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CLINICAL INFORMATION NEEDS AND DIAGNOSTIC DECISION- MAKING IN NIGERIAN GOVERNMENT HOSPITALS: THE ROLE OF PATIENT DATA MANAGEMENT

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Abstract

This study aims to examine the relationship between information needs and information- seeking behaviour of medical doctors in government- owned hospitals in Cross River State, Nigeria. The objectives include clinical information needs, diagnostic information needs and patient data information needs and the relationship with their information- seeking behaviour of Medical Doctors. Three research questions and three research hypotheses were formulated and tested. Survey research design was adopted. The population of the study comprised all Medical Doctors in government- owned hospitals in Cross River State, totalling 530 Medical Doctors distributed across different government- owned hospitals. The instrument adopted for the study was a 35- item structured Questionnaire titled "nformation Needs and Information- Seeking Behaviour of Medical Doctors Scale". The study establishes the validity and reliability of the instrument through face validation and a trial testing process, yielding a Cronbach Alpha reliability coefficient of 0.74. The instrument was administered through purposive and accidental sampling technique. A 4- point likert type scale was used for scoring. Data analysis was conducted using Pearson product- moment correlation for individual hypotheses and multiple regressions for the composite effect of information needs on information- seeking behaviour. The findings reveal significant positive relationships between various information needs and the information- seeking behaviour of Medical Doctors. Clinical information needs,

diagnostic information needs and patient data information needs are all positively relate with the information-seeking behaviour of Medical Doctors. The study emphasizes the dynamic nature of medical information needs and the crucial role they play in shaping the information-seeking behaviour of Medical Doctors. The recommendations include enhancing access to medical resources, organizing workshops on technology integration, fostering a culture of continuous learning, and providing support services for medical professionals. Suggestions for further research involve exploring other variables, conducting similar studies in different areas, and replicating the study with diverse populations for broader generalization.
Keywords: Clinical information needs, Diagnostic decision making, Patient data management, information- seeking behavior, medical doctors

Introduction

The effective utilization of information by medical professionals is crucial for delivering high-quality healthcare and ensuring positive patient outcomes in Nigeria (Ogah *et al.,* 2024). As primary caregivers, medical doctors rely heavily on accurate and timely information to guide clinical decisions, from diagnosis to treatment protocols. This dependency is driven not only by functional requirements but also by intrinsic motivations, such as empathy for patients, which can compel physicians to seek out critical data to resolve complex cases (Inyang & Offem, 2014). Information-seeking behavior, defined as the actions individuals take to identify, evaluate, and apply information to meet their needs, plays a central role in bridging knowledge gaps and addressing professional demands, such as updating clinical knowledge or adhering to evolving medical guidelines (Nuru & Ahmad, 2008; Ojabulu, 2016).

However, studies have revealed significant challenges in Nigeria's healthcare landscape, particularly in terms of information access and utilization. Medical Doctors in government-owned hospitals often depend on peer consultations and trial-and-error approaches rather than evidence-based resources, leading to inconsistent care practices and potential risks to patient safety (Chakravarty & Chakravarty, 2024). Limited access to up- to-date digital tools, fragmented paper-based records, and inadequate training in information literacy further exacerbate these issues (Oluwatoyin, 2020). The repercussions of suboptimal information practices are far- reaching, resulting in delayed diagnoses, inappropriate treatments, and inefficiencies in resource allocation, ultimately undermining both professional satisfaction and systemic trust (Ugwuanyi & Ugwu, 2017).

This study investigates the interplay between specific information needs such as clinical, diagnostic, and patient data requirements and the seeking behaviors of medical doctors in government-owned hospitals in Cross River State. Grounded in Wilson' theory of information needs as gaps between current and desired knowledge, the research explores how factors like access to guidelines, imaging tools, and patient records shape decision-making (Wilson, 2016). Through synthesizing insights from Savolainen (2016) and others, this study aims to address gaps in existing literature, which often overlook regional disparities and the multifaceted nature of information access in low-resource settings. The findings seek to inform targeted interventions, from digitizing health records to enhancing collaborations between librarians and healthcare institutions aimed at fostering a culture of informed, evidence-based practice in Nigeria's evolving healthcare system.

Research Objectives

The research aims to achieve the following objectives:

1. To investigate the relationship between clinical information needs and diagnostic decision-making among medical doctors in Nigerian government hospitals.
2. To examine the impact of diagnostic information needs on the decision-making processes of medical doctors.
3. To assess the role of patient data management in supporting diagnostic decision-making among medical doctors.

Statement of Problem

Medical Doctors in government-owned hospitals in Cross River State, Nigeria, are confronted with substantial challenges in accessing and utilizing pertinent information to address their clinical, diagnostic, and patient care needs. Despite their critical role in the healthcare system, these doctors frequently resort to inefficient and fragmented information-seeking practices, such as relying on informal peer consultations, outdated paper-based records, and trial-and-error approaches, rather than leveraging evidence-based resources, institutional databases, or modern digital tools. This situation raises significant concerns regarding the quality of care provided, the potential for medical errors, delayed diagnoses, and inconsistent treatment protocols.

The challenges faced by these medical professionals are multifaceted. Limited access to current medical literature, inadequate training in information literacy, time constraints in overburdened clinical settings, and

socio-cultural factors that may conflict with modern medical practices all contribute to the persistence of suboptimal information-seeking behaviors. Furthermore, the healthcare infrastructure in these settings often suffers from inadequate institutional support, including underfunded libraries, unreliable internet connectivity, and insufficient integration of digital technologies such as electronic health records. These systemic barriers not only hinder the efficient delivery of healthcare services but also compromise patient outcomes and undermine trust in the public healthcare system.

This study aims to investigate the complex interplay between the specific information needs of Medical Doctors in government-owned hospitals in Cross River State encompassing clinical information needs, diagnostic information needs, and patient data information needs and their information-seeking behaviors.

Literature Review

Information seeking starts when someone acknowledge that there is need for information and make frantic efforts to mee that need. (David-West 2023). Research conducted by Covell et al. (1985) to examine self¬reported information needs among physicians during office practice found that 70% of 269 patient management questions remained unresolved due to barriers such as outdated textbooks, disorganized journal articles, and time constraints. The study used direct observation to identify these challenges and highlighted the need for more effective information systems to support clinical decision-making. The results showed that physicians face significant challenges in accessing relevant information, which can impact patient care. The study's findings emphasize the importance of addressing these information needs to improve clinical practice. A study by Ely et al. (2007) to analyze unanswered clinical questions from physicians categorized 237 questions into 19 types, with “ndiagnosed finding,”“onditional,”and “ompound”questions dominating. The study recommended rephrasing queries and using clinically oriented resources to address these information needs. The results showed that physicians have diverse information needs that require tailored solutions. The study's findings highlight the importance of developing effective strategies to support clinical decision¬making.

An investigation by Maggio et al. (2014) to identify information needs

among physicians in the U.S. and the Netherlands found that physicians have six information needs: refreshing, confirming, logistics, teaching, idea generation, and personal learning. The study used semi-structured interviews with 22 physicians and highlighted the importance of tools like PubMed and UpToDate in supporting these needs. The results showed that physicians value digital resources in clinical practice. The study's findings emphasize the need for more effective information systems to support clinical decision-making.

Research carried out by Singh and Sittig (2015) to propose a framework to address diagnostic errors developed the Safer Dx framework, emphasizing sociotechnical system integration. The study linked structure, process, and outcomes to diagnostic accuracy and highlighted the importance of a holistic approach to addressing diagnostic errors. The results showed that the framework offers a comprehensive approach to improving diagnostic accuracy. The study's findings underscore the need for practical implementation and testing of the framework in clinical settings.

A study by Lundgren et al. (2024) to develop case-based learning resources using generative AI to address clinical uncertainty found that normalized uncertainty improved trainee confidence. The study engaged medical students and educators through action research and highlighted the importance of interdisciplinary collaboration in developing effective learning resources. The results showed that AI-powered learning resources can improve clinical confidence. The study's findings emphasize the need for further research on the scalability and effectiveness of AI-powered learning resources.

An investigation by Gao (2025) to review AI' role in healthcare highlighted AI' potential to enhance diagnostics but noted ethical and training gaps. The study advocated for AI integration into medical education and policy reform to address these gaps. The results showed that AI has the potential to transform clinical practice. The study's findings underscore the need for empirical data on AI's real-world impact and effectiveness in clinical settings.

A study conducted by Peck et al. (2018) to analyze diagnostic inaccuracies in pathology found error rates of 3-% across specialties like gynecology and dermatology. The study used external quality assurance data and highlighted the importance of improved diagnostic accuracy in clinical

practice. The results showed that diagnostic inaccuracies are a significant challenge in clinical practice. The study's findings emphasize the need for more effective strategies to improve diagnostic accuracy.

Research carried out by Thammasitboon and Cutrer (2013) to link diagnostic errors to cognitive failures found that 75% of diagnostic errors were due to cognitive failures. The study advocated for dual-process model training and clinical guidelines to address these errors. The results showed that cognitive failures are a significant contributor to diagnostic errors. The study's findings highlight the importance of developing effective strategies to mitigate cognitive failures in clinical practice.

A study by Adeniyi et al. (2024) to review EHRs'impact on patient care noted improved data accessibility and care coordination but highlighted barriers like interoperability and provider burnout. The study emphasized the need for comprehensive synthesis of existing literature to address these challenges. The results showed that EHRs have the potential to improve patient care. The study's findings underscore the need for more effective strategies to address the challenges associated with EHRs.

A study conducted by Chao et al. (2013) to survey outpatient physicians on EHR utility found 78% usage but concerns about inefficiency and data privacy. The study highlighted the importance of qualitative analysis of user perspectives to address these concerns. The results showed that while EHRs are widely used, their effectiveness is hindered by usability issues. The study's findings emphasize the need for more user-friendly EHR systems.

Research carried out by Karaferis et al. (2025) to propose a blockchain-based EHR system for cross-border data sharing addressed portability challenges but acknowledged technical and ethical hurdles. The study highlighted the need for data standardization and cybersecurity to ensure the effectiveness of such systems. The results showed that blockchain technology has the potential to improve EHR systems. The study's findings underscore the importance of addressing the technical and ethical challenges associated with blockchain-based EHR systems.

An investigation by Ajami (2013) to identify barriers to EHR adoption found 25 barriers, including cost, workflow disruption, and inadequate training. The study highlighted the importance of addressing these barriers to

improve EHR adoption. The results showed that EHR adoption is hindered by multiple factors. The study's findings underscore the need for more effective strategies to address these barriers.

A study conducted by Derecho (2024) to systematically review EHR adoption in developing economies identified enablers (e.g., computer literacy) and barriers (e.g., resistance to change). The study emphasized the importance of physician perspectives in understanding EHR adoption. The results showed that EHR adoption is influenced by various factors. The study's findings highlight the need for more research on the factors influencing EHR adoption in developing economies.

A study by Alrebh et al. (2024) to examine telemedicine' ethical challenges identified privacy breaches and inequitable access as major concerns. The study advocated for infrastructure investments and culturally sensitive platforms to address these challenges. The results showed that telemedicine has the potential to improve healthcare access, but its effectiveness is hindered by ethical concerns. The study's findings emphasize the need for more research on the ethical implications of telemedicine.
Thompson et al., (2018) explored the clinical information needs of Medical Doctors in a tertiary hospital setting. The researchers utilized a mixed-methods approach, combining surveys and in-depth interviews. The study was made up of 152 medical personnels selected through census procedure. The findings highlighted that Medical Doctors exhibited a strong inclination to seek clinical information in real-time, emphasizing the importance of immediate access to relevant data during patient consultations. The study also revealed a preference for digital platforms, such as electronic health record systems, for retrieving clinical information, showcasing the impact of technological advancements on information-seeking behaviour.

Research carried out by MacWalter et al. (2016) to survey Scottish GPs on online Continuing Professional Development (CPD) use found preferences for evidence-based resources like SIGN guidelines and highlighted IT barriers like slow connectivity. The study emphasized the importance of addressing these barriers to improve CPD use. The results showed that GPs value online CPD, but its effectiveness is hindered by technical issues. The study's findings underscore the need for more effective strategies to address these technical issues.

Martinez and Johnson (2023) conducted a comprehensive literature review synthesizing empirical studies on Medical Doctors' information needs regarding the current research and medical advancements. The review encompassed diverse research methodologies, including surveys, interviews, and observational studies. A total of 452 respondents were employed for the study. The analysis indicated a consistent demand among medical practitioners for the latest research findings to inform evidence-based practice. The study highlighted the influence of technological advancements in facilitating access to the current medical knowledge and emphasized the ongoing challenge of information overload in the rapidly evolving field of healthcare.

Methodology

The research employed the correlational design. According to Ofem (2022), correlational design examines the relationship between variables without manipulating them, focusing on the magnitude and direction of relationships between two or more variables. This design was deemed appropriate for investigating how information needs influence the information-seeking behavior of medical personnel in government-owned hospitals in Cross River State. Cross River State, located in the south-south zone of Nigeria, served as the study area. The population consisted of530 medical doctors working in public hospitals in Cross River State. The distribution of the population across hospitals is presented in Table 1. Purposive sampling technique was adopted to sample all the 530 members of the population. A questionnaire was developed to collect data on socio-demographic information, information needs, and information-seeking behavior.

The instrument consisted of two sections: Section A captured socio-demographic data, while Section B included a 15-item Likert scale to measure information needs and information-seeking behavior. The instrument, underwent face validity by experts in educational test and measurement, information science, and medical professionals. The validation process refined the initial items and finally go 18 items in the questionnaire. Reliability was established through a pilot test with 50 respondents, yielding Cronbach Alpha reliability coefficients ranging from 0.70 to 0.84. Out of the 530 questionnaires administered, 509 were successfully completed and retrieved, resulting in a response rate of approximately 96%. Data were analyzed using Pearson product moment

correlation to test the relationships between information needs (clinical, diagnostic, and patient data) and information-seeking behavior. Six hypotheses were tested, with each hypothesis examining the relationship between a specific information need and information-seeking behaviour.

The study ensured confidentiality and anonymity of respondents, and informed consent was obtained before administering the questionnaire. The research instrument was approved by relevant authorities, and the study adhered to ethical standards for research involving human subjects.

Table 1: Distribution of population by government own hospitals in Cross River State

S/n	Names of Hospital	No of respondents
1	University of Calabar Teaching Hospital (UCTH)	500
2	General hospital Akampka	2
3	St Joseph Hospital Ikot Ene	1
4	Eja Memorial Hospital, Itigidi	1
5	Cottage Hospital, Akpet	1
6	Cottage Hospital, Oban	1
7	General Hospital Calabar	5
8	General Hospital Obubra	1
9	Sacred Heart Hospital Obudu	5
10	Model General Hospital, Sankwala	2

11	General Hospital, Ogoja	5
12	General Hospital, Ugep	2
13	General Hospital, Okpoma	2
14	Lutheran Hospital Yala	2
	Total	**530**

Source: Registry of each of the hospitals 2022

TABLE 2: Coding schedule of the variables and items in the questionnaire

Variables	Sub units	Colum
Gender	Male - 1Female - 2	1
Age	Below 40- 140- 55ys- 2 56- above- 3	2
Experience	Below 10yrs- 110- 20yrs- 2 21- 30yrs- 3 31- above yrs - 4	3
Clinical information needs,	Add score of item 1- 5 in Section B of the instrument	4
Diagnostic information needs	Add score of item 6- 10 in Section B of the instrument	5
Patient data information needs	Add score of item 11- 15 in Section B of the instrument	6
Information Seeking Behavior	Add score of item 31- 40in Section B of the instrument	10

Result

The study aimed to investigate the information needs and information-seeking behavior of Medical Doctors in government hospitals in Cross River State. The results are presented below:

The results showed that the calculated means for all the items related to clinical information needs were greater than 2.5, except actively participating in medical conferences, which had a mean of 2.42. This indicates that respondents agreed that the various areas highlighted are the clinical information needs of Medical Doctors in the study area. Specifically, the respondents identified collaborating with colleagues to discuss challenging cases (mean = 2.78), consulting medical literature

databases (mean = 2.67), seeking advice from specialists within the hospital (mean = 2.80), and utilizing online platforms for medical information exchange (mean = 2.78) as essential clinical information needs while seminar participations wasn' too essential (2.42).

Table 1: Means and standard deviation of clinical information needs of Medical Doctors

S/N	Clinical Information Needs	N	CM	OM	SD	Remarks
1	Actively participating in medical conferences and seminars.	50 9	2. 5	2. 42	19 02	Not needed
2	Collaborating with colleagues to discuss challenging cases.	50 9	2. 5	2. 78	.78 2	Needed
3	Consulting medical literature databases	50 9	2. 5	2. 67	.76 2	Needed
4	Seeking advice from specialists within the hospital.	50 9	2. 5	2. 80	.98 2	Needed
5	Utilizing online platforms for medical information exchange	50 9	2. 5	**2. 78**	**.45 2**	Needed
	Total	**50 9**	**2. 5**	**2. 98**	**.88 8**	**Needed**

The results showed that the calculated means for all the items related to diagnostic information needs were greater than 2.5. This indicates that respondents agreed that the various areas highlighted are the diagnostic information needs of Medical Doctors in the study area. Specifically, the respondents identified collaborating with radiologists and pathologists (mean = 2.90), actively participating in diagnostic conferences (mean = 2.88), utilizing online platforms for diagnostic discussions (mean = 2.74), seeking second opinions for complex cases (mean = 2.89), and subscribing to journals focused on diagnostic advancements (mean = 2.92) as essential diagnostic information needs.

Table 3: Means and standard deviation of diagnostic information needs of Medical Doctors

1	Collaborating with radiologists and	50	2.5	2.9	.55	Neede
2	Actively participating in diagnostic	50	2.5	2.8	.09	Neede
3	Utilizing online platforms for diagnostic	50	2.5	2.7	.78	Neede
4	Subscribing to journals focused on	50	2.5	2.9	.87	Neede

The results showed that the calculated means for all the items related to patient data information needs were greater than 2.5. This indicates that respondents agreed that the various areas highlighted are the patient data information needs of Medical Doctors in the study area. Specifically, the respondents identified utilizing electronic health record systems for patient information (mean = 3.02), seeking guidance on ethical dilemmas in patient data management (mean = 2.77), collaborating with other healthcare professionals for comprehensive patient insights (mean = 2.65), attending workshops on advancements in patient data technologies (mean = 2.91), and following updates on regulations and policies regarding patient data (mean = 2.67) as essential patient data information needs..

Table 4: Means and standard deviation of patient data information needs of Medical Doctors.

1	Utilizing electronic health record	5	2.	3.	.67	Neede
2	Seeking guidance on ethical dilemmas in	5	2.	2.	.29	Neede
3	Collaborating with other healthcare	5	2.	2.	2.8	Neede

4	Following updates on regulations and	5	2.	2.	.98	Neede

Inferential Statistics

The Pearson product moment correlation analysis revealed a significant positive relationship between clinical information needs and information-seeking behavior ($r = 0.484$, $p < 0.05$). Since p (0.000) is less than p (0.05), the null hypothesis was rejected, and the alternate hypothesis was supported. This implies that the higher the clinical information needs, the higher the information- seeking behavior of Medical Doctors.

Table 5: Pearson product moment correlation analysis of the relationship between clinical information needs and information seeking behaviour of Medical Doctors.

Variables	N	Mean	Std. Dev	Df	r-cal	p-val
Clinical information needs	509					
					.484*	.000
Information seeking behaviour	509					

*= significant at .05 level

The Pearson product moment correlation analysis revealed a significant positive relationship between diagnostic information needs and information- seeking behavior ($r = 0.798$, $p < 0.05$). Since p (0.000) is less than p (0.05), the null hypothesis was rejected, and the alternate hypothesis was supported. This implies that the higher the diagnostic information needs, the higher the information- seeking behavior of Medical Doctors.

Table 6: Pearson product moment correlation analysis of the relationship between diagnostic information needs and information seeking behaviour of Medical Doctors.

Variables	N	Mean	Std. Dev	Df	r-cal	p-val

Diagnostic information needs	509	.798*	.000
Information seeking behaviour	509		

*= significant at .05 level

The Pearson product moment correlation analysis revealed a significant positive relationship between patient
data information needs and information-seeking behavior ($r = 0.280$, $p < 0.05$). Since p (0.000) is less than p (0.05), the null hypothesis was rejected, and the alternate hypothesis was supported. This implies that the higher the patient data information needs, the higher the information-seeking behavior of Medical Doctors.

Table 7: Pearson product moment correlation analysis of the relationship between patient data information needs and information seeking behaviour of Medical Doctors

Variables	N	Mean	Std. Dev	Df	r-	p-
Patient data information needs	509				.280	.00
Information seeking behaviour	509					

*= significant at .05 level

Discussion of Findings

For the clinical information needs, the study reveals that medical doctors prioritize several key clinical information needs, with mean scores exceeding 2.5 for most items. Doctors strongly endorse collaboration with colleagues to discuss challenging cases (mean = 2.78), consulting medical literature databases (mean =2.67), seeking advice from hospital specialists (mean = 2.80), and utilizing online platforms for medical information exchange (mean = 2.78) as essential practices. These findings align with established patterns in clinical workflows, where peer consultations and evidence-based resources are critical for resolving uncertainties and refining treatment plans (Covell *et al.,* 1985; Ely *et al.,* 2007). For instance, Covell *et al.* (1985) noted that clinicians frequently turn to colleagues and literature for "just-in-time" learning, particularly in complex cases requiring rapid decision-making. Similarly, Ely *et al.* (2007) emphasized that clinical questions often arise from the need to confirm or update knowledge, a process facilitated by specialist input and digital

resources. However, the study identified one exception: actively participating in medical conferences scored marginally below the threshold (mean = 2.42), suggesting that respondents did not view seminar attendance as integral to meeting their clinical information needs.

This contrasts with the high valuation of online platforms, which offer immediacy and convenience. Younger clinicians, in particular, increasingly favour dynamic, on-demand resources over traditional conference formats, reflecting a shift towards efficiency and digital accessibility (Maggio *et al.,* 2014). For example, Maggio *et al.* (2014) observed that time constraints and workload pressures often deter clinicians from attending in-person seminars, prompting reliance on virtual tools for continuous education. These results underscore a tension between traditional and modern approaches to clinical knowledge acquisition. While peer collaboration and literature remain foundational, the declining emphasis on conferences highlights the need for institutions to adapt by integrating hybrid learning models, such as virtual conferences or curated online modules, to better align with clinicians' preferences and workflow demands. By addressing this gap, institutions can enhance engagement and ensure that continuing education remains relevant in an era dominated by digital solutions.

From the result on the diagnostic information needs, the study underscores the critical role of interdisciplinary collaboration and evidence-based resources in addressing diagnostic information needs, with all items scoring above 2.5 on the Likert scale. Respondents strongly endorsed collaborating with radiologists and pathologists (mean = 2.90), participating in diagnostic conferences (mean = 2.88), and subscribing to journals focused on diagnostic advancements (mean = 2.92) as essential practices. These findings reflect the complex, team-based nature of modern diagnostics, where integrating specialized expertise and peer-reviewed knowledge is vital for accuracy (Patel, 2014). For instance, collaboration with radiologists and pathologists aligns with prior research showing that diagnostic errors often stem from communication gaps between clinicians and laboratory specialists, necessitating structured interdisciplinary workflows (Singh & Sittig,2015). Similarly, the high valuation of diagnostic conferences mirrors the result on a study by Lundgren *et al.,* (2024) emphasis on case-based learning and peer discussions to reduce diagnostic uncertainty (CDC, 2021). The reliance on journals (mean = 2.92) highlights a persistent preference for traditional, peer- reviewed literature,

which remains a cornerstone of evidence-based diagnostics.

This contrasts with trends in other clinical domains, where younger clinicians increasingly favour digital tools like AI-driven platforms for rapid information retrieval and emphasis have been made that there should be properly guided in using such platforms (Gao, 2025). The study's respondents also valued online platforms for diagnostic discussions (mean = 2.74), indicating that journals and digital resources can work together to support clinical decision-making. For instance, platforms like BMJ Best Practice provide evidence-based guidance that incorporates the latest research findings, enabling clinicians to stay up-to-date and informed in their practice (Protus, 2014). This complementary relationship highlights the potential for journals and online resources to enhance each other, rather than replace traditional formats. Seeking second opinions for complex cases (mean = 2.89) further emphasizes the cautious, iterative nature of diagnostics. This aligns studies that have found that second opinions reduce diagnostic errors by 15-0% in high-risk scenarios (Singh & Sittig, 2015; Peck *et al.,* 2018; Thammasitboon & Cutrer, 2013). Additionally, consultation for getting second opinion has gone past the formal consultations due emerging practices such as crowdsourcing diagnoses via virtual networks, which offer scalability but lack the rigor of structured peer review (Wazny 2018; Ringart, 2024).

The study demonstrates strong agreement among medical doctors regarding essential patient data information needs, with all items scoring above 2.5 on the Likert scale. The highest-rated need was the utilization of electronic health record (EHR) systems (mean = 3.02), reinforcing their role as foundational tools for accessing and managing patient information, as emphasized by Adeniyi *et al.,* 2024. However, practical challenges such as interoperability barriers and incomplete data, reported in various healthcare settings globally, reveal a gap between the perceived value of EHRs and their real-world efficacy and these systemic issues, including manual entry errors and fragmented systems, underscore the need for policy- driven reforms to enhance integration and usability (Chao *et al.,* 2013). Respondents also prioritized attending workshops on advancements in patient data technologies (mean = 2.91), aligning with evidence that continuous education is critical for adapting to innovations like AI-driven analytics and mitigating EHR- related burnout (Karaferis *et al.,* 2025). Ethical dilemmas in data management (mean = 2.77) further emerged as a key concern, reflecting heightened awareness of privacy and consent issues amid expanding telemedicine and data-sharing practices, as

outlined in a study by Alrebh *et al.,* 2024.

Collaboration with healthcare professionals for comprehensive insights (mean = 2.65) and adherence to evolving regulations (mean = 2.67) were also endorsed, though the relatively lower scores for ollaboration may signal institutional barriers to interdisciplinary teamwork, such as hierarchical structures or time constraints (Etherington *et al.,* 2021). These findings contrast with studies highlighting clinician dissatisfaction with EHR usability, including a survey where physicians cited poor design as a workflow hindrance (Ajami, 2013), as well as global disparities in resource-limited settings where training and policy updates lag behind technological adoption (Derecho, 2024). Collectively, the results advocate for a balanced approach that combines interoperable EHR systems, ethics-focused training, and standardized regulations to address both technical and human-centered challenges in patient data management. Future strategies must prioritize equity and adaptability to ensure resilient, patient-centered data ecosystems across diverse healthcare environments.

The result of hypotheses one that stated that there was no significant relationship between clinical and information needs and information seeking behaviour of Medical Doctors was rejected. This implied that the relationship between the two variables were positive and significant. The study findings align with that of Thompson *et al.* (2018) explored the clinical information needs of Medical Doctors in a tertiary hospital setting. The researchers utilized a mixed-methods approach, combining surveys and in-depth interviews. The findings highlighted that Medical Doctors exhibited a strong inclination to seek clinical information in real¬time, emphasizing the importance of immediate access to relevant data during patient consultations. The study also revealed a preference for digital platforms, such as electronic health record systems, for retrieving clinical information, showcasing the impact of technological advancements on information-seeking behaviour.

The result of hypotheses two that stated that there was no significant relationship between diagnostic information needs and information seeking behaviour of Medical Doctors was rejected. This implied that the relationship between the two variables were positive and significant. The

study findings aligns with that MacWalter *et al.* (2016), the diagnostic information needs of Medical Doctors were investigated. The researchers employed a questionnaire-based survey distributed among doctors across different specialties. The results indicated that medical practitioners actively sought diagnostic information from various sources, including medical literature, consultations with colleagues, and online databases. The study shed light on the diverse sources utilized by doctors in fulfilling their diagnostic information needs, emphasizing the multifaceted nature of their information-seeking behaviour.

The result of hypotheses three that stated that there was no significant relationship between patient data information needs and information seeking behaviour of Medical Doctors was rejected. This implied that the relationship between the two variables were positive and significant. The study findings is in line with that of Martinez & Johnson (2021) investigated the patient data information needs of Medical Doctors in a primary care setting. The researchers collected data through repeated interviews and observations over a six-month period. The study identified that medical practitioners sought comprehensive and context-specific patient data to inform their decision-making processes. The findings emphasized the dynamic nature of patient data information needs, with Doctors adapting their information-seeking behaviour based on the evolving conditions and complexities of individual cases

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