Healthcare Professionals' Perceptions, Anxieties, and Concerns Regarding AI Adoption in Human Resources and Employee Retention in Southwestern Nigeria

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ABSTRACT

This study investigated healthcare professionals' perceptions, anxieties, and concerns regarding the adoption of artificial intelligence (AI) in human resources (HR) practices and examined their influence on HR practices in healthcare institutions across South-Western Nigeria. A quantitative survey design was adopted, and data were collected from 600 healthcare professionals drawn equally from Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti States. Descriptive statistics, Pearson Product Moment Correlation, and multiple regression analysis were used for data analysis. Demographic results showed that 53.0% of respondents were female, 40.0% were aged 41–50 years, and 77.0% had over 11 years of work experience, while 51.3% possessed a bachelor's degree in healthcare. Correlation analysis revealed a positive and significant relationship between healthcare professionals' perceptions and HR practices ($r = .453$, $p < .05$), anxieties and HR practices ($r = .687$, $p < .05$), and concerns and HR practices ($r = .374$, $p < .05$). Multiple regression results indicated a strong joint effect of healthcare professionals' perceptions, anxieties, and concerns on HR practices ($R = .699$, $R^2 = .489$, $p < .05$), explaining approximately 49% of the variance. Anxiety emerged as the strongest predictor ($\beta = .630$), followed by healthcare professionals' perceptions ($\beta = .195$) and concerns ($\beta = .088$). The study concludes that AI adoption significantly influences HR practices in healthcare institutions, with healthcare professionals' anxieties playing a critical role. The study recommends targeted training, awareness programmes, and supportive policies to reduce anxieties and enhance effective AI integration in healthcare HR systems.

Keywords: Artificial intelligence, Human resources, Healthcare professionals, HR practices, Anxiety, Perception, Nigeria **Word count:** 212

INTRODUCTION

The integration of Artificial Intelligence (AI) in healthcare systems has become a significant area of interest, particularly in Human Resource (HR) management. AI technologies have the potential to enhance HR practices, improving recruitment, employee management, and retention strategies (Davenport et al., 2018). AI's capacity to analyze large datasets, automate administrative tasks, and make predictions can streamline HR processes, ultimately enhancing efficiency in healthcare institutions (Brynjolfsson & McAfee, 2017). However, despite its promise, there exists considerable uncertainty surrounding AI adoption in HR, particularly in developing regions like Southwestern Nigeria.

In Nigeria, the healthcare sector has faced numerous challenges related to employee retention, including workforce shortages, high turnover, and dissatisfaction (Adeyemi & Adewale, 2020). Employee retention is crucial in maintaining a stable and efficient healthcare workforce, which is essential for delivering quality care (De Lange et al., 2010). However, HR departments in healthcare institutions often struggle with these challenges, and the adoption of AI has been proposed as a potential solution. Despite its potential benefits, healthcare professionals' perceptions of AI and their concerns about its adoption remain underexplored in the context of HR practices in Nigeria.

Healthcare professionals' anxieties and concerns about AI adoption in HR systems could affect its successful implementation (Binns et al., 2020). Previous studies have shown that employees in various sectors express

resistance to AI due to fears about job displacement, lack of trust in technology, and perceived loss of control (Chui et al., 2018; Frey & Osborne, 2017). Similarly, in healthcare, the integration of AI raises concerns about the adequacy of training, ethical implications, and the potential dehumanization of patient care (Hartzband & Groopman, 2016). These anxieties are particularly relevant in developing countries like Nigeria, where there may be additional barriers such as limited access to technology, inadequate infrastructure, and varying levels of digital literacy (Olakulehin, 2021).

Moreover, concerns about AI may extend to the impact it has on employee retention. AI could potentially reduce turnover by streamlining HR processes, providing personalized career development, and offering more efficient performance management systems (Tambe et al., 2019). However, if healthcare professionals perceive AI as a threat to their job security or as a tool that reduces human interaction, it may negatively influence retention rates (Susskind & Susskind, 2015). Therefore, understanding healthcare professionals' perceptions, anxieties, and concerns regarding AI adoption is essential to addressing potential barriers to successful AI integration and to ensure that it contributes to improving employee retention.

This study aims to explore healthcare professionals' perceptions, anxieties, and concerns regarding AI adoption in HR and its impact on employee retention across Southwestern Nigeria. The study will assess how healthcare professionals view AI's potential to improve HR practices, while also examining the extent to which their concerns might affect its implementation and employee retention strategies. By understanding these factors, this research seeks to contribute valuable insights that can inform the development of strategies for successful AI integration in HR in Nigerian healthcare institutions

Objective

The overarching objective of this study is to explore healthcare professionals' perceptions, anxieties, and concerns regarding the adoption of Artificial Intelligence (AI) in Human Resources (HR) practices and to assess the potential impact of AI adoption on employee retention in healthcare institutions across Southwestern Nigeria.

The specific objectives of the study include:

1. To examine healthcare professionals' perceptions of AI adoption in HR practices and its potential impact on employee retention in healthcare settings in Southwestern Nigeria.

2. To assess the anxieties and concerns of healthcare professionals regarding the integration of AI technologies in HR processes, focusing on issues such as job security, the loss of human interaction, and trust in technology.

3. To explore the factors influencing healthcare professionals' acceptance or resistance to AI adoption in HR, including individual, organizational, and technological factors.

4. To investigate the relationship between healthcare professionals' perceptions of AI and their attitudes toward employee retention in healthcare institutions, specifically how AI adoption can enhance or hinder retention strategies.

5. To identify the key barriers and challenges to successful AI adoption in HR in healthcare institutions, with a focus on the unique context of Southwestern Nigeria, including infrastructure, digital literacy, and organizational readiness.

METHODS

This study adopts a quantitative research approach using a structured questionnaire distributed via Google Forms to examine healthcare professionals' perceptions, anxieties, and concerns regarding the adoption of artificial intelligence (AI) in human resource management and employee retention in Southwestern Nigeria. A descriptive survey research design is employed to enable the systematic collection and analysis of numerical data from a large and diverse population at a single point in time.

The study targets 600 healthcare professionals drawn from both public and private healthcare institutions across the six states in Southwestern Nigeria (Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti), with 100 respondents selected from each state to ensure balanced regional representation. Participants include doctors, nurses, pharmacists, laboratory scientists, HR personnel, and hospital administrators with a minimum of one year of professional experience in the healthcare sector. A stratified random sampling technique is used to ensure adequate representation across professional categories and institution types.

The questionnaire is divided into five sections covering demographic information, knowledge and awareness of AI in HR, perceptions of AI adoption, anxieties and ethical concerns, and readiness and willingness to adopt AI. Data collected are analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0, employing both descriptive statistics (such as frequencies and percentages) and inferential statistics to test the study hypotheses and examine relationships among the variables.

Research Hypothesis

There is no significant relationship between healthcare professionals and human resource practices among healthcare institutions in Southwestern Nigeria.

Hypothesis Two (H_{02})

There is no significant relationship between anxieties and human resource practices among healthcare institutions in Southwestern Nigeria.

Hypothesis Three (H_{03})

There is no significant relationship between concerns and human resource practices among healthcare institutions in Southwestern Nigeria.

Hypothesis Four (H_{04})

There is no significant joint and relative contribution of healthcare professionals, anxieties, and concerns to human resource practices among healthcare institutions in Southwestern Nigeria.

LITERATURE REVIEW

The adoption of Artificial Intelligence (AI) in Human Resource (HR) management within the healthcare sector has become an increasingly relevant topic, with significant implications for employee retention. AI technologies, particularly in HR functions such as recruitment, training, and performance management, have been lauded for their potential to enhance efficiency, reduce biases, and improve decision-making (Davenport et al., 2018). However, while AI promises numerous benefits, its integration into HR practices is met with various concerns, particularly in developing countries such as Nigeria, where healthcare systems face unique challenges. This literature review explores the perceptions, anxieties, and concerns healthcare professionals have about AI adoption in HR, highlighting the potential benefits and the barriers that hinder its successful implementation.

AI Adoption in HR: Promises and Benefits

AI has been widely recognized for its potential to transform HR practices, making them more efficient, datadriven, and objective. According to Brynjolfsson and McAfee (2017), AI can streamline HR tasks by automating administrative functions, enhancing recruitment through predictive algorithms, and improving employee engagement through data analysis. In the context of healthcare, AI could offer significant advantages, particularly in addressing issues related to employee retention. For example, AI can identify patterns of job satisfaction and dissatisfaction, offering personalized solutions for career development (Tambe et al., 2019). AI can also optimize scheduling, workload distribution, and performance management, reducing burnout and improving employee retention, which are critical issues in the healthcare sector (De Lange et al., 2010).

AI in HR can also enhance recruitment processes by identifying candidates who are not only qualified but also likely to remain in the organization for the long term. According to Chui et al. (2018), AI's ability to analyze large datasets allows for more accurate predictions of employee retention, enabling HR managers to make more informed decisions. These advances can be particularly crucial in Nigeria, where high turnover rates among healthcare professionals are a pressing challenge (Adeyemi & Adewale, 2020).

Healthcare Professionals' Perceptions of AI: A Dual Perspective

While the benefits of AI adoption in HR are widely acknowledged, healthcare professionals' perceptions of AI are far from uniformly positive. Numerous studies have shown that there is a significant degree of skepticism and resistance to AI, particularly in professions that rely heavily on human interaction, such as healthcare (Binns et al., 2020). In their study on AI adoption in healthcare, Hartzband and Groopman (2016) argued that while AI could optimize administrative functions, it could never replace the human touch that is essential inpatient care. This concern may extend to HR practices, where healthcare professionals may fear that AI could dehumanize the HR process and lead to the erosion of personal interactions that are critical in a healthcare environment.

Furthermore, Susskind and Susskind (2015) contend that while AI can perform specific tasks efficiently, it cannot replicate the complex, multifaceted nature of human decision-making in the healthcare sector. This argument challenges the notion that AI can significantly improve HR practices without losing valuable elements of human intuition and empathy. Thus, healthcare professionals may be concerned that AI adoption in HR could result in decisions that are perceived as cold or impersonal, leading to a decline in employee satisfaction and retention.

Anxieties and Concerns: Job Security and Trust Issues

Healthcare professionals' anxieties regarding AI adoption in HR are primarily driven by concerns over job security and the potential loss of control. As Frey and Osborne (2017) highlight, AI technologies have the potential to automate many tasks traditionally performed by humans, leading to fears of job displacement. These concerns are particularly salient in the healthcare sector, where many employees, particularly in HR roles, may fear that AI systems could replace them. In a study conducted by Chui et al. (2018), workers in various sectors expressed similar concerns, noting that AI could undermine job security and result in a reduction in the workforce.

In addition to fears about job loss, healthcare professionals may also have concerns about the transparency and trustworthiness of AI systems. According to Binns et al. (2020), trust is a critical factor in the acceptance of new technologies, and AI systems in HR could be perceived as opaque, particularly if they are not fully understood by healthcare workers. The lack of transparency in AI decision-making could lead to resistance, especially if healthcare professionals feel that AI systems are making important decisions about their careers or job retention without sufficient accountability or human oversight (Hartzband & Groopman, 2016).

Barriers to AI Adoption in Southwestern Nigeria

In Southwestern Nigeria, the successful adoption of AI in HR faces additional challenges due to the country's limited technological infrastructure, low digital literacy, and skepticism about new technologies (Olakulehin, 2021). While developed countries have seen increasing AI integration in healthcare, Nigeria's healthcare sector is still grappling with basic infrastructural challenges, such as unreliable internet access and outdated equipment, which hinder the successful implementation of AI technologies (Adeyemi & Adewale, 2020). Moreover, a study by Olakulehin (2021) suggests that Nigerian healthcare workers' digital literacy levels are relatively low, which could exacerbate concerns about the potential complexity and accessibility of AI tools in HR.

In addition, Nigerian healthcare professionals may be hesitant to trust AI due to broader issues related to the adoption of new technologies in the country. According to Adeyemi and Adewale (2020), healthcare professionals in Nigeria have expressed concerns about the reliability of technology and the lack of adequate training to use new systems effectively. These barriers must be addressed for AI to be successfully integrated into HR practices in Nigerian healthcare institutions.

Divergent Perspectives on AI's Impact on Employee Retention

While AI has been touted as a solution to improving employee retention through more efficient HR practices, contradictory perspectives exist regarding its impact on retention. On one hand, AI could help retain employees by identifying patterns in job satisfaction, providing personalized career development opportunities, and reducing burnout (Tambe et al., 2019). On the other hand, if AI is perceived as a threat to job security or as a tool that reduces human interaction, it could negatively impact retention (Susskind & Susskind, 2015).

Tambe et al. (2019) argue that AI can help create more effective HR interventions that are tailored to individual employee needs, potentially leading to higher levels of job satisfaction and, in turn, improved retention rates. However, concerns raised by Frey and Osborne (2017) and Binns et al. (2020) suggest that if healthcare workers perceive AI as a replacement for human decision-making in HR, it may lead to increased dissatisfaction and higher turnover rates.

MATERIALS AND METHODS

Design and Respondents' Selection

This study adopted a quantitative research design to examine healthcare professionals' perceptions, anxieties, and concerns regarding the adoption of artificial intelligence (AI) in human resource practices and its implications for employee retention in healthcare institutions across Southwestern Nigeria. A descriptive survey research approach was employed to enable the systematic collection of numerical data from a large population at a single point in time.

The respondents for the study comprised 600 healthcare professionals drawn from both public and private healthcare institutions across the six states in Southwestern Nigeria, namely Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti. A stratified random sampling technique was used to ensure proportional representation of different professional groups, including doctors, nurses, pharmacists, laboratory scientists, human resource personnel, and hospital administrators. Only healthcare professionals with a minimum of one year of work experience were included to ensure that respondents possessed adequate knowledge and experience to provide informed responses relevant to the objectives of the study.

Measures

The study employed a structured questionnaire comprising five sections designed to measure the key variables of the study. All items were measured using a Likert-type scale, ranging from *Strongly Disagree (1)* to *Strongly Agree (5)*, unless otherwise stated.

Section A: Demographic Characteristics

This section captured respondents' background information, including gender, age, highest educational qualification, years of work experience, professional category, type of healthcare institution (public or private), and state of employment. These variables were used to describe the sample and contextualize the study findings.

Section B: Healthcare Professionals' Perceptions of AI in HR Practices

This section measured respondents' perceptions of AI adoption in human resource functions such as recruitment, performance appraisal, training, and employee retention. Items assessed perceived usefulness, efficiency, accuracy, and fairness of AI-driven HR systems.

Section C: Anxieties Related to AI Adoption

This section assessed respondents' anxieties regarding AI adoption in HR practices, including fears of job displacement, loss of professional autonomy, increased surveillance, and reduced human judgment in decisionmaking processes.

Section D: Concerns About AI in HR Practices

This section measured ethical and operational concerns associated with AI adoption, such as data privacy, confidentiality, algorithmic bias, transparency, and accountability in HR decisions.

Section E: Human Resource Practices and Employee Retention

This section examined the effectiveness of HR practices and the perceived impact of AI on employee retention, including job satisfaction, organizational commitment, intention to remain, and perceived organizational support.

RESULTS

Three research hypotheses were formulated and tested for the study. The data were analyzed using frequency count, percentages, Pearson Product Moment Correlation (PPMC) and Regression Analysis. The summary of data analysis were discussed.

Demographic Characteristic

Table 4.1.1: Distribution of Respondents by Gender

Gender	**Frequency**	**Percentage**
Male	282	47.0%
Female	318	53.0%
Total	**600**	**100.0**

Source: Field survey, 2025

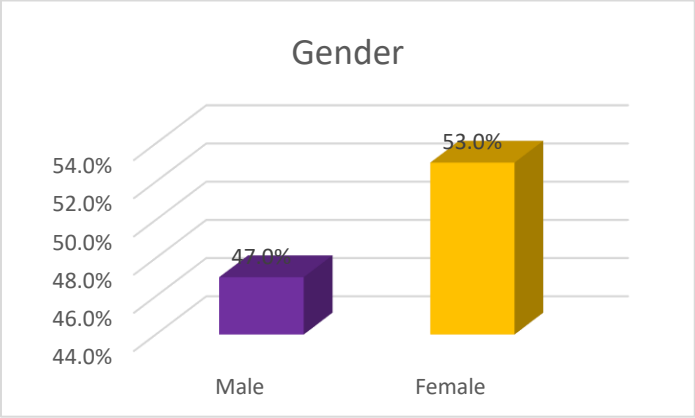

Figure 4.1.1: Showing Bar chart distribution of Respondents by Gender

Table and figure 4.1.1 revealed that 318 representing 53.0% of the respondents were female, 282 of them or 47.0% were female respectively. These imply that majority of the respondents were female.

Table 4.1.2: Distribution of Respondents by Age

Age range	Frequency	Percentage
20 to 30years	24	4.0%

31 to 40years	132	22.0%
41 to 50 years	240	40.0%
51 years and above	204	34.0%
Total	**600**	**100.0%**

Source: Field survey, 2025

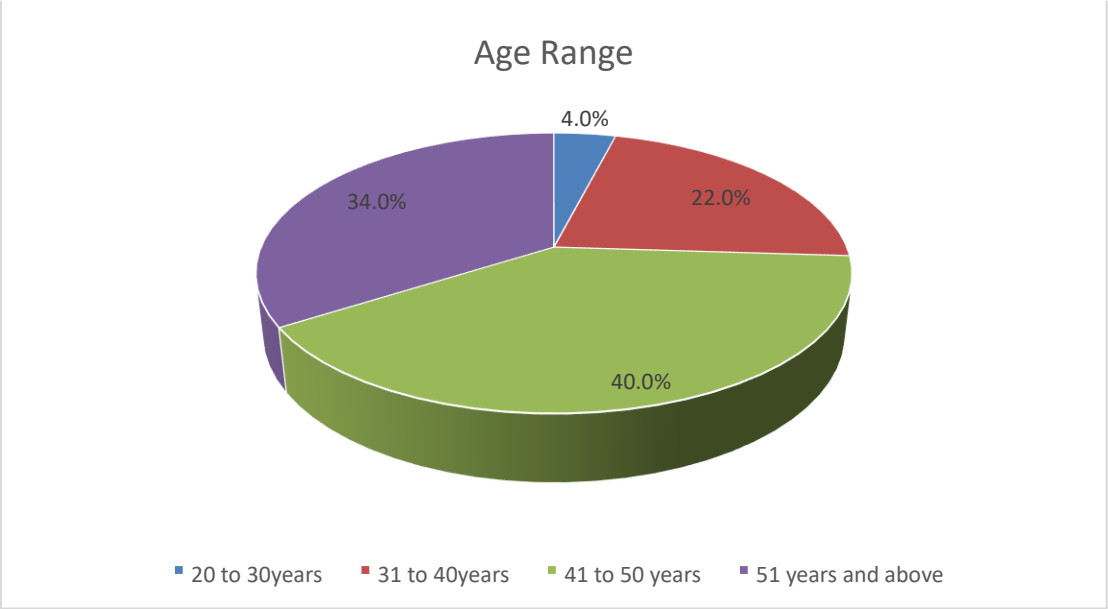

Figure 4.1.2: Showing Pie chart distribution of Respondents by Age

Table and figure 4.1.2 reveal the frequency distribution according to age group of the respondents. According to the table, the respondents' age group displayed in the table, with a mean and standard deviation of 42.48 ±7.11. The result shows that age range between 41 to 50 years were 240 (40.0%) while age range of between 51 years and above were 204 (34.0%) and age range between 31 to 40years were 132 (22.0%) while age range between 20 to 30 years were 24 (4.0%) of the total respondents. These imply that age range between 31 to 50 years had the highest percentage

Table 4.1.3: Distribution of Respondents by Years of working experience

Years of working experience	Frequency	Percentage
1 to 5 years	36	6.0%
6 to 10 years	102	17.0%
11 to 15 years	234	39.0%
16 years and above	228	38.0%
Total	600	100.0%

Source: Field survey, 2025

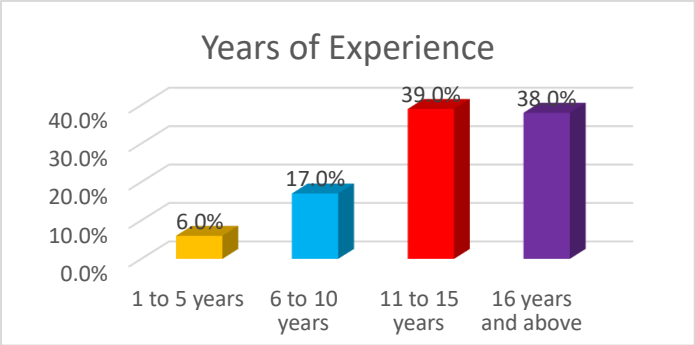

Figure 4.1.3: Showing Bar chart distribution of Respondents by Years of working experience

Table and figure 4.1.3 reveal the frequency distribution according to years of working experience of the respondents. The result show that 11 to 15 years were 234 (39.0%) while 16 years and above were 228 (38.0%) and 6 to 10 years were 102 (17.0%) and 1 to 5 years were 36 (6.0%) of the total respondents. These imply that majority of the respondents had experienced between 11 to 15 years.

Table 4.1.4: Distribution of Respondents by Highest Educational qualification

Highest Educational qualification	**Frequency**	**Percentage**
Diploma in Healthcare	60	10.0%
Bachelor Degree in Healthcare	308	51.3%
Master Degree in Healthcare	179	29.8%
Doctoral Degree Healthcare	34	5.7%
Others Professional Certificate	19	3.2%
Total	**600**	**100.0**

Source: Field survey, 2025

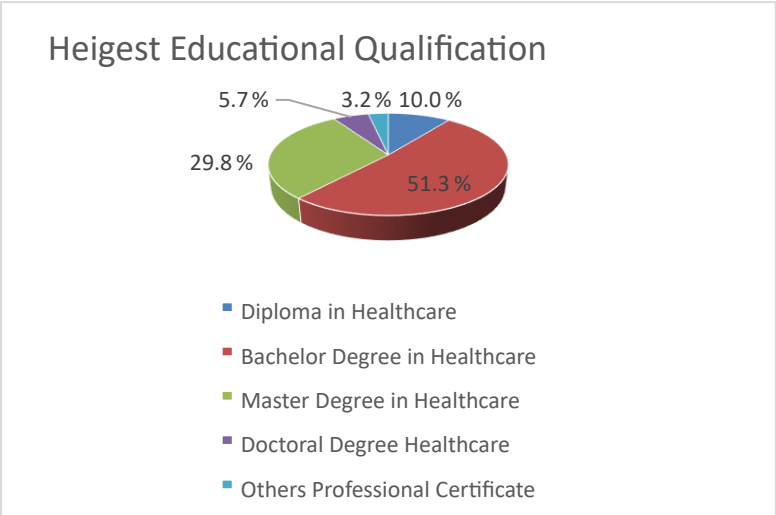

Figure 4.1.4: Showing Pie chart distribution of Respondents by Highest Educational qualification

Table and figure 4.1.4 revealed that 308 representing 51.3% of the respondents have Bachelor Degree in Healthcare, while 179 of them or 29.8% have Master Degree in Healthcare and 60 (10.0%) have Diploma Certificate in Healthcare while those with Doctoral Degree Healthcare where 34 (5.7%) and Others Professional Certificate where 19 (3.2%) of the total respondents. These imply that majority of the respondents have Bachelor Degree in Healthcare.

Table 4.1.5: Distribution of Respondents by State

State	**Frequency**	**Percentage**
Lagos	100	16.7%
Oyo	100	16.7%
Ogun	100	16.7%
Osun	100	16.7%
Ondo	100	16.7%
Ekiti	100	16.7%
Total	**600**	**100.0**

Source: Field survey, 2025

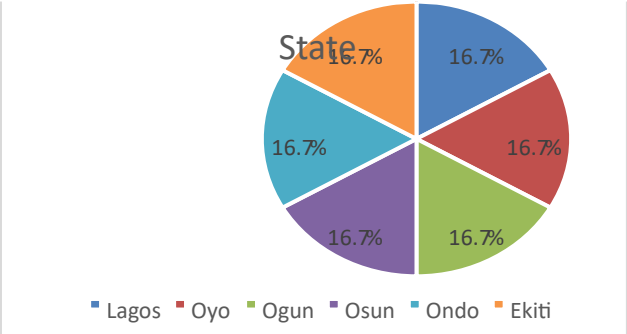

Figure 4.1.5: Showing Pie chart distribution of Respondents by State

Table and figure 4.1.5 revealed equal number and percentage of 100 representing 16.7% of the respondents' state status were from Lagos, Oyo, Ogun, Osun, Ondo and Ekiti respectively. These imply that equal numbers of the respondents were frpm six state

Testing of Hypotheses

Ho1: There is no significant relationship between Healthcare Professional and Human Resources Practices among healthcare institutions across South- western Nigeria.

Table 4.3.1: Result of PPMC: Showing the Significant Relationship between Healthcare Professional and Human Resources Practices among healthcare institutions across South- western Nigeria

Variable	Mean	Std. Dev.	N	R	P	Remark
Healthcare Professional	34.80	3.46	600	.453**	.000	Sig.
Human Resources Practices	35.20	3.25				

Source: Field survey, 2025

Table 4.3.1, showed that there was a positive significant relationship between Healthcare Professional and Human Resources Practices among healthcare institutions across South- western Nigeria (r = .453, N= 600, p <.05). The result rejected the null hypothesis and accept alternative which states there is significant relationship between Healthcare Professional and Human Resources Practices among healthcare institutions across South-western Nigeria.

Ho2: There is no significant relationship between Anxieties and Human Resources Practices among healthcare institutions across South- western Nigeria.

Table 4.2.2: Result of PPMC: Showing the Significant Relationship between Anxieties and Human Resources Practices among healthcare institutions across South- western Nigeria.

Variable	Mean	Std. Dev.	N	R	P	Remark
Anxieties	34.84	3.68	600	.687**	.000	Sig.
Human Resources Practices	35.20	3.25				

Source: Field survey, 2025

Table 4.2.2 showed that there was a positive significant relationship between Anxieties and Human Resources Practices among healthcare institutions across South- western Nigeria (r = .687, N= 600, p <.05). The result rejected the null hypothesis and accept alternative which states there is significant relationship between Anxieties and Human Resources Practices among healthcare institutions across South- western Nigeria.

Ho3: There is no significant relationship between concerns and Human Resources Practices among healthcare institutions across South- western Nigeria.

Table 4.3.3: Result of PPMC: Showing the Significant Relationship between concerns and Human Resources Practices among healthcare institutions across South- western Nigeria

Variable	Mean	Std. Dev.	N	R	P	Remark
Concerns	34.71	3.77	600	.374**	.000	Sig.
Human Resources Practices	35.20	3.25				

Source: Field survey, 2025

Table 4.3.3 showed that there was a positive significant relationship between concerns and Human Resources Practices among healthcare institutions across South- western Nigeria (r = .374, N= 600, p <.05). The result rejected the null hypothesis and accept alternative which states there is significant relationship between concerns and Human Resources Practices among healthcare institutions across South- western Nigeria

Ho4: There is no significant joint and relative composite of healthcare professional, anxieties and concerns on human resources practices among healthcare institutions across South- western Nigeria.

Table 4.2.4: The Joint composite of Healthcare Professional, Anxieties and concerns on Human Resources Practices among healthcare institutions across South- western Nigeria.

Model	**Sum of squares**	**Df**	**Means Square**	**F**	**Sig.**
Regression Residual Total	3102.803 3240.390 6343.193	3 596 599	1034.268 5.437	190.231	.000[b]
R = .699[a] R^2 = .489 Adjusted R^2 = .487 Std. Error of the Estimate = 2.332					

The joint composite of healthcare professional, anxieties and concerns on human resources practices among healthcare institutions across South- western Nigeria.is displayed in Table 4.2.4. Multiple regression coefficients R =.699, R^2 =.489, and adjusted R-square = 0.487 are obtained from the results. This indicates that 48/7% (Adj. R2 =.487) of the variance can be explained by these three factors taken together. This suggests that the human resources practices is significantly affected by the independent variables of healthcare professional, anxieties and concerns among healthcare institutions across South- western Nigeria. This study is not intended to address the additional factors that account for the remaining variance.

The regression analysis's ANOVA result indicates that the independent variables have a significant composite of knowledge, Attitude toward AI and usage of AI on effect of artificial intelligence among postgraduate of social work students (F (3, 596) = 190.231; P<0.05) among healthcare institutions across South- western Nigeria, this suggests that, there is significant joint composite of healthcare professional, anxieties and concerns on human resources practices among healthcare institutions across South- western Nigeria.

Table 4.2.5: Multiple Regression Showing the Relative Composite of healthcare professional, anxieties and concerns on human resources practices among healthcare institutions across South- western Nigeria.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	12.005	1.083		11.083	.000
Healthcare professional	.183	.043	.195	4.206	.000
Anxieties	.557	.031	.630	18.140	.000
Concerns	.074	.040	.088	1.973	.006

Table 4.2.5 reveals the relative composite of healthcare professional, anxieties and concerns on human resources practices among healthcare institutions across South- western Nigeria. These independent variables constitute the significant predictors of effect of artificial intelligence among postgraduate of social work students. The results show that there is a significant relative composite of Anxieties (β = .630; t = 18.140; P<0.05), follows by Healthcare professional (β = .195; t = 4.206; P<0.05) and Concerns (β = .088; t = 1.973; P<0.05) to human resources practices among healthcare institutions across South- western Nigeria. As the results reveal, the most

potent predictor is Anxieties followed by Healthcare professional and concerns respectively. Thus, there are significant relative composite of healthcare professional, anxieties and concerns on human resources practices among healthcare institutions across South- western Nigeria.

DISCUSSION OF FINDINGS

This study examined healthcare professionals' perceptions, anxieties, and concerns regarding the adoption of artificial intelligence (AI) in human resource (HR) practices and its implications for employee retention in healthcare institutions across Southwestern Nigeria. The findings underscore the critical role of human and organizational factors in shaping the effectiveness of AI-driven HR systems.

Demographic Characteristics and Implications for AI Adoption

The demographic results revealed a predominantly female workforce with most respondents aged between 41 and 50 years and possessing over 11 years of work experience. This reflects the structure of Nigeria's healthcare workforce and suggests that respondents had sufficient professional exposure to evaluate changes in HR practices. Experienced healthcare professionals often display cautious attitudes toward technological change, particularly when it affects job roles and security. This aligns with Adeyemi and Adewale (2020), who argue that workforce retention in Nigerian healthcare institutions is strongly influenced by employees' perceptions of organizational change and job stability. Additionally, the relatively high educational qualifications of respondents suggest a capacity to understand AI systems, though understanding does not necessarily translate into acceptance, especially where anxieties persist (Olakulehin, 2021).

Healthcare Professionals and Human Resource Practices

The study found a positive and significant relationship between healthcare professionals and HR practices. This indicates that healthcare professionals' perceptions and engagement significantly influence the effectiveness of HR systems, including those enhanced by AI. This finding supports Davenport, Guha, and Grewal (2018), who emphasize that AI in HR functions such as recruitment, performance appraisal, and retention is most effective when employees perceive it as supportive rather than controlling. Similarly, Tambe, Cappelli, and Yakubovich (2019) note that human acceptance remains a key determinant of successful AI integration in HR management. In the healthcare context, where professional autonomy is highly valued, the involvement of healthcare workers in AI-related HR decisions is essential.

Anxieties and Human Resource Practices

The results revealed a strong positive and significant relationship between anxieties and HR practices, with anxieties emerging as the most powerful predictor. This suggests that fears surrounding job displacement, loss of professional judgment, and algorithm-driven decisions strongly shape HR outcomes. These findings are consistent with Frey and Osborne (2017) and Brynjolfsson and McAfee (2017), who argue that fears of automation and job insecurity are common responses to AI adoption across sectors. In healthcare, such anxieties may be intensified due to concerns that AI could undermine professional expertise or replace human judgment (Hartzband & Groopman, 2016). The strong influence of anxiety highlights the need for healthcare organizations to prioritize communication, reassurance, and skills development when implementing AI-driven HR systems.

Concerns and Human Resource Practices

The study also found a significant relationship between concerns and HR practices, although the effect was weaker compared to anxieties. These concerns likely relate to ethical issues, data privacy, fairness, and transparency in AI-driven HR decisions. This aligns with Binns, Haslam, and Reicher (2020), who emphasize that trust in AI systems is shaped by perceptions of fairness and accountability. Concerns about data security and algorithmic bias are particularly relevant in Nigeria's healthcare system, where infrastructural and regulatory challenges persist (Olakulehin, 2021). While these concerns may not provoke immediate emotional responses like anxiety, they nonetheless influence acceptance and long-term sustainability of AI adoption in HR.

Joint and Relative Contributions of Predictors

The regression analysis demonstrated that healthcare professionals' perceptions, anxieties, and concerns jointly accounted for a substantial proportion of the variance in HR practices. Anxieties emerged as the strongest predictor, followed by healthcare professionals' perceptions and then concerns. This finding reinforces Susskind and Susskind's (2015) argument that technological transformation in professional fields is as much a social and psychological process as it is a technical one. It also supports De Lange, De Witte, and Notelaers (2010), who emphasize that employee perceptions and psychological resources significantly influence organizational performance and retention outcomes.

Overall Implications of the Findings

Overall, the findings indicate that the effectiveness of AI adoption in healthcare HR practices depends less on technological sophistication and more on how healthcare professionals perceive, emotionally respond to, and trust AI systems. Consistent with Adeyemi and Adewale (2020), retention strategies in Nigerian healthcare institutions must therefore integrate technological innovation with human-centered management practices. Addressing anxieties, fostering trust, and ensuring transparency in AI-driven HR decisions are essential for improving employee retention and sustaining AI-enabled HR practices in Southwestern Nigeria.

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