with the findings of Abeid et al. (2024) in Libya, who also reported moderate ratings in outpatient communication. This finding reinforces the idea that satisfaction does not always equate to effective or complete understanding, especially when emotional or cognitive overload occurs, as suggested by Azizam and Shamsuddin (2015). Their observation that patients with lower education levels reported higher satisfaction suggests satisfaction might reflect perceived respect or reassurance rather than clarity. Additionally, Ismail et al. (2020) showed that affiliative and collaborative communication fosters greater satisfaction, suggesting that moderate satisfaction in this study may point to a lack of consistently empathetic or participatory communication styles among some medical practitioners (doctors). Social Interaction Theory helps explain this by pointing to the hierarchical nature of patient-doctor interactions, where patients may feel hesitant to question or seek clarification from doctors they perceive as authority figures.

The third objective explored the communication barriers faced by doctors in explaining MRI and CT scan results. Several themes emerged, including time constraints, low patient health literacy, emotional reactions, language barriers, and patient anxiety—barriers that have also been widely documented in earlier studies. For instance, Cubaka et al. (2018) and Mary (2024) found that heavy workloads and insufficient communication training impede effective interactions in healthcare settings. The challenges of language and cultural

differences identified in this study echo the findings of Ngene et al. (2022), who linked these barriers to breakdowns in therapeutic rapport. Similarly, the emotional responses and anxiety described by participants are consistent with Rathiram et al.'s (2022) findings on expressive and receptive difficulties among patients with communication disorders. However, unlike studies that suggest demographics such as education or age significantly influence communication quality (Okamura et al., 2024), this study found these challenges to be more systemic and universal across respondents. These findings further validate Social Interaction Theory, which posits that communication is deeply influenced by power asymmetries, emotional states, and contextual barriers. The interaction between doctors' limited time and patients' vulnerability and confusion reflects an imbalanced communication setting, limiting the effective exchange of medical information.

CONCLUSION

This established that patients had a moderate level of understanding of their diagnostic results following consultations with doctors. Additionally, patient satisfaction with how results were communicated was also moderate, this was caused by several factors including time constraints, low patient health literacy, emotional reactions and language barriers. The situation undermine general health care delivery, as medical practitioners success in service delivery hinges on the cooperation of their patient and such cooperation can only be achieve through effective communication and understanding of health related information and diagnoses between the two parties. The implication of the findings of this study highlight the fact that effective communication of diagnostic results is not merely a clinical task but a relational process that requires time, empathy, and mutual understanding. Thus, addressing challenges facing patient-doctor communication at all levels particularly in interpreting machine (MRI and CT) scan result is necessary.

Recommendations

1. NAUTH and COOUTH should provide regular, structured training for medical doctors on patient-centred communication strategies, especially in explaining complex diagnostic results like MRI and CT scans.
2. To overcome the challenges of low patient literacy and language barriers, the hospitals should consider engaging trained patient educators or interpreters who

can assist in simplifying medical information and bridging language gaps during consultations.

3. Hospital management should review patient flow and workload to ensure that doctors have adequate time for each patient. Reducing the number of patients per doctor or increasing staff strength could help relieve time constraints that hinder effective communication.
4. The Hospitals should produce easy-to-understand printed materials, visual aids, or digital resources that explain common scan procedures and typical results. These materials can reinforce verbal explanations and aid patient comprehension after the consultation.
5. The hospitals should establish feedback systems where patients can report their level of understanding and satisfaction after receiving scan results. This will help monitor and improve communication quality and ensure that patients' perspectives are consistently incorporated into service delivery.

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