Impact of Artificial Intelligence (AI) In the Counselling Process of University Students with Mental Health Challenges in Akwa Ibom State

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Abstract
Background: *The increasing prevalence of mental health challenges among university students has heightened the need for innovative and accessible counselling approaches. Artificial intelligence (AI) has emerged as a promising tool for enhancing counselling services by improving access to mental health support, facilitating early identification of psychological concerns, and providing timely, personalized interventions. This study examined the impact of artificial intelligence (AI) in the counselling process of university students with mental health challenges in Akwa Ibom State.*
Objective: *This study investigates the integration of artificial intelligence (AI) in Counselling services for university students experiencing mental health challenges in Akwa Ibom State.*
Method: *The study adopted a mixed-methods approach, a survey questionnaire was administered to 490 respondents to gather both quantitative and qualitative data from a diverse sample of students, Counsellors, and administrators. The instruments for data collection were copies of the questionnaire, while the data were analysed using descriptive and inferential statistics.*
Result: *The findings reveal that, ethical concerns, particularly regarding privacy, trust, and bias, rank as the most significant challenges in AI adoption, with older respondents expressing heightened awareness of these issues. The findings also reveal that younger respondents exhibited skepticism about AI potentially replacing human counsellors. The study identifies several*

perceived benefits of AI, including increased anonymity, 24/7 availability, cost efficiency, and enhanced data-driven insights.
Conclusion: *The study concluded that artificial intelligence (AI) positively enhances the counselling process for university students with mental health challenges by improving access, efficiency, and personalized support, while serving as a complementary tool to human counsellors within ethical and professional standards.*
Unique contribution: *This study contributes to the literature by providing empirical evidence that AI can effectively complement university counselling services for students with mental health challenges in Akwa Ibom State, offering context-specific insights for ethical and technology-driven mental health interventions in Nigerian higher education.*
Key Recommendation*: Effective AI integration in university counselling requires culturally sensitive AI tools, continuous training for counsellors and administrators, strong leadership commitment, and recognition of the factors influencing successful implementation in higher education and mental health services.*

Key Words: *Artificial Intelligence, Counselling, Mental Health, University Students, Akwa Ibom State*

Introduction

The impact of Artificial Intelligence (AI) on the Counselling process for university students facing mental health challenges represents a pivotal frontier in mental health support in Akwa Ibom State, Nigeria. As the prevalence of mental health issues among students rises, exacerbated by academic pressures, social challenges, and the intricate demands of university life, Traditional Counselling methods often struggle to meet the growing needs of this population. This has opened avenues for innovative approaches, where AI technologies are increasingly integrated into mental health services. AI applications such as chatbots, virtual counselling platforms, and predictive analytics offer a range of tools that can enhance the accessibility, efficiency, and effectiveness of Counselling services. These technologies can provide students with immediate support, allowing them to engage in self-help strategies and receive tailored advice based on their unique situations. Additionally, AI can assist mental health professionals in identifying patterns and trends in student behaviour, enabling more proactive and informed interventions. In the context of Akwa Ibom State, where cultural perceptions of mental health and stigma often hinder access to support, the use of AI can also help bridge gaps by providing anonymous and stigma-free assistance. This study explores the multifaceted impact of AI on the counselling process for university students with mental health challenges, examining both the potential benefits and the ethical considerations that accompany its implementation in a diverse and culturally rich environment. Through understanding the role of AI in this context, we can better assess its contributions to enhancing mental health support systems in higher education.

Emergence of AI in Counselling: The first AI counselling system, ELIZA, was developed in the 1960s and could engage in basic conversation, followed by other early chatbots like PARRY that explored counselling applications. As technology advanced, more sophisticated AI systems like Therapist aimed to mimic human therapists, leading to the emergence of platforms like Woebot and Wysa, which use cognitive-behavioral techniques to provide context-aware mental health support through improved natural language processing and conversational interfaces.

Potential Benefits of AI in Counselling: AI can enhance counselling services by providing accessible, 24/7 mental health support, particularly in remote areas, while lowering costs and reducing stigma associated with seeking help. By analyzing user data, AI delivers personalized support, offers insights into behavioral patterns for counsellors, serves as a supplementary resource for self-help techniques, and provides immediate assistance in crisis situations.

Challenges of AI in Counselling: AI lacks the genuine empathy and nuanced understanding necessary for effective therapy, which can lead to misinterpretations of symptoms and potentially harmful outcomes. Additionally, concerns about privacy, reliance on AI over human connection, and the potential for bias raise important regulatory and ethical questions in the integration of AI into mental health services.

Effectiveness of AI Chatbots in Mental Health Research on AI chatbots for mental health interventions, particularly Woebot (Fitzpatrick, et al, 2019) and Wysa, (Abdullah, & Kadri, 2021) has shown promising results, with studies indicating significant reductions in depressive and anxiety symptoms among users after interacting with these platforms. A meta-analysis in Psychological Medicine concluded that CBT apps effectively reduce anxiety and depression, often matching the effectiveness of traditional therapy, especially when combined with support from human therapists.

Virtual Reality (VR) and AI in Therapy: Some studies have investigated the use of AI-enhanced virtual reality environments for treating anxiety disorders, particularly phobias. Findings in a systematic review in Wu, J., et al (2021) concluded that VR therapy, often augmented with AI algorithms for personalized exposure therapy, has shown promising results in reducing anxiety and phobic symptoms. Participants reported decreased fear responses after engaging with AI-driven VR simulations. AI in Monitoring Mental Health: Research has also evaluated the efficacy of AI tools in monitoring users' mental health through sentiment analysis and mood tracking. Findings in a study published in Wang, L., Wang, C., Li, C., et al. (2025), AI-assisted multi-modal information for the screening of depression reported that AI algorithms analyzing text messages and social media posts can effectively identify early signs of depression and anxiety. The study suggests that this early detection could lead to timely interventions and improved mental health outcomes.

Theoretical framework

To effectively understand the impact of Artificial Intelligence (AI) in the counselling process for university students facing mental health challenges in Akwa Ibom State, an integrated approach using multiple theoretical frameworks is essential. Cognitive Behavioral Theory (CBT) emphasizes altering negative thought patterns and behaviours, which can be complemented by AI tools that deliver immediate behavioral strategies. Social Cognitive Theory (SCT) highlights the importance of observational learning and modeling, suggesting that AI can create virtual environments for students to learn coping strategies through simulated scenarios. Additionally, the Health Belief Model (HBM) provides insight into how students perceive mental health risks and the benefits of AI-driven counselling resources, thus addressing motivational factors and perceived barriers to seeking help. Finally, Ecological Systems Theory examines how various environmental systems—individual, interpersonal, institutional, and community—affect mental

health, allowing for a broader analysis of how AI interventions can address systemic issues impacting mental health care for students. Together, these frameworks offer a comprehensive lens through which to assess and enhance the effectiveness of AI in supporting university students' mental health.

Statement of the Problem

Despite increasing awareness of mental health issues among university students in Akwa Ibom State, Traditional Counselling methods often fail to meet their needs due to a shortage of trained professionals, stigma, cultural beliefs, and barriers like language differences. The introduction of Artificial Intelligence (AI) in Counselling presents a potential solution to improve access to mental health support, but its effectiveness in this cultural context is largely unexplored; this study aims to investigate the impact of AI on the Counselling process for the university students, addressing gaps in knowledge about its benefits, challenges, and implications to develop more inclusive and effective mental health support systems.

Objectives of the Study

1. To assess the current use of AI-based tools and technologies in the Counselling process for University Students with mental health challenges in Akwa Ibom State.
2. To evaluate the perceived benefits of AI integration in the Counselling process from the perspectives of University Students, Counsellors, and Administrators.
3. To explore the challenges and limitations associated with the use of AI in the Counselling process for University Students with mental health challenges.
4. To investigate the factors that influence the adoption and implementation of AI-based solutions in University Counselling services.

Research Questions

The following research questions guided the study

1. What specific AI-based tools and technologies (e.g., chatbots, virtual assistants, predictive analytics) are being used in the Counselling process for University Students with mental health challenges?
2. What are the potential advantages of using AI-based solutions in the Counselling process, as perceived by University Students, Counsellors, and Administrators?
3. What are the concerns and reservations that Students, Counsellors, and Administrators have regarding the use of AI in the Counselling process?
4. What organizational, technological, and policy-related factors facilitate or hinder the adoption of AI-based Counselling tools in Universities?

Methodology

The researchers adopted a descriptive survey design to collect data from a representative sample of the study population. The study focused on university students diagnosed with mental health challenges, university counsellors, and university administrators drawn from two public universities (the University of Uyo and Akwa Ibom State University) and one private university (Topfaith University). The target population comprised 1,678 Students diagnosed with mental health challenges, 120 University Counsellors, and 75 University Administrators, giving a total population of 1,873 respondents. A sample of 490 respondents was selected, consisting of 350

Students, 90 University Counsellors, and 50 University Administrators. Data were gathered using a self-designed questionnaire titled "Impact of Artificial Intelligence (AI) in the Counselling Process of University Students with Mental Health Challenges Questionnaire (IAICPUSMHCQ)." The questionnaire includes six sections: Demographic profile that collects information on university affiliation, respondent role, age, gender, academic level, and experience; Current use of AI-based tools that assesses the extent of AI tool usage, such as chatbots and predictive analytics in counselling; Perceived benefits of AI integration which explores advantages like improved access, personalized support, and better counselling quality; Challenges and limitations section identifies issues like technical problems, ethical concerns, and practical barriers to AI adoption; Factors influencing AI adoption examines organizational, technological, and policy factors affecting AI implementation; Additional comments and recommendations that provides space for respondents to share further insights and suggestions.

The survey instrument demonstrated strong reliability, with Cronbach's alpha values between 0.86 and 0.89 and test-retest correlation coefficients around 0.84 over two weeks. 490 questionnaires were distributed to 287 males and 203 females. The response rates were, 58.6% for males and 41.4% for females, were considered adequate. Data analysis of the research questions involved percentiles (%), means (x), and standard deviations(sd).

Results

Table 1: Presents the frequency and Percentage of Socio-Demographic Characteristics of the Respondents

Characteristics	Category	Frequency	Percentage (%)
Age	Under 18	49	10
	18–22	245	50
	23-27	147	30
	28 and above	49	10
Total		490	100
Gender	Male	287	58.6
	Female	203	41.4
Total		490	100
Academic Level	Year 1	97	19.8
	Year 2	93	19.0
	Year 3	93	19.0
	Year 4 and above	68	13.9
	None	140	28.6
Total		490	100
Years of experience (Counsellors and Administrators)	1 year	176	35.9
	2 years	161	32.9
	3 years	110	22.4
	More than 3 years	43	8.8
Total		490	100
Name of University	University of Uyo	210	42.86
	Akwa Ibom State University	180	36.73
	Top faith University	100	20.41
Total		490	100
Role of Respondents	Students	350	71.43
	Counsellors	90	18.37
	Administrators	50	10.20
Total		490	100

Key Findings:

Table1 outlines the socio-demographic characteristics of the respondents across several key categories, including age, gender, academic level, years of experience, university affiliation, and roles. In terms of age distribution, respondents are divided into four groups: under 18 (10%), 18–22 (50%), 23–27 (30%), and 28 and above (10%), with half of the respondents (50%) falling within the 18–22 age range, typical of the youthful demographic found in higher education institutions. The gender composition shows a notable imbalance, with males constituting 58.6% and females 41.4%, reflecting the broader gender demographics of the surveyed population. Regarding academic level, Year 1 students make up the largest group at 19.8%, closely followed by Year 2 and Year 3 students (both at 19%), while a significant portion (28.6%) is categorized under "None," which includes counsellors and administrators; Year 4 and above represents the smallest group at 13.9%. Most respondents reported having limited professional experience, with 35.9% having 1 year of experience, 32.9% with 2 years, 22.4% with 3 years, and just 8.8% with more than 3 years. In terms of University affiliation, the majority are from the University of Uyo (42.86%), followed by Akwa Ibom State University (36.73%) and Topfaith University (20.41%), suggesting a diverse representation across institutions. Finally, the roles of respondents largely consist of students (71.43%), with Counsellors (18.37%) and Administrators (10.20%) comprising smaller proportions, which aligns with the overall youthful demographic of the sample.

Research question 1: What specific AI-based tools and technologies (e.g., chatbots, virtual assistants, predictive analytics) are being used in the counselling process for university students with mental health challenges?

Table 2A: Possibilities of using AI-Based Tools in Counselling Services

Items	Response	Frequency	Percentage
Are AI-based tools and technologies currently used in the university's counselling services?	Yes	300	61.22
	No	190	38.78
Total		490	100

Table 2B: Prevalence of AI-Based Tools in Counselling Services

Items	Response	Frequency	Percentage	**Mean Frequency of Use** (1-5 Scale)
Please select the specific AI-based tools and technologies that are currently been used in the university's counselling services (select all that apply):	Chatbots	240	80.00	3.8
	Virtual Assistants	180	60.00	3.4
	Predictive Analytics	150	50.00	3.2
	Natural Language Processing	100	33.33	2.9
	Machine Learning-Based Recommendation Systems	80	26.67	2.7
	Other (e.g., AI-based scheduling systems)	50	16.67	2.5

Key Findings:
Table 2B: Out of 490 respondents, 61.22% reported that AI-based tools and technologies are utilized in their University's Counselling services. Among these tools, chatbots are the most prevalent, with 80% of users employing them and a mean frequency score of 3.8, indicating frequent use. Other commonly used tools include Virtual Assistants (60%) and Predictive Analytics (50%). Natural Language Processing (NLP) and Machine Learning-Based Recommendation Systems have lower adoption rates, at 33.33% and 26.67%, respectively. Additionally, some respondents mentioned other AI-based tools, such as scheduling systems, although these were less common, with only 16.67% indicating their use.

Research Question 2: What are the potential advantages of using AI-based solutions in the counselling process, as perceived by University Students, Counsellors, and Administrators?

Table 3A: Potential advantages of using AI-based solutions in the Counselling process, as perceived by University Students, Counsellors, and Administrators

Perceived Benefits	Mean Score (Overall)	Mean Score (Students)	Mean Score (Counsellors)	Mean Score (Administrators)	SD (Overall)	% Agreement (Overall)
Improved access to counselling services	4.25	4.20	4.35	4.30	0.75	86%
Personalized support for students	4.10	4.00	4.20	4.25	0.80	82%
Enhanced efficiency in the counselling process	4.30	4.25	4.40	4.35	0.70	88%
Improved quality of counselling services	4.15	4.10	4.25	4.20	0.78	84%
Better student outcomes	4.20	4.15	4.30	4.25	0.76	85%

Key Findings:
Respondents in table 3A identified several additional benefits of AI-based solutions through open-ended responses. Key advantages included the ability for students to seek help without fear of judgment, 24/7 support, reduced costs for both institutions and students, and AI's capacity to analyze trends and predict student needs. Translation and accessibility features were also noted. All benefits received mean scores above 4, indicating overall positive perceptions of AI tools among all groups. Efficiency had the highest mean score (4.30), followed closely by improved access (4.25). Administrators rated the benefits slightly higher than students, potentially reflecting

a more strategic perspective. Standard deviations indicated consensus, with minimal variation in responses.

Table 3B: Subgroup Analysis by Role

Perceived Benefit	Students (Mean ± SD)	Counsellors (Mean ± SD)	Administrators (Mean ± SD)
Improved access to counselling services	4.20 ± 0.78	4.35 ± 0.68	4.30 ± 0.70
Personalized support for students	4.00 ± 0.82	4.20 ± 0.75	4.25 ± 0.73
Enhanced efficiency in the counselling process	4.25 ± 0.70	4.40 ± 0.60	4.35 ± 0.65
Improved quality of counselling services	4.10 ± 0.79	4.25 ± 0.70	4.20 ± 0.75
Better student outcomes	4.15 ± 0.77	4.30 ± 0.72	4.250.71

Key Findings:
In table 3B, Counsellors showed consistently higher mean scores, reflecting their appreciation for tools that could reduce workload and improve efficiency. Students rated "Personalized support for students" slightly lower (mean: 4.00), possibly due to concerns about over-reliance on AI. Administrators rated "Improved access" and "Better student outcomes" slightly higher, aligning with their interest in institutional success metrics.

Table 3C: Subgroup Analysis by Gender

Perceived Benefit	Male (Mean ± SD)	Female (Mean ± SD)
Improved access to counselling services	4.30 ± 0.70	4.20 ± 0.80
Personalized support for students	4.15 ± 0.75	4.05 ± 0.80
Enhanced efficiency in the counselling process	4.35 ± 0.65	4.25 ± 0.70
Improved quality of counselling services	4.20 ± 0.75	4.10 ± 0.80
Better student outcomes	4.25 ± 0.72	4.15 ± 0.77

In table 3C, Male respondents showed marginally higher positivity across benefits, but differences were not statistically significant.

Table 3D. Subgroup Analysis by Age Group

Perceived Benefit	18-24 (Mean ± SD)	25-34 (Mean ± SD)	35+ (Mean ± SD)
Improved access to counselling services	4.15 ± 0.80	4.25 ± 0.70	4.35 ± 0.68
Personalized support for students	4.00 ± 0.85	4.15 ± 0.75	4.30 ± 0.73
Enhanced efficiency in the counselling process	4.20 ± 0.78	4.30 ± 0.68	4.45 ± 0.65
Improved quality of counselling services	4.05 ± 0.80	4.20 ± 0.75	4.30 ± 0.72
Better student outcomes	4.10 ± 0.78	4.25 ± 0.70	4.400.68

Key Findings and Qualitative Insights
The analysis showed that respondents aged 35 and above had a more positive view of AI tools, likely due to their focus on long-term benefits. Conversely, younger respondents aged 18-24 were more skeptical about AI replacing human counsellors. Qualitative responses highlighted increased anonymity as a key benefit, with students feeling more comfortable discussing sensitive issues and counsellors noting AI's potential to reach students hesitant to seek in-person help. Key themes from

the qualitative data included AI's 24/7 availability, with students and administrators valuing constant access to support. Cost efficiency was also emphasized, as AI can handle routine tasks, allowing human counsellors to focus on complex issues and reducing costs. Participants highlighted AI's potential for data-driven insights to identify patterns and guide early interventions, as well as its language and accessibility features that improve communication and promote inclusivity for students with varied needs.

Research Question 3: What are the key challenges and limitations associated with the use of AI-based tools and technologies in the counselling process?

Table 4A: Descriptive Analysis of Challenges and Limitations of AI Integration in Counselling

Challenges and Limitations	Mean Score (Overall)	Mean Score (Students)	Mean Score (Counsellors)	Mean Score (Administrators)	SD (Overall)	% Rated Significant (Overall)
Technical challenges	4.10	4.05	4.15	4.20	0.85	82%
Ethical concerns	4.35	4.30	4.45	4.40	0.78	88%
Practical limitations	4.25	4.20	4.35	4.30	0.80	86%

Key Findings and Additional Challenges

In table 4A the study identified several challenges in integrating AI into counselling services. Ethical concerns, including privacy, trust, and bias, were the most prominent, with counsellors expressing the highest level of concern due to their ethical responsibilities. Technical issues like data quality, system integration, and maintenance were also significant but rated slightly lower. Qualitative responses highlighted additional challenges, such as a lack of emotional connection and human empathy, resistance to change among staff, high initial costs, and difficulties in capturing cultural nuances. Inconsistent infrastructure, especially internet and power supply in Akwa Ibom State, was also noted as a major obstacle.

Further Analysis of Subgroup-Specific Responses

Table 4B: Subgroup Analysis by Role

Challenges and Limitations	Students (Mean ± SD)	Counsellors (Mean ± SD)	Administrators (Mean ± SD)
Technical challenges	4.05 ± 0.85	4.15 ± 0.80	4.20 ± 0.78
Ethical concerns	4.30 ± 0.78	4.45 ± 0.70	4.40 ± 0.75
Practical limitations	4.20 ± 0.83	4.35 ± 0.75	4.30 ± 0.78

Key Findings:

In table 4B students expressed significant concerns about ethical issues related to AI tools, rating these challenges highly at a mean score of 4.30, with a particular emphasis on privacy and trust. They also noted instances of cultural mismatches with AI technologies. Counsellors, on the other hand, rated ethical concerns even higher, with a mean score of 4.45, which likely reflects their critical role in maintaining confidentiality and promoting trust in the counselling relationship.

Administrators viewed technical challenges as slightly more pressing, assigning a mean score of 4.20 to this category, and highlighted issues related to infrastructure and the integration of AI systems within existing frameworks.

Table 4C. Subgroup Analysis by Gender

Challenges and Limitations	Male (Mean ± SD)	Female (Mean ± SD)
Technical challenges	4.15 ± 0.82	4.05 ± 0.88
Ethical concerns	4.40 ± 0.75	4.30 ± 0.80
Practical limitations	4.30 ± 0.78	4.20 ± 0.83

Key Findings:
Minimal Gender Variance: Male respondents slightly rated all challenges higher, but differences between genders were not significant.

Table 4D. Subgroup Analysis by Age Group

Challenges and Limitations	18-24 (Mean ± SD)	25-34 (Mean ± SD)	35+ (Mean ± SD)
Technical challenges	4.00 ± 0.88	4.10 ± 0.80	4.25 ± 0.75
Ethical concerns	4.20 ± 0.80	4.40 ± 0.72	4.50 ± 0.68
Practical limitations	4.15 ± 0.83	4.30 ± 0.78	4.40 ± 0.70

Key Findings:
Table 4D shows key Insights from Respondent Perspectives
Older respondents, especially those aged 35 and above, expressed greater concern about AI integration challenges, particularly ethical issues (mean: 4.50) and practical limitations (mean: 4.40), while younger respondents aged 18-24 rated these challenges lower, indicating less awareness or engagement. Qualitative responses revealed that students feel AI lacks empathy and emotional connection, preferring human counsellors for comfort and emotional support. Counsellors acknowledged that although AI can assist with routine tasks, it cannot replace the human touch in emotionally sensitive situations. Resistance to change was a common theme, with staff and students demonstrating apprehension towards adopting new technologies. Both groups highlighted that training is necessary for effective AI integration, but some individuals remain unwilling to undergo it. Administrators raised concerns about the high initial costs of implementing AI systems, especially for smaller institutions, and students worried that these costs could lead to increased tuition fees. Both students and counsellors pointed out that AI often struggles with local languages and cultural references, reducing its effectiveness in their context. Dependence on stable internet and reliable power supply was identified as a significant barrier, particularly in areas with poor infrastructure. Students expressed frustration about limited access to AI-based services due to connectivity issues, highlighting infrastructural challenges.
Research Question 4: What organizational, technological, and policy-related factors facilitate or hinder the adoption of AI-based counselling tools in universities?

Table 5A: Table: Descriptive Analysis of Factors Influencing AI Adoption in Counselling Services

Factors	Mean Score (Overall)	Mean Score (Students)	Mean Score (Counsellors)	Mean Score (Administrators)	SD (Overall)	% Rated Highly Influential (Overall)
Organizational support (e.g., leadership commitment)	4.30	4.20	4.40	4.50	0.75	87%
Availability of skilled personnel	4.15	4.10	4.25	4.30	0.80	82%
Technological infrastructure (e.g., software, hardware)	4.25	4.20	4.30	4.35	0.78	85%
Policy frameworks (e.g., data privacy regulations)	4.35	4.30	4.40	4.45	0.73	89%
Funding and resource allocation	4.40	4.35	4.45	4.50	0.70	90%

Key Findings and Suggested Strategies

Funding in table 5A was identified as the most influential factor for adopting AI-based counselling tools, with a high mean score of 4.40, followed by the need for strong policy frameworks on data privacy (mean of 4.35). Counsellors and administrators rated all factors higher, highlighting their importance in implementation, while students emphasized the necessity of reliable technological infrastructure. Qualitative responses suggested that strong leadership commitment is crucial for creating a supportive environment for AI adoption. Overall, strategic funding, policy clarity, infrastructure, and leadership are key to successful integration

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Discussions

Summary of Key Findings from Socio-Demographic Characteristics of Respondents

The respondents predominantly aged 18-22 years, representing 50% of the sample, reflecting the youthful demographic common in higher education in developing countries. There was a notable gender imbalance, with males making up 58.6% and females 41.4%, highlighting ongoing gender disparities in higher education. The majority of students were in Year 1, 2, or 3, each around 19%, while 28.6% were Counsellors or Administrators, indicating the importance of including diverse perspectives in the research. Overall, the demographic profile emphasizes the youthful, gender-imbalanced, and diverse nature of the respondent group. Most respondents have 1-2 years of professional experience, typical for students, while those with over three years are mainly

Counsellors or Administrators, adding diverse expertise. The majority of participants are from the University of Uyo (42.86%), with significant representations from Akwa Ibom State University (36.73%) and Topfaith University (20.41%), ensuring balanced institutional coverage. Students make up 71.43% of respondents, with counsellors at 18.37% and administrators at 10.20%, reflecting the usual stakeholder distribution in higher education. Overall, the sample includes a mix of experience levels, institutions, and roles, supporting the credibility of the research findings. The study found that a significant 61.22% of respondents are using AI tools in their university counselling services, indicating a strong level of integration and alignment with the increasing adoption of AI in higher education (Zawacki-Richter et al., 2019; Mabaso & Ndlovu, 2022). Chatbots were the most widely used AI tool, employed by 80% of users to provide personalized, 24/7 support for common student inquiries. Other popular tools included Virtual Assistants and Predictive Analytics, with usage rates of 60% and 50%, respectively; Virtual Assistants assisted with scheduling and emotional support, while Predictive Analytics helped identify at-risk students for targeted interventions (Hoober, 2022; Ahuja et al., 2019).

The adoption of advanced AI techniques like Natural Language Processing (33.33%) and Machine Learning-Based Recommendation Systems (26.67%) remains limited due to the need for specialized expertise. This presents opportunities for universities to further adopt and optimize AI tools to better support student well-being. Respondents recognized benefits of AI, including reducing stigma, providing continuous support, saving costs, enabling trend analysis, and improving accessibility to mental health resources. These advantages help expand access, especially in contexts with limited budgets. Overall, there is significant potential for AI to enhance counselling services through broader adoption and integration (Mabaso & Ndlovu, 2022).

Table 3 shows differing views on the benefits of AI-based tools among Counsellors, Students, and Administrators. Counsellors highly value AI for improving efficiency and reducing their workload. Students, however, express concerns about the lack of personalization and prefer human interaction over technology. Administrators focus on AI's potential to improve access and student outcomes, emphasizing institutional benefits. These distinct perspectives highlight the need for a comprehensive approach to AI implementation that considers the specific concerns and preferences of each stakeholder group (Mabaso & Ndlovu, 2022; Hoober, 2022; Zawacki-Richter et al., 2019; Ahuja et al., 2019). Respondents also valued the predictive capabilities of AI for identifying patterns and informing policy decisions, reflecting the growing emphasis on data analytics in higher education (Ahuja et al., 2019). Furthermore, the importance of language translation and accessibility features was noted, highlighting the need for inclusivity among diverse student populations (Cardoso et al., 2020). Overall, the combination of quantitative and qualitative findings offers a comprehensive understanding of stakeholder perspectives on AI tools in University Counselling services, which can guide the development and implementation of technologies to better serve the needs of Students, Counsellors, and Administrators.

Table 4a highlights that ethical concerns, especially regarding privacy, trust, and bias, are the most significant challenges in using AI-based tools in university counselling, with a high mean score of 4.35. Counsellors expressed greater worry about these ethical issues than other stakeholders, reflecting their direct involvement and responsibility in ethical implementation. While technical challenges like data quality and system integration were noted, they received lower ratings, indicating that ethical considerations are viewed as more pressing. Literature supports that successful AI integration must address ethical, technical, organizational, and social factors. Overall, ethical issues remain the primary challenge in adopting AI in counselling services

(Zawacki-Richter et al., 2019). Respondents emphasized that challenges including AI's lack of human empathy, organizational resistance, high costs, cultural insensitivity, and infrastructural problems like unreliable internet and power supply can significantly delay or hinder the counselling process, particularly in resource-limited regions.

Table 4b shows that students are particularly concerned about ethical issues, such as privacy and trust, and highlight the importance of culturally sensitive AI tools. Counsellors rated all challenges, especially ethical concerns, very highly, reflecting their focus on confidentiality and trust in their roles. Administrators prioritized technical challenges, mainly related to infrastructure and system integration, due to their responsibility for effective technology implementation. The discussion on gender perceptions suggests that while some differences exist, overall attitudes toward AI are generally similar across genders, indicating that perceptions should not be based solely on gender. Instead, universities should focus on understanding the diverse needs of stakeholders to ensure effective and inclusive AI integration (Cardoso et al., 2020). Table 4D reveals that older respondents (35+) tend to regard challenges, especially ethical issues, more seriously due to their long-term perspective on technology risks, while younger respondents (18-24) perceive these challenges as less significant, possibly indicating less familiarity. Open-ended responses highlight concerns about AI's lack of emotional connection, which is vital for effective mental health support, along with resistance to organizational change requiring training and shared understanding. Cost-related worries emphasize the need for thorough financial assessments, particularly in resource-limited areas. Participants also stress that AI often fails to consider local cultural contexts, underscoring the importance of culturally tailored solutions. Additionally, unreliable internet and power supply in regions like Akwa Ibom State are major obstacles, necessitating alternative infrastructure and strategies.

Conclusion: The study concluded that artificial intelligence (AI) positively enhances the counselling process for university students with mental health challenges by improving access, efficiency, and personalized support, while serving as a complementary tool to human counsellors within ethical and professional standards.

Summary of Findings

1. Financial resources emerged as the highest priority (M = 4.40), highlighting adequate funding as essential for successful AI integration in higher education.
2. The high rating for data privacy policies (M = 4.35) emphasize the need for robust ethical and regulatory frameworks to ensure secure and responsible AI use in mental health counselling.
3. Counsellors and administrators placed greater importance on AI implementation factors than students, while students emphasized the need for reliable technological infrastructure to support access to AI counselling services.

Recommendations

To effectively integrate AI-based tools in counselling services, Universities should adopt the following strategies:

1. Allocate sufficient financial resources for the implementation, maintenance, and ongoing development of AI tools, acknowledging the associated costs.
2. Create strong data privacy, security, and governance policies to address ethical concerns, particularly in sensitive areas like mental health support.

3. Involve counsellors and administrators in the design, implementation, and continual improvement of AI tools to utilize their expertise and insights.

Ethical clearance: Ethical consent was sought and obtained from the participants used in this study. They were made to understand that the exercise was purely for academic purposes, and their participation was voluntary.

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Availability of data and materials. The datasets on which conclusions were made for this study are available on reasonable request.

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