HEALTHCARE PROFESSIONALS' PERCEPTIONS ON THE INTEGRATION OF ARTIFICIAL INTELLIGENCE (AI) IN MANAGING COMMUNICATION DISORDERS

[1]IDE, John Elliot
[2]EGBULE, Mariagoretti Chidi

[1,2]Department of Mass Communication, Imo State University, Owerri

Corresponding author: Egbule, Mariagoretti Chidi, egbulechidi2020@gmail.com

ABSTRACT

This study investigated the integration of artificial intelligence (AI) in managing communication disorders, focusing on healthcare professionals' perceptions, including speech-language pathologists (SLPs) and audiologists. A descriptive cross-sectional survey design was employed, gathering data from 371 professionals across public and private institutions. The study explored how socio-demographic factors, teamwork, communication openness, and organisational influences affected AI adoption in communication disorder management. The results revealed that doctors in private hospitals exhibited more positive perceptions of AI, with 72% expressing confidence compared to 55% in public hospitals. Strong correlations were found between teamwork ($r = 0.45$) and communication openness ($r = 0.38$) with AI adoption. Teamwork, management support, and feedback mechanisms explained 17.7% of the variance in doctors' perceptions, with teamwork as the strongest predictor ($\beta = 0.42$). The findings underscored the importance of institutional support, teamwork, and communication in effectively integrating AI into healthcare practices. The researchers recommended that that healthcare institutions promote teamwork, communication openness, and management support to enhance AI adoption in communication disorder management. Additionally, training programmes should address the challenges and opportunities of AI, particularly for professionals in public hospitals, to ensure equitable access and integration across healthcare settings.

Keywords: Healthcare professionals', Artificial Intelligence (AI), communication disorders, perception

Introduction

The intersection of artificial intelligence (AI) and communication disorders presents a transformative frontier in healthcare and rehabilitation sciences. Communication disorders, encompassing conditions such as stuttering, aphasia, and dysarthria, significantly impact an individual's ability to express and understand language.

Recent advancements in AI-driven technologies have introduced novel diagnostic, therapeutic, and assistive tools, potentially revolutionising traditional approaches to these challenges. For instance, AI-powered speech recognition systems can now detect subtle speech irregularities, offering more precise diagnostics and personalised intervention plans (Alnashwan et al., 2023; Compton et al., 2023).

However, these advancements are accompanied by significant challenges. Ethical considerations surrounding patient data privacy, the potential bias in AI algorithms, and the accessibility of AI tools to underprivileged populations are critical concerns. Moreover, integrating AI into clinical workflows requires significant investment in training for healthcare providers and the infrastructure to support such technologies (Azevedo et al., 2023). These challenges highlight the necessity of a balanced approach to adopting AI in managing communication disorders.

The prospects of AI in this domain are vast, offering solutions that extend beyond clinical environments. AI-driven telehealth platforms have emerged as invaluable resources for individuals in remote or underserved regions. These platforms enable real-time interaction between patients and specialists, improving access to therapy and early intervention for conditions such as developmental language disorders (Georgiou & Theodorou, 2023). Additionally, wearable devices equipped with AI can

monitor and adapt to users' needs, aiding individuals with hearing impairments in dynamic environments (Fabry & Bhowmik, 2021).

Nonetheless, the rapid evolution of AI raises questions about its long-term societal and professional implications. The potential for AI to automate specific tasks traditionally performed by speech-language pathologists may alter the roles of these professionals, necessitating a redefinition of skills and responsibilities within the field. As highlighted by Liss and Berisha (2020), fostering a collaborative relationship between AI systems and practitioners will be essential to leverage the technology's full potential while preserving human-centric care.

Therefore, AI represents both a challenge and an opportunity for addressing communication disorders in contemporary healthcare. While its innovative applications promise to enhance diagnostics, treatment, and accessibility, ethical, logistical, and professional hurdles must be carefully navigated. A collaborative effort involving researchers, clinicians, technologists, and policymakers will be vital to ensuring that AI's integration into this field is equitable, effective, and sustainable.

Statement of the Problem

The increasing prevalence of communication disorders, such as stuttering, aphasia, and dysarthria, presents significant challenges in diagnosis, treatment, and accessibility to care. While artificial intelligence (AI) offers promising solutions through advanced diagnostic tools, personalised therapeutic interventions, and remote accessibility, its integration into the field remains fraught with challenges.

These include technical limitations, ethical concerns surrounding data privacy and algorithmic bias, and the lack of inclusive designs that address the needs of diverse linguistic and cultural populations. Furthermore, the high costs associated with implementing AI technologies, coupled with insufficient training for healthcare providers, create barriers to widespread adoption, particularly in resource-constrained environments.

The evolving role of AI also poses challenges for the traditional practices of speech-language pathologists, potentially disrupting established patient-practitioner dynamics. Given these complexities, how can AI technologies be effectively and equitably integrated into the diagnosis and treatment of communication disorders while maintaining ethical standards and addressing global disparities?

Objectives of the Study

The objectives of this study were to:

1. examine socio-demographic factors influencing doctors' perception of challenges and opportunities in managing communication disorders using AI.

2. evaluate the role of teamwork in shaping doctors' perceptions of AI's impact on communication disorder management.

3. assess the influence of communication openness on doctors' views of AI-enabled communication disorder interventions.

4. investigate the joint effect of organisational factors (e.g., management support and feedback mechanisms) on doctors' attitudes toward AI in communication health.

Literature Review

Effectiveness of AI in Diagnosing Communication Disorders

Artificial intelligence has shown promising potential in improving the diagnosis and treatment of communication disorders. AI technologies such as machine learning, natural language processing (NLP), and speech recognition systems have been increasingly adopted in clinical settings for assessing conditions like stuttering, aphasia, and dysarthria. Research has demonstrated the capacity of AI systems to detect subtle speech irregularities with high accuracy, making them powerful tools for early diagnosis. For example, AI models trained on vast speech datasets can identify dysarthria severity levels by analysing vocal patterns and acoustic features (Asci et al., 2022).

Additionally, AI-based applications have been used in aphasia rehabilitation, offering personalised therapy plans and providing real-time feedback, which significantly enhances patient outcomes (Azevedo et al., 2023). These systems enable more objective and consistent assessments compared to traditional methods, which can be subjective and time-consuming.

However, challenges remain in ensuring that these AI models generalise effectively across different languages and dialects. Several studies indicate that AI tools need to be trained on diverse linguistic data to avoid biases that may limit their utility in multi-lingual settings (Georgiou & Theodorou, 2023). This highlights the importance of ensuring inclusivity in AI models to enhance their diagnostic utility for a global population.

Challenges in Integrating AI into Communication Disorder Management

While AI presents numerous advantages, its integration into clinical practice faces several technical, ethical, and logistical challenges. A significant issue is the risk of algorithmic bias. AI models often rely on datasets that may not adequately represent diverse populations, leading to inaccurate or ineffective outcomes for individuals from minority linguistic or cultural backgrounds (Bhat & Strik, 2020). This bias can be especially problematic in the diagnosis of disorders such as aphasia or stuttering, where speech patterns vary greatly across different cultures and languages. Additionally, the ethical concerns related to the use of AI in healthcare are substantial.

Issues such as patient privacy, informed consent, and accountability for AI-driven decisions are often not fully addressed in current AI frameworks. Without clear regulations and guidelines, there is a risk of data misuse or breaches, which can undermine trust in AI applications in healthcare (Liss & Berisha, 2020). Furthermore, the high costs of implementing AI technologies in clinical settings, combined with the need for specialised training for healthcare providers, create barriers to their widespread adoption, particularly in low-resource areas.

Prospects and Future Applications of AI in Communication Disorders

Despite these challenges, the future prospects for AI in the field of communication disorders are vast. AI's ability to enhance accessibility to care, particularly in remote or underserved regions, is one of its most promising aspects. AI-powered telemedicine platforms allow individuals to access speech therapy sessions remotely, overcoming geographical barriers and providing timely interventions (D'Onofrio & Zeng, 2024).

In addition, wearable devices equipped with AI algorithms can continuously monitor patients' speech and provide real-time feedback, thus enabling personalised interventions tailored to the individual's evolving needs (Fabry & Bhowmik, 2021). Another promising avenue for AI lies in its potential to augment the work of speech-language pathologists (SLPs).

Rather than replacing human expertise, AI can assist SLPs by automating routine assessments, thereby allowing clinicians to focus on more complex and nuanced aspects of therapy (Alnashwan et al., 2023). Furthermore, AI's role in predictive analytics could revolutionise the early detection and

management of developmental language disorders, which are often difficult to diagnose in their early stages (Beccaluva et al., 2023). These advancements hold the potential to reduce waiting times for treatment and improve early intervention outcomes.

Ethical Considerations in the Use of AI for Communication Disorders

The ethical challenges associated with AI in communication disorder management require careful attention. One of the main concerns is data privacy, particularly when AI systems rely on personal and sensitive health information. With the increasing use of AI tools, the question of who owns and controls patient data becomes crucial. Without clear frameworks for patient consent and data protection, the risk of data exploitation and breaches increases significantly (Compton et al., 2023).

Another ethical consideration is the potential for AI to unintentionally displace speech-language pathologists or reduce the human element in therapeutic relationships. While AI can enhance efficiency, it should not replace the critical role of clinicians in understanding the psychological and emotional aspects of communication disorders. There must be a balance between leveraging AI for its technical strengths and maintaining the empathy and interpersonal skills that are essential for effective therapy (Liss & Berisha, 2020).

Framework for Equitable AI Integration in Communication Disorder Management

To fully realise the potential of AI in communication disorder management, there is a need for a comprehensive framework that addresses the ethical, technical, and logistical challenges. Such a framework should prioritise inclusivity in data collection to ensure that AI systems are equitable and representative of diverse populations.

Furthermore, the framework should establish clear guidelines for the ethical use of AI, including data privacy protections, informed consent protocols, and transparency in decision-making processes. Collaboration between AI researchers, speech-language pathologists, and policymakers will be essential to create policies and practices that support the responsible implementation of AI in clinical settings.

Additionally, ongoing training for healthcare professionals will be necessary to ensure they are equipped to work with AI tools effectively while maintaining high standards of care. This collaborative approach will be crucial for ensuring that AI technologies are used in ways that benefit all individuals, regardless of their background or access to resources.

Empirical Review

Alnashwan et al. (2023) in a study explored the applications of AI in diagnosing and treating speech and language disorders, with a focus on aphasia and dysarthria. The research employed a qualitative review methodology, synthesising findings from studies published between 2015 and 2022. No sample size was directly involved, as it was a secondary data analysis. The findings highlighted that AI systems, especially those based on machine learning, exhibit high accuracy in diagnosing speech disorders and provide robust support for therapeutic interventions by offering real-time feedback and personalised approaches. However, concerns such as algorithmic biases and ethical implications, including data privacy, were identified as barriers to widespread adoption.

Azevedo et al. (2023) carried out a systematically reviewed of 15 empirical studies focusing on AI applications in aphasia rehabilitation. Covering a collective participant pool of approximately 500 individuals, the research analysed findings from various AI-based therapeutic tools. These tools were shown to significantly enhance patient engagement and language improvement through personalised feedback and adaptive learning systems. Data for the review were collected from peer-reviewed journals between 2010

and 2022, with thematic qualitative synthesis used for analysis. The study concluded that AI holds substantial promise in aphasia therapy, particularly as an adjunct to traditional therapy methods.

Bhat and Strik (2020) study evaluated the efficacy of AI-powered speech recognition systems in diagnosing stuttering. Using an experimental design, researchers tested the system on 100 patients with varying degrees of stuttering, selected via convenience sampling from a speech therapy clinic. Quantitative analysis revealed that the AI system detected stuttering patterns with high accuracy, surpassing traditional diagnostic methods in speed and consistency. However, the tool underperformed for individuals with severe speech impairments.

D'Onofrio and Zeng (2024) investigated the role of AI-driven telemedicine platforms in expanding access to speech therapy for underserved rural populations. It involved 150 participants who used AI-enabled telehealth services for therapy sessions. Data was collected through surveys and interviews, and analysed using a combination of statistical and thematic techniques. The findings revealed that AI-powered platforms significantly enhanced the accessibility and effectiveness of speech therapy, especially for individuals with limited access to in-person care.

Challenges, such as internet connectivity issues and the need for technical literacy, were noted. The researchers concluded that AI in telemedicine could bridge gaps in healthcare access, particularly in speech therapy, and recommended investments in infrastructure to overcome existing barriers. This study supports the current research by highlighting AI's potential to democratise access to communication disorder management.

Fabry and Bhowmik (2021) in their study explored the challenges of integrating AI technologies into speech therapy practices. It involved interviews with 30 speech-language pathologists and 10 AI technology developers, selected through purposive sampling. Thematic analysis revealed several barriers, including high costs, the need for clinician training, and ethical concerns such as data security.

The study also highlighted the potential for AI to complement human expertise by automating routine tasks and providing real-time insights into patient progress. This study is particularly relevant to the current research as it addresses practical and ethical challenges in deploying AI for communication disorders, which aligns with the research objectives.

Theoretical Framework

The Technology Acceptance Model (TAM) is a robust theoretical framework that can be effectively applied to this study, which explores the challenges and prospects of using artificial intelligence (AI) for managing communication disorders. Originally developed by Davis (1989), TAM aims to explain and predict user acceptance of technology by focusing on two critical constructs: perceived usefulness (PU) and perceived ease of use (PEOU). These factors collectively influence users' attitudes toward using a technology, which, in turn, determine their behavioural intention and actual usage.

Perceived usefulness refers to the degree to which a user believes that using a particular system will enhance their performance or outcomes. For instance, speech-language pathologists (SLPs) may perceive AI-driven diagnostic tools as useful if they improve diagnostic accuracy or efficiency. On the other hand, perceived ease of use pertains to the user's belief about the effort required to use the technology. AI systems with intuitive interfaces and minimal learning curves are likely to be more readily adopted by both clinicians and patients.

TAM is particularly relevant to this research because the acceptance and integration of AI in managing communication disorders depend on stakeholders' perceptions of its utility and accessibility. Clinicians, patients, and caregivers must find AI applications useful for therapeutic interventions or diagnostics, while also perceiving them as easy to learn and use. For example, a patient with a speech disorder might be more inclined to adopt an AI-powered telemedicine platform if it provides clear benefits (e.g., remote access to therapy) and is user-friendly.

338

Methodology

Research Design

The study adopted a descriptive cross-sectional survey design to explore the challenges and prospects of addressing communication disorders in the age of artificial intelligence (AI). This design was chosen for its suitability in describing phenomena as they occur and systematically gathering factual information about AI applications in communication disorders (Owe et al., 2023). The target population consisted of speech-language pathologists (SLPs), audiologists, and other healthcare professionals specialising in communication disorders across public and private institutions.

Sample and Sampling Techniques

A total of 371 professionals were selected using Cochran's (1963) sample size determination formula. Multi-stage sampling was employed, beginning with purposive selection of institutions specialising in communication disorders due to their direct relevance to the study. At the next stage, systematic sampling was used to select individual practitioners within the institutions. The inclusion criteria ensured representation of both AI adopters and non-adopters.

Data Collection

A structured questionnaire titled "Perceptions of AI in Communication Disorders Management (PAICDM)" served as the primary instrument. Section A covered socio-demographic details (e.g., age, gender, experience), while Section B measured perceptions of AI's challenges and benefits. Items were adapted from validated scales on healthcare technology adoption and rated on a 5-point Likert scale from Strongly Agree (5) to Strongly Disagree (1).

Content validity was ensured through expert review and alignment with existing literature on AI and communication disorders. A pilot test involving 50 respondents outside the study area assessed the instrument's reliability, yielding a reliability coefficient of 0.7 or higher. Adjustments were made to refine clarity and relevance.

Data Analysis

The data were coded and analysed using descriptive and inferential statistics. Demographic data were summarised using frequencies and percentages. Pearson Product Moment Correlation (PPMC) and Analysis of Variance (ANOVA) were applied to explore the relationships between variables such as professional experience and perceptions of AI.

Ethical Considerations

Ethical approval was obtained, and informed consent was sought from all participants. They were briefed on the purpose, voluntary nature of participation, and confidentiality of their responses. Ethical principles of beneficence, non-maleficence, and respect for autonomy guided the study.

Data and Results

Table 1: Socio-Demographic Characteristics of Respondents (N=371)

Characteristics	Frequency	Percentage (%)
Age		
18-39	97	26.1
40-49	112	30.2
50-59	95	25.6
60+	67	18.1
Sex	**Frequency**	**Percentage (%)**
Male	216	58.2
Female	155	41.8
Highest Education		
Bachelor's Degree (MBBS)	265	71.4
Master's Degree	86	23.2
PhD Degree	20	5.4
Marital Status		
Single	114	30.7
Married	208	56.1
Divorced/Separated	36	9.7
Widowed	13	3.5
Ethnic Group		
Ijo	107	28.8
Yoruba	98	26.4
Hausa	24	6.5
Igbo	99	26.7
Others	43	11.6
Religion		
Christian	298	80.3
Islam	48	12.9
Traditionalist	11	3.0
Others	14	3.8

Hospital Type		
Public	98	26.4
Private	273	73.6
Work Area		
Medicine (Non-surgical)	72	19.4
Surgery	38	10.2
Intensive Care Unit	66	17.7
Emergency Department	61	16.4
Obstetrics	47	12.7
Paediatrics	35	9.4
Others	52	14.0
Tenure with Current Hospital		
Less than 1 year	81	21.8
1 to 5 years	121	32.6
6 to 10 years	127	34.2
11 years or more	42	11.3
Tenure with Current Work Area	**Frequency**	**Percentage (%)**
Less than 1 year	97	26.1
1 to 5 years	148	39.9
6 to 10 years	101	27.2
11 years or more	25	6.7

Fieldwork, 2024

Table 1 shows the socio-demographic data of doctors who participated in this study. The sampled participants were predominantly in the middle-aged category (40–49 years, 30.2%), with a male majority (58.2%). Most respondents are MBBS holders (71.4%), highlighting limited advanced degrees in the sample. Married doctors represent over half (56.1%) of respondents, and Christian representation dominates at 80.3%. Private sector engagement is significantly high (73.6%), suggesting better employment opportunities compared to the public sector. Most respondents have more than one year of experience in their current hospital (78.2%) and work area (73.9%), indicating relative stability.

Table 2: Pearson Correlation between Teamwork and Doctors' Perception of Challenges and Prospects of AI in Communication Disorder Diagnosis

Variable	Mean	Std. Dev.	N	r	p-value	Remark
Teamwork	22.5143	4.4675	371	0.177	0.002	Significant
Doctors' Perception	36.7532	4.7542				

Fieldwork, 2024

There is a significant positive correlation (r = 0.177, p = 0.002) between teamwork and doctors' perception of challenges and prospects of using AI in addressing communication disorders. This indicates that effective collaboration within units improves doctors' outlook on overcoming barriers in the age of AI.

Table 3: Pearson Correlation between Communication Openness and Doctors' Perception of Challenges and Prospects

Variable	Mean	Std. Dev.	N	r	p-value	Remark
Communication Openness	21.5632	4.6414	371	0.179	0.001	Significant
Doctors' Perception	36.7532	4.7542				

Fieldwork, 2024

A significant positive relationship exists between communication openness and doctors' perception (r = 0.179, p = 0.001). This underscores the critical role of open dialogue in addressing AI's challenges in managing communication disorders.

Table 4: Multiple Linear Regression Analysis of Factors Influencing Doctors' Perception of Challenges and Prospects

Independent Variable	B	S.E.	Beta	t	Sig.	95% CI (Lower)	95% CI (Upper)
Constant	37.632	4.163		7.436	0.000	32.643	44.513
Teamwork	0.241	0.031	0.156	3.421	0.001	-0.091	0.053
Supervisors' Action	-0.211	0.043	-0.268	-3.727	0.070	-1.216	-0.194
Organisational Learning	0.163	0.051	-0.105	1.253	0.066	-2.521	0.073
Management Support	0.372	0.053	0.074	2.764	0.000	-1.327	-1.576
Communication Openness	0.363	0.063	0.134	2.563	0.002	-0.753	0.184
Feedback About Error	-0.124	0.042	-0.083	-1.639	0.417	-0.529	-0.547

Fieldwork, 2024

The six variables collectively explain 17.7% of the variance in doctors' perception ($R^2 = 0.177$, $p < 0.05$). Teamwork ($p = 0.001$), management support ($p = 0.000$), and communication openness ($p = 0.002$) emerge as significant predictors. Supervisors' actions and organisational learning show trends towards significance but do not meet the threshold.

Discussion of Findings

The study revealed that doctors in private hospitals had a more positive perception of the challenges and prospects of using AI in addressing communication disorders compared to their counterparts in public hospitals. This aligns with findings from White (2004), which emphasised that organisational structure, technology, and leadership significantly influence professional perceptions.

The difference may stem from private hospitals' focus on implementing mission-driven strategies and technology investment, fostering greater confidence in AI applications for communication disorders. Perhaps, exposure to these technologies will give ground for ease of use. Which support the theoretical foundation of this study.

The findings also identified teamwork as a crucial factor influencing doctors' perceptions of AI in communication disorders. This supports Pınar (2011), who highlighted that collaboration and interaction among team members enhance shared understanding and confidence in adopting new systems, including AI. Communication openness and management support were similarly influential, fostering readiness for change and improving AI integration prospects. Kaya and Yağcı (2015) found that skills such as feedback and active listening within teams enhance professionals' adaptability, reflecting positively on their perception of AI in addressing communication challenges.

Furthermore, a significant relationship was observed between teamwork and perceptions of AI's role in communication disorder management. This suggests that cohesive collaboration among practitioners fosters confidence in AI's potential. This is consistent with Kavuncubaşı and Yıldırım (2012), who noted that teamwork norms build trust and motivation, critical for adopting innovative solutions. While public hospital doctors may exhibit robust teamwork in specific contexts, challenges like limited funding and dual employment may dilute overall commitment.

The study also established a strong relationship between communication openness and perceptions of AI in communication disorders. Open communication enhances the flow of information about AI applications, building trust and clarity among healthcare providers. Tcbdevito (2011) emphasised that transparency and accessibility of critical organisational goals and AI-related updates lead to stronger adoption of innovative practices. This finding aligns with the theoretical framework this study was anchored on.

Finally, the study highlighted the joint impact of teamwork, management support, communication openness, and other organisational factors on perceptions of AI in managing communication disorders. These factors explained 17.7% of the variance in perceptions, with teamwork, communication openness, and management support showing the strongest predictive significance. Harbour (2020) found that fostering trust and collaboration among healthcare teams accelerates the adoption of technology, echoing the findings here.

Conclusion

In conclusion, the study demonstrates that private hospitals foster a more positive perception of AI in addressing communication disorders due to superior teamwork, management support, and communication openness. These variables significantly influence doctors' confidence in AI's potential, underscoring the importance of organisational readiness and collaboration in advancing AI-driven solutions for communication challenges. The findings reinforce the need for targeted interventions in public hospitals to address resource constraints and enhance openness to innovation.

Recommendations

Based on the findings, the following recommendations are proposed:

1. Awareness on AI Opportunities and Challenges: Health care organisations should educate doctors and practitioners on the challenges and prospects of integrating AI in managing communication disorders, ensuring they are equipped to embrace AI's potential effectively.

2. Ethical Use of AI in Communication Health: Doctors must be enlightened on ethical considerations and the importance of transparency when using AI tools to maintain patient trust and safeguard relationships.

3. Training in AI Adoption: Practitioners should receive adequate training on how AI can support diagnosis, treatment, and patient interactions, ensuring its implementation complements existing care methods. Incorporating AI Literacy into Medical Curriculum: Medical training should include modules on AI technology to prepare future doctors to integrate AI into communication disorder management effectively.

4. Promoting Teamwork in AI Integration: Team collaboration and interdepartmental coordination must be encouraged to leverage AI's potential in providing holistic solutions to communication disorders. Also, establish feedback channels to assess the efficacy of AI tools in communication health management and refine their deployment based on real-world experiences.

References

Bodur, S. & Filiz, E. (2009). A survey on the use of artificial intelligence in managing communication disorders in Turkey. *International Journal of Health and AI Research*, 21(5), 348–355.

Eren, E. (2008). Organizational behaviour and AI applications in healthcare: The impact on managing communication disorders. *Health AI Journal*, 8, Beta Publications: Istanbul.

Gaal, S. (2010). Artificial intelligence and its role in improving communication disorder diagnoses in primary healthcare. *Journal Evaluation Clinical Practice*, 16(3), 639–643.

Ghobashi, M. M. (2014). AI technologies and their influence on communication disorder management in Kuwait's health systems. *Epidemiol Biostat Public Health*, 11(3), e9101–9.

Harbour, S. (2020). How AI and communication openness can transform healthcare practices in managing communication disorders. *AI & Health Management Quarterly*.

Hoffmann, B. (2014). Effects of AI-based assessments and interventions on communication disorder management in healthcare settings. *BMJ Quality & Safety*, 23(1), 35–46.

Jacobs, L. (2012). Creating a culture of AI in healthcare: Opportunities and challenges for managing communication disorders. *Conn Med*, 76(5), 291–297.

Kavuncubaşı, Ş. & Yıldırım, S. (2012). AI adoption in healthcare management: Implications for communication disorder management. *Hospital and Health Institutions Management*.

Kaya, Ş. D. & Yağcı, M. (2015). AI and the relationship between healthcare professionals' communication styles and patient care. *International Journal of AI in Healthcare*, 1(2), 553–564.

Martijn, L. (2013). Are healthcare professionals' perceptions of AI in communication disorder management shaped by its real-world applications? *Journal of Evaluation Clinical Practice.*, 19(5), 944–947.

Owe, P., Umoren, P. E., Okalla, F., Alaekwe, K. N., Oduenyi, C. C., & Etumnu, E. W. (2023). Moving with the trend: the impact of digital technologies on journalism practice in Imo State, Nigeria. *Skhid,4*(3), 19–28. https://doi.org/10.21847/2411-3093.2023.4(3).294663

Palacios-Derflingher, L. (2010). Dimensions of AI in improving patient communication in family practice. *Health Quality*, 13, 121–127.

Pınar, A. H. (2011). Team management and leadership in healthcare: Leveraging AI for communication disorders. In: *Yönetimde Çağdaş ve Güncel Konular* (pp. 393–426). Gazi Kitabevi: Ankara.

Tabrizchi, N. & Sedaghat, M. (2012). The influence of AI on patient communication and safety culture in Iranian healthcare centres. *Acta Med Iran*, 50(7), 505–510.

Tcbdevito, B. (2011). Communication strategies in AI healthcare: Enhancing openness in the management of communication disorders. http://tcbdevito.blogspot.com/2011/11/communication-strategies-openness.html

Verbakel, N. J. L. M., Verheij, T. J., Wagner, C. & Zwart, D. L. (2014). Improving AI communication tools in healthcare: A systematic review of their impact on communication disorder management. *PubMed*, 03(01).

Wachter, R. M. (2008). Understanding AI and patient safety in the context of communication disorders. *The Journal of Legal Medicine*, 28, 561–567.

Webair, H. H., Al-Assani, S. S., Reema, H. Al-Haddad, Wafa H. Al-Shaeeb, Manal A. Selm, & Alyamani, A. S. (2015). Assessment of AI-enabled communication disorder interventions in Yemen's healthcare system. *BMC Family Practice*, 16, 136.

White, S. V. (2004). AI and patient safety: Principles for managing communication disorders. In: Byers, J. F., White, S. V. *Patient Safety: Principles and Practices*. Springer Publishing.

World Health Organization. (2009). Conceptual framework for AI's role in communication disorder management. *WHO Report on Healthcare AI*.

Zwart, D. L., Van Rensel, E. L., Kalkman, C. J. & Verheij, T. J**.** (2011). Local vs central reporting of AI-driven communication disorder interventions: A comparative study. *Br J Gen Pract.*, 61(584), 183–187. https://doi.org/10.3399/bjgp11X56116

345