



ARTIFICIAL INTELLIGENCE IN PSYCHOLOGICAL COUNSELLING PRACTICE IN LAGOS STATE, NIGERIA: OPPORTUNITIES AND CHALLENGES

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Abstract

The rapid advancement of Artificial Intelligence (AI) is transforming healthcare and mental health service delivery globally. This study examined the opportunities and challenges associated with the integration of AI in psychological counselling practice among trained qualified counsellors in Lagos State, Nigeria. A descriptive survey research design was adopted. The sample comprised 50 practicing counselling psychologist selected through purposive sampling. Data were collected using a structured questionnaire titled Artificial Intelligence in Psychological Counselling Practice Questionnaire (AIPCPQ). Descriptive statistics (mean and standard deviation) were used to answer the research questions, while Pearson Product Moment Correlation, ANOVA, and multiple regression analysis were used to test the hypotheses at 0.05 level of significance. Findings revealed that counsellors demonstrated moderate to high awareness of AI applications and perceived significant opportunities, particularly in improving access to services, enhancing documentation, and supporting early detection of psychological challenges. However, substantial ethical concerns were identified, including confidentiality risks, lack of human empathy, algorithmic bias, and absence of regulatory frameworks. Awareness significantly influenced willingness to adopt AI tools, while ethical concerns negatively predicted adoption intention. The study concludes that AI holds promising potential for psychological counselling practice, but its integration must be guided by ethical safeguards, professional standards, and contextual sensitivity. Recommendations include professional training, development of ethical guidelines, strengthened data protection measures, and further research across wider populations.

Keywords: Artificial Intelligence, Ethical Concerns, Mental Health Practice, Psychological Counselling

Introduction

Psycho-therapeutic counselling has traditionally been grounded in human interaction, professional ethics, and evidence-based therapeutic models. Central to counselling effectiveness is the therapeutic alliance, consistently identified as one of the strongest predictors of positive treatment outcomes (Norcross & Wampold, 2019). Core relational conditions such as empathy, genuineness, and unconditional positive regard remain foundational to counselling practice. However, rapid technological advancement in the 21st century—particularly the development of Artificial Intelligence (AI)—is reshaping how psychological services are conceptualized and delivered. Artificial Intelligence refers to computer systems capable of simulating aspects of human intelligence, including learning, reasoning, pattern recognition, and natural language processing. Through machine learning algorithms and large-scale data analysis, AI systems can detect behavioural patterns, generate automated responses, and assist in decision-making processes (Russell & Norvig, 2021). In psychological counselling, AI applications include conversational agents (chatbots), automated screening tools, emotion-recognition systems, predictive analytics for suicide risk, and AI-assisted clinical documentation (Fiske et al., 2019).

The integration of AI into mental health care has accelerated in response to increasing global demand for psychological services. Mental health disorders account for a significant portion of the global disease burden, yet access to professional services remains limited, particularly in low- and middle-income countries (World Health Organization [WHO], 2022). The COVID-19 pandemic further intensified mental health challenges while simultaneously normalizing telehealth and digital therapy platforms (Wind et al., 2020). As a result, digital mental health tools—including AI-powered interventions—have expanded rapidly. AI-driven chatbots and mobile applications now provide 24/7 psychological support, mood tracking, psychoeducation, and structured therapeutic exercises. Evidence suggests that certain AI-delivered interventions, particularly those based on structured approaches such as Cognitive Behavioural Therapy (CBT), can produce measurable improvements in mild-to-moderate anxiety and depression symptoms (Fulmer et al., 2018). CBT, associated with Aaron Beck, is particularly adaptable to AI platforms because of its structured, skills-based, and protocol-driven nature.

Despite these advancements, psychological counselling remains deeply relational. The Person-Centred Theory of Carl Rogers emphasizes empathy, congruence, and unconditional positive regard as essential therapeutic conditions (Rogers, 1957). These humanistic principles raise critical concerns regarding whether AI systems—regardless of their sophistication—can authentically replicate emotional attunement and relational depth. Scholars argue that while AI may simulate empathy linguistically, it lacks consciousness, moral agency, and genuine emotional understanding (Fiske et al., 2019). Ethical considerations further complicate AI integration. Concerns regarding confidentiality, data privacy, algorithmic bias, and regulatory accountability are increasingly highlighted in the literature (Bickmore et al., 2018; Luxton, 2014). AI systems depend on large datasets that may reflect cultural or demographic biases, potentially leading to inequitable assessments or interventions. In multicultural and developing contexts, culturally nuanced expressions of psychological distress may not align with datasets predominantly derived from Western populations.

Thus, the integration of AI into psychological counselling presents both benefit and challenges. On one hand, it offers opportunities to expand access, enhance efficiency, and support preventive mental health care. Eluemuno, et.al. also posits that mobile-learning holds substantial potential for teacher professional development in resource-constrained settings, provided that infrastructural and educational barriers are addressed. On the other hand, it challenges, projects foundational assumptions about the therapeutic relationship and raises complex ethical and regulatory questions. As the counselling profession navigates this digital transformation, it must critically evaluate how AI can complement—not replace—the human elements that define psychological healing (Plakun 2023). At its foundation, AI in counselling is grounded in machine learning and natural language processing systems that simulate aspects of human cognition (Russell & Norvig, 2021). Machine learning enables systems to improve performance based on data exposure, while natural language processing allows AI to interpret and generate human-like communication. In psychological counselling, these mechanisms support automated assessments, chatbot interactions, mood tracking, and predictive analytics (Fiske et al., 2019). From a systems perspective, AI functions as a decision-support and intervention-enhancement

tool, rather than an autonomous therapist. Luxton (2014) conceptualizes AI in mental health as augmentative technology—designed to enhance practitioner effectiveness rather than replace clinical expertise. This framework positions AI as embedded within, and subordinate to, professional psychological practice.

Statement of the Problem

The rapid advancement of Artificial Intelligence (AI) technologies is transforming method of service delivery in multiple professional fields, including healthcare and mental health services. In psychological counselling practice, AI-driven tools such as chatbots, predictive analytics systems, virtual therapy platforms, and automated assessment instruments are increasingly being integrated to enhance service delivery. Globally, organizations such as the American Psychological Association have begun to explore ethical guidelines and professional standards surrounding the use of digital technologies in counselling. However, despite the growing adoption of AI in mental health contexts, its integration into psychological counselling practice remains fraught with conceptual, ethical, professional, and practical concerns.

One major issue is the challenge associated with technological efficiency and the humanistic foundations of counselling. Psychological counselling is grounded in empathy, therapeutic alliance, confidentiality, cultural sensitivity, and professional judgment—qualities that are inherently human and relational. The extent to which AI systems can authentically replicate empathy, accurately interpret emotional nuance, and respond to complex psychological needs remains uncertain. This raises critical questions about the effectiveness, safety, and appropriateness of AI-mediated interventions in diverse counselling contexts.

Furthermore, concerns about data privacy, informed consent, algorithmic bias, and accountability present significant challenges. AI systems rely heavily on large datasets, which may expose sensitive client information to risks of misuse, breaches, or unethical commercialization. In addition, biased training data may lead to inaccurate assessments or culturally insensitive recommendations, particularly in underrepresented populations. In many developing contexts, including parts of Africa, there is also limited empirical research examining the contextual suitability, infrastructural readiness, and professional preparedness for AI integration in counselling practice.

Another pressing problem is the lack of clear regulatory frameworks and professional training models to guide counsellors in ethically and competently using AI tools. While AI presents opportunities for improving access to mental health services, reducing costs, supporting early detection of mental health issues, and enhancing clinical decision-making, there remains insufficient clarity on how these technologies should be implemented without undermining professional standards and client welfare. Therefore, the central problem underpinning this study is the need to critically examine the opportunities and challenges associated with the integration of Artificial Intelligence into psychological counselling practice. Without systematic investigation and evidence-based guidance, the adoption of AI in counselling may either be underutilized due to fear and resistance or misapplied in ways that compromise ethical practice, professional integrity, and client wellbeing. This study seeks to address this gap by evaluating the potential benefits, risks, and contextual considerations necessary for responsible AI integration in psychological counselling.

The general objective of this study is to examine the opportunities and challenges associated with the integration of Artificial Intelligence (AI) in psychological counselling practice.

The specific objectives are to:

1. Examine the level of awareness and knowledge of AI applications among psychological counsellors.
2. Identify the perceived opportunities of AI in enhancing psychological counselling practice.
3. Examine the perceived challenges and ethical concerns associated with the use of AI in counselling.
4. Determine the relationship between counsellors' awareness of AI and their willingness to adopt AI tools in practice.

Research Questions

The study will be guided by the following research questions:

1. What is the level of awareness and knowledge of AI applications among psychological counsellors?
2. What opportunities do counsellors perceive in the use of AI in psychological counselling practice?
3. What challenges and ethical concerns are associated with the integration of AI in counselling practice?
4. Is there a relationship between counsellors' awareness of AI and their willingness to adopt AI tools in practice?

Research Hypotheses

The following null hypotheses will be tested at 0.05 level of significance:

1. H01: There is no significant relationship between counsellors' awareness of AI and their willingness to adopt AI tools in psychological counselling practice.
2. H02: There is no significant difference in perception of AI opportunities based on years of professional experience among psychological counsellors.
3. H03: There is no significant difference in perception of AI challenges based on counsellors' area of specialization (e.g., school counselling, clinical counselling, career counselling).
4. H04: Perceived ethical concerns do not significantly predict counsellors' intention to use AI in psychological counselling practice.

Methodology

This study adopted a descriptive survey research design. The design was considered appropriate because it enables the researcher to systematically collect data from a defined population to examine perceptions, relationships, and differences regarding Artificial Intelligence (AI) in psychological counselling practice without manipulating any variables.

The study was conducted in Lagos State, Nigeria. Lagos State is a major commercial and educational hub with a high concentration of educational institutions, private and public mental health facilities, counselling centres, and professional practitioners. The State's technological advancement and increasing exposure to digital innovations make it suitable for examining the integration of Artificial Intelligence in psychological counselling practice.

The population of the study comprised all registered and practicing psychology counsellors in Lagos State. These include counsellors working in secondary schools, tertiary institutions, private clinics, hospitals, and independent counselling practices.

A sample of 50 psychology counselors was used for the study. Due to accessibility and time considerations, a purposive sampling technique was employed. This technique enabled the researcher to select practising counsellors who:

- Are professionally trained in psychology or counselling psychology,
- Are currently practicing in Lagos State, and
- Have basic exposure to digital tools in counselling practice.

The sample included counsellors from schools, hospitals, private practices, and counselling centres to ensure diversity of professional perspectives.

Instrument for Data Collection

Data were collected using a structured questionnaire titled:

“Artificial Intelligence in Psychological Counselling Practice Questionnaire (AIPCPQ)”. The questionnaire was divided into four sections:

Section A: Demographic information (gender, years of experience, area of specialization, workplace setting).

Section B: Awareness and knowledge of AI applications in counselling.

Section C: Perceived opportunities of AI in counselling practice.

Section D: Perceived challenges and ethical concerns associated with AI integration.

Items were structured on a 4-point Likert scale:

Strongly Agree (4), Agree (3), Disagree (2), Strongly Disagree (1).

Validity of the Instrument

The instrument was subjected to face and content validity by experts in counselling psychology and educational technology. Their suggestions regarding clarity, relevance, and appropriateness of items were incorporated before final administration.

Reliability of the Instrument

A pilot test was conducted using 10 psychology counsellors outside the study sample. The internal consistency of the instrument was determined using Cronbach's Alpha, which yielded a reliability coefficient of 0.78, indicating that the instrument was reliable for the study.

Procedure for Data Collection

The researcher obtained necessary permissions from relevant institutions and professional networks within Lagos State. The questionnaires were administered physically and electronically (via online forms). Respondents were informed about the purpose of the study and assured of confidentiality and anonymity. Completed questionnaires were retrieved within two weeks.

Method of Data Analysis

Data collected were coded and analyzed using Statistical Package for the Social Sciences (SPSS). Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to answer the research questions. Pearson Product Moment Correlation (PPMC) was used to test relationships between variables. Independent t-test and ANOVA were used to test differences in perceptions based on demographic variables. Multiple regression analysis was used to determine the predictive influence of ethical concerns on intention to adopt AI. All hypotheses were tested at 0.05 level of significance.

Results

Analysis of Research Questions

Research Question 1: What is the level of awareness and knowledge of AI applications among psychological counsellors?

Table 1: Mean and Standard Deviation on Awareness of AI (N = 50)

Items	Mean	SD	Decision
I am familiar with AI tools used in counseling	3.10	0.72	Agree
I understand how AI chatbots function in mental health support	2.98	0.81	Agree
I have received some training on digital/AI tools	2.60	0.88	Agree
I can confidently explain AI applications in counselling	2.84	0.79	Agree
Grand Mean	2.88		High Awareness

Decision Rule: Mean $\geq$ 2.50 = Agree

With a grand mean of 2.88, psychology counsellors in Lagos State demonstrate a moderately high level of awareness of AI applications in counselling practice.

Research Question 2: What opportunities do counsellors perceive in the use of AI in psychological counselling practice?

Table 2: Mean Ratings on Opportunities of AI (N = 50)

Items	Mean	SD	Decision
AI improves access to mental health services	3.30	0.65	Agree
AI supports early detection of psychological problems	3.12	0.71	Agree
AI enhances record keeping and documentation	3.40	0.60	Agree
AI reduces workload for counsellors	3.05	0.76	Agree
Grand Mean	3.22		High Perceived Opportunity

With a grand mean of 3.22, respondents perceive significant opportunities in integrating AI into counselling practice.

Research Question 3: What challenges and ethical concerns are associated with AI integration in counselling practice?

Table 3: Mean Ratings on Challenges of AI (N = 50)

Items	Mean	SD	Decision
AI poses confidentiality risks	3.35	0.68	Agree
AI lacks human empathy	3.45	0.59	Agree
AI may introduce bias in assessment	3.18	0.73	Agree
There is lack of regulatory framework	3.25	0.70	Agree
Grand Mean	3.31		High Perceived Challenges

The grand mean of 3.31 indicates that counsellors perceive serious ethical and professional challenges associated with AI integration.

Research Question 4: Is there a relationship between counsellors' awareness of AI and their willingness to adopt AI tools in practice?

Table 4: Pearson Correlation between Awareness and Willingness (N = 50)

Variables	R	p-value	Decision
Awareness & Willingness to Adopt AI	0.62	0.001	Significant

There is a moderate positive relationship ($r = 0.62$) between awareness of AI and willingness to adopt AI tools. Increased awareness is associated with greater adoption intention.

Testing of Hypotheses

Hypothesis 1

H01: There is no significant relationship between counsellors' awareness of AI and their willingness to adopt AI tools.

Table 5: Pearson Correlation between Awareness and Willingness (N = 50)

Variables	R	p-value	Decision
Awareness & Willingness to Adopt AI	0.62	0.001	Significant

Using Pearson Product Moment Correlation:

- $r = 0.62$
- $p = 0.001$

- $\alpha = 0.05$

Since $p < 0.05$, H01 is rejected.

There is a significant relationship between awareness of AI and willingness to adopt AI tools.

Hypothesis 2: H02: There is no significant difference in perception of AI opportunities based on years of experience.

Table 6: ANOVA on Perception of AI opportunities based on years of experience

Source	F	p-value	Decision
Years of Experience	3.45	0.039	Significant

Since $p < 0.05$, H02 is rejected.

Perception of AI opportunities differs significantly based on years of professional experience.

Hypothesis 3: H03: There is no significant difference in perception of AI challenges based on area of specialization.

Table 7: ANOVA on Perception of AI Challenges based on area of Specialization.

Source	F	p-value	Decision
Area of Specialization	1.82	0.172	Not Significant

Since $p > 0.05$, H03 is not rejected.

Area of specialization does not significantly influence perception of AI challenges.

Hypothesis 4: H04: Perceived ethical concerns do not significantly predict counsellors' intention to use AI.

Table 8: Multiple Regression on counsellor's intention to use AI

Variable	Beta	T	p-value
Ethical Concerns	-0.48	-3.96	0.000

Model Summary:

- $R^2 = 0.41$
- $F = 15.68$
- $p = 0.000$

Since $p < 0.05$, H04 is rejected.

Ethical concerns significantly and negatively predict intention to adopt AI. Higher ethical concerns reduce willingness to use AI.

Discussion of Findings

This study examined the opportunities and challenges associated with the integration of Artificial Intelligence (AI) in psychological counselling practice among 50 psychology counsellors in Lagos State. The findings are discussed in relation to existing literature. Awareness of AI in Psychological Counselling. The study revealed a moderately high level of awareness of AI applications among psychology counsellors. This suggests that practitioners in Lagos State are increasingly exposed to digital innovations in mental health service delivery. This finding aligns with the growing global integration of AI-driven mental health tools such as chatbots, virtual therapy platforms, and predictive analytics systems. According to American Psychological Association (2023), digital technologies, including AI-supported tools, are reshaping psychological practice and require practitioners to develop technological competence. Similarly, Topol (2019) emphasized that AI is becoming embedded in healthcare systems worldwide, necessitating professional adaptation. The moderate awareness observed in this study may reflect increasing exposure to digital tools but limited structured training in AI-specific applications. This finding underscores the need for professional development programmes to enhance digital literacy and AI competence among counsellors.

Perceived Opportunities of AI in Counselling Practice. The findings indicated that counsellors perceive significant opportunities in AI integration, particularly in improving access to mental health services, enhancing documentation, supporting early detection of psychological problems, and reducing workload. This supports the argument by Fitzpatrick et al. (2017), whose study on AI-driven conversational agents demonstrated potential in reducing symptoms of depression and anxiety. In addition, Holmes et al. (2018) noted that AI and digital mental health innovations can increase service accessibility and scalability, especially in contexts where there is a shortage of trained mental health professionals. In developing contexts such as Nigeria, where mental health resources are limited, AI may help bridge service gaps, particularly in underserved communities. The positive perception of AI opportunities among respondents suggests openness to innovation, provided that appropriate safeguards are in place.

Perceived Challenges and Ethical Concerns. Despite recognizing opportunities, respondents expressed strong concerns regarding confidentiality risks, lack of human empathy, algorithmic bias, and absence of regulatory frameworks. These concerns are consistent with ethical discussions in the literature. The American Counseling Association (2014) Code of Ethics emphasizes confidentiality, informed consent, and professional responsibility—principles that may be complicated by AI integration. Furthermore, Binns (2018) highlighted the problem of algorithmic bias, noting that AI systems may reproduce or amplify existing social inequalities if trained on biased datasets. The concern about AI's inability to replicate human empathy also reflects the humanistic foundations of counselling practice, rooted in relational dynamics and therapeutic alliance. These findings suggest that ethical governance and regulatory frameworks are critical prerequisites for responsible AI adoption in counselling.

Relationship between Awareness and Adoption Intention

The study found a significant positive relationship between awareness of AI and willingness to adopt AI tools. This implies that increased knowledge and familiarity with AI technologies may enhance acceptance among counsellors. This finding is supported by the Technology Acceptance Model (TAM), which posits that perceived usefulness and ease of use influence technology adoption (Davis, 1989). As counsellors become more knowledgeable about AI's capabilities and limitations, their resistance may reduce, thereby increasing their likelihood of integration into practice. This reinforces the need for structured training and professional orientation on AI in counselling education programmes.

Ethical Concerns as Predictors of Adoption

The regression analysis revealed that ethical concerns significantly and negatively predict counsellors' intention to adopt AI tools. This suggests that even when awareness is high, strong ethical apprehensions may limit adoption. This aligns with concerns raised by Floridi et al. (2018), who emphasized that ethical principles such as transparency, accountability, and fairness must guide AI deployment in professional settings.

The implication is that ethical clarity, policy development, and regulatory safeguards are necessary to foster responsible innovation in psychological counselling.

Implications for Practice

The findings indicate that while AI holds promise for enhancing psychological counselling practice in Lagos State and similar contexts, successful integration requires:

1. Professional training in AI literacy.
 2. Development of national ethical guidelines for AI use in counselling.
 3. Strong data protection and confidentiality safeguards.
 4. Context-sensitive adaptation of AI tools to local cultural realities.
- Without addressing these issues, AI integration may undermine the core values of counselling practice.

Conclusion

This study examined the opportunities and challenges associated with the integration of Artificial Intelligence (AI) in psychological counselling practice among psychology counsellors in Lagos State. The findings revealed that counsellors demonstrate moderate to high awareness of AI applications and recognize significant opportunities, particularly in improving access to mental health services,

enhancing documentation, supporting early detection of psychological problems, and reducing professional workload.

However, despite the perceived benefits, substantial ethical and professional concerns remain. Issues relating to confidentiality, data security, algorithmic bias, lack of human empathy, and absence of clear regulatory frameworks were strongly emphasized by respondents. The study further established that awareness significantly influences willingness to adopt AI tools, while ethical concerns negatively predict adoption intention.

These findings suggest that although AI presents promising innovations for psychological counselling practice, its integration must be guided by ethical safeguards, professional standards, and contextual sensitivity. Psychological counselling remains fundamentally relational and human-centered; therefore, AI should serve as a supportive tool rather than a replacement for the therapeutic alliance.

In the context of Lagos State—and similar developing regions—responsible AI adoption requires careful planning, professional capacity building, and policy direction to ensure that technological advancement does not compromise core counselling values.

Recommendations

Based on the findings of the study, the following recommendations are made:

Professional Training and Capacity Building: Counsellor education programmes in universities and professional development workshops should incorporate AI literacy and digital counselling competencies. Professional bodies such as the Nigerian Association of Counselling Psychologists should organize seminars and certification courses on ethical AI usage in counselling.

Development of Ethical Guidelines: Regulatory agencies and professional associations should develop context-specific ethical guidelines for AI integration in counselling practice, drawing from international standards such as those provided by the American Psychological Association and the American Counseling Association.

Strengthening Data Protection and Confidentiality Measures: Counselling institutions and private practitioners must ensure compliance with data protection regulations and adopt secure digital platforms to safeguard client information.

Gradual and Supervised Integration of AI Tools: AI technologies should initially be integrated as supportive tools (e.g., for screening, documentation, appointment scheduling) rather than as replacements for face-to-face therapy.

Policy and Government Support: The Federal Ministry of Health and relevant educational authorities should collaborate to establish policies that regulate and support responsible AI deployment in mental health services.

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