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| RESEARCH ARTICLE

Assessing the Fusion of ChatGPT into Employee Retention: Effectiveness and Limitations in the Omani Public Sector

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| ABSTRACT
This study aimed to investigate the potential effectiveness of fusing ChatGPT as a recommendation instrument for employee retention purposes in the Omani public sector. It also identified potential limitations associated with its implementation. The study employed a descriptive approach and utilized a survey instrument to gather data from 376 employees and administrators working in the Omani public sector for participation in the current study. The researcher designed a questionnaire to investigate the potential effectiveness and limitations of using ChatGPT as a recommendation tool for employee retention purposes in the Omani public sector. The questionnaire, in its final format, consisted of three main axes; the first axis was potential effectiveness, the second one was possible limitations of using ChatGPT, while the third shed light on affective factors. The results revealed that there were varied potential effectiveness of using ChatGPT as a recommendation tool for employee retention purposes in the Omani public sector. All potential effectiveness dimensions obtained moderate degrees. ChatGPT can develop personalized career paths, identify turnover risk factors, design effective reward mechanisms, and provide accessibility & availability. Possible limitations included a lack of contextual understanding, privacy and security concerns, and a lack of emotional intelligence. All these limitations obtained a high response degree that could be attributed to the possibility of using ChatGPT to generate harmful content. Affective factors, when analyzed, did not result in a statistically significant influence on participant responses. From a practical standpoint, the research suggests the development of comprehensive educational resources to augment user awareness of ChatGPT's functionalities and stress the need for the aggregation of training data from diverse origins, including authentic human interactions across diverse cultures and communities.

| KEYWORDS
ChatGPT; Public Sector; Employee Retention; potential effectiveness; possible limitations; affective factors

| ARTICLE INFORMATION
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1. Introduction

One of ChatGPT's main assets is its powerful natural language processing abilities, which allow it to maintain multi-turn interactions, handle complex requests, and produce coherent written content across several fields (Salah, Abdelfattah & Al Halbusi, 2023). Due to its adaptability, ChatGPT has attracted significant academic and media interest, with discussions centering on its revolutionary potential and its ethical, societal, and organizational implications (Budhwar et al., 2023).

The incorporation of generative AI technology into human resource management (HRM) signifies a fundamental transformation in organizational strategies for workforce management and employee engagement (Rane, 2023). Empirical research indicates that AI-driven decision-support technologies can markedly improve efficiency, transparency, and strategic decision-making in human resources operations (Iswahyudi et al., 2023). As an AI-powered virtual HR assistant, ChatGPT can optimize essential HR functions,

such as recruitment, employee development, performance appraisal, and workplace support services. AI technologies furnish data-driven recommendations and insights, enabling HR practitioners to promote a more engaging and supportive workplace, hence enhancing job satisfaction and increasing employee retention (Iswahyudi et al., 2023).
In addition to administrative assistance, ChatGPT is instrumental in tailored employee onboarding and training, essential for sustained worker retention. AI-driven systems may assess individual competencies, work positions, and learning preferences to create customized professional development programs, which maximize skill acquisition, knowledge retention, and job growth opportunities (Rane, 2023). This tailored learning strategy enhances employees' affiliation with their employers while promoting ongoing professional development and engagement.

Moreover, ChatGPT's analytical capabilities provide HR executives with data-driven insights into workforce trends, facilitating more effective staff retention plans and turnover analysis (Raman, Venugopalan & Kamal, 2024). AI-powered data analytics have the ability to methodically compile, analyze, and extract significant patterns from various employee datasets, equipping firms with data-informed strategies for talent management, workforce planning, and employee engagement (Balamurugan & Vidhya, 2024).

AI technology has the potential to help individuals in several ways and add value to the public sector. Academics have addressed possible challenges associated with AI while also highlighting its potential benefits for internal operations and the provision of public services. AI technology is already being used and employed in the public sector, where it supports a variety of activities with multiple approaches and leads to advancements. According to reports, the public sector is employing artificial intelligence with minimal assistance. The majority of AI research is theoretical, creating a vacuum in providing actual data to public leaders (Murko, Umek & Aristovnik, 2023). Public institutions can be impacted by AI applications such as ChatGPT if they have been well integrated into regular procedures. The public sector is especially sensitive to the deployment of such AI-based technologies, as they provide services that are essential to the State's operation and have a great impact on the quality of services being delivered to citizens (Council of the European Union, 2023).

Identifying factors affecting employee development and retention has appeared as a critical priority in public sector organizations in the Sultanate of Oman (Saadouli & Al-Khanbashi, 2021; Al Amri & Pandey, 2019). The Omani government encourages the adoption of AI applications in different sectors (Abdelfattah et al., 2024). Artificial intelligence has the power to revolutionise Omani government services, enhancing their efficacy, efficiency, and general quality for the benefit of citizens. Artificial intelligence can increase government workers' productivity and efficiency by automating repetitive jobs so they can concentrate on more difficult and valuable work. However, there are also worries about how artificial intelligence may affect employment and the necessity for government workers to retrain and upgrade their skills to utilise new tools and technology that assist AI (Al-Araimi, Mahmoud & Aldabue, 2023). Based on what has been mentioned above, the researchers see the statement of the problem revolving around the potential effectiveness and possible limitations of using ChatGPT as a recommendation tool for employee retention purposes in the Omani public sector.

Therefore, the Omani public sector has to continuously remain updated with the rapid advancements in AI and chatbots like ChatGPT. It is essential to investigate the potential advantages and disadvantages of utilizing ChatGPT as a possible catalyst for public sector employee retention in Oman. The efficient integration of ChatGPT and other AI technologies into the HR processes of the Omani public sector could exemplify broader digital transformation initiatives. Recognizing the potential and limitations of these technologies is essential for their effective integration into HR processes and decision-making. Employee retention is a key concern for numerous public sector organisations in Oman. Examining the application of AI-driven solutions like ChatGPT may provide valuable insights into enhancing the support and retention of skilled public sector employees. Omani public sector organizations can determine the optimal application of emerging technologies to enhance worker support and overall organizational performance by meticulously evaluating the potential positives and drawbacks of utilizing ChatGPT for staff retention within the Omani public sector. This leads to setting the research objectives and questions as listed below.

The primary objectives of this study were to:

- Assess the perceived effectiveness of ChatGPT as a recommendation tool for employee retention in the Omani public sector.
- Identify and analyze the key limitations associated with using ChatGPT for employee retention purposes in the Omani public sector.

- Examine whether statistically significant differences exist in participants' responses regarding the effectiveness and limitations of ChatGPT, based on gender, job position, and years of experience.

To attain these objectives, this study sought to address the following research questions:

- What is the perceived effectiveness of ChatGPT as a recommendation tool for employee retention in the Omani public sector?
- What are the key limitations associated with using ChatGPT as a recommendation tool for employee retention in the Omani public sector?

- To what extent do gender, job position, and years of experience influence the perceived effectiveness and limitations of ChatGPT as a recommendation tool for employee retention?

2. Related Work

2.1 ChatGPT

OpenAI ChatGPT is an NLP model poised to transform higher education. Generative language models, such as ChatGPT and Google Bard, can create human-like responses to open-ended prompts, including questions, statements, or inquiries into academia. The recent emergence and increasing popularity of ChatGPT (as of early 2023) have made its use especially significant for enhancing student learning in diverse areas, such as language acquisition, writing support, research activities, and general academic research (Fuchs, 2023).

ChatGPT was launched on November 30, 2022, marking an unprecedented breakthrough in technology. Created by OpenAI, this chatbot model rapidly attracted over one million users in just five days, eliciting significant global interest and debate. The introduction catalyzed a global wave of innovation, prompting technology and internet companies, as well as conventional businesses, to pursue a variety of product developments focused on ChatGPT. The most recent version of OpenAI's language model, GPT-4, demonstrates how artificial intelligence has the potential to transform self-directed learning for students. Utilizing the remarkable abilities of GPT-4 in understanding and generating natural language, students can access tailored and contextually relevant information, speeding up their learning and fostering deeper understanding. This advanced AI model can foster interactive and dynamic learning settings, allowing individuals to engage in meaningful conversations, resolve uncertainties, and explore various viewpoints (Firat, 2023).

ChatGPT represents a potent instrument with the capacity to revolutionize our interactions with technology, facilitating increasingly natural and instinctive communication between humans and machines. Its application spans various domains, encompassing customer service chatbots, language translation utilities, and virtual assistants. Furthermore, its potential within education is being investigated as a means to enrich student learning experiences and foster greater engagement (Božić & Poola, 2023). However, in today's fiercely competitive business landscape, employee retention has emerged as a crucial factor that every organization must prioritize. With a plethora of opportunities available in the market, employees often hop from one organization to another in pursuit of better positions and higher salaries. Employee retention is a process aimed at encouraging employees to remain with the organization for an extended duration, typically until a project is completed or for a longer-term commitment (Harika & Bindu, 2020).

Additionally, there is a fiercely competitive global environment, and employee retention has emerged as a significant concern for corporations. Organizations dedicate substantial time and financial resources to nurturing individuals, ensuring they are prepared for their roles and assimilate into the corporate ethos. Organizations must retain hardworking individuals who play vital roles within the system. Managing and retaining these valuable resources pose considerable challenges for organizations today. Employee competencies play a pivotal role in a company's economic competitiveness, underscoring the importance of attracting and retaining skilled individuals for every firm (Prakash, 2022).

ChatGPT refers to cutting-edge machine learning algorithms that have undergone pre-training on extensive text datasets, empowering them to produce exceptionally nuanced responses to user input. Additionally, the model can undergo fine-tuning tailored to specific applications, enabling developers to personalize the language model according to their unique requirements (Božić & Poola, 2023). In addition, Alipour, Pendar, and Roy (2024) define ChatGPT as the application has adaptability, demonstrating prowess in captivating users across a spectrum of conversational subjects while providing insightful and imaginative responses. Its utility extends to tasks such as text completion, answering queries, and fostering interactive dialogue.

ChatGPT has many advantages which provide the ability for ChatGPT to gain potential effectiveness in many areas. Fuchs (2023) showed that GPT can analyze students' responses and offer feedback tailored to their comprehension level. Additionally, ChatGPT can create personalized learning plans for each student based on their progress and feedback and holds promise in fostering students' self-directed learning abilities and empowering them to take charge of their educational journey. Moreover, ChatGPT can

provide immediate support by offering real-time assistance to students who are struggling with specific concepts or problems. It helps students overcome learning hurdles and deepen their grasp of the subject matter. ChatGPT can deliver on-demand support by generating responses to student queries and feedback instantaneously, tailoring each response to address the student's individual needs.

Firat (2023) showed that ChatGPT has many potential advantages. ChatGPT, utilizing the cutting-edge GPT-3 language model developed by OpenAI, has swiftly amassed a user base of one million within just five days. To put this into perspective, major platforms like Facebook, Netflix, Instagram, and Twitter took significantly longer periods of 300, 1200, 75, and 720 days, respectively, to achieve the same milestone. With an impressive 175 billion parameters, GPT-3 can generate text closely resembling human language. The official announcement of GPT-4 on March 13 brought about even greater advancements, rendering it more dependable, imaginative, and nuanced. Empowered by the GPT-4 model, ChatGPT can seamlessly engage in multiple concurrent conversations, comprehend and respond to natural language input, and provide tailored and interactive assistance. This positions ChatGPT as a highly promising tool for open education, as it can enhance the self-reliance and self-directed learning of autodidactic individuals, all while remaining practical and adaptable.

The advancement of technology offers the potential to revolutionize human routines, ushering in unparalleled digital encounters and enhancing the quality of life. Nevertheless, this technology also carries certain drawbacks. As ChatGPT matures and finds widespread application, it could displace numerous jobs that demand skills beyond the realm of artificial intelligence, potentially leading to elevated unemployment rates and adverse effects on the economy. Moreover, its adoption might heighten reliance on artificial intelligence, potentially diminishing human cognitive faculties and decision-making capabilities (Yu, 2023).

On the other hand, Firat (2023) announced the potential limitation of Chat GPT. The system responses precision depends heavily on the quality, diversity, and complexity of the training data, together with the quality of input data submitted. The accuracy of natural language processing (NLP) models can be influenced by the sophistication of the input data, especially for idiomatic expressions or other subtle linguistic forms. Furthermore, the model's accuracy may be affected by the quality of input data provided by users. Ambiguous, verbose, or extraneous input from users may impede the system's capacity to produce accurate responses. One more significant drawback is the over reliance on technology, which may hinder the development of crucial critical thinking abilities. While critical thinking is often highlighted as a key skill, numerous other higher-order thinking skills could be explored further in the context of chatbots. Another significant challenge is the linguistic dimension of ChatGPT.

Moreover, Biswas (2023) revealed that ChatGPT has many limitations in the public sector. Restricted precision is an important constraint that faces chat GPT. In addition, Prejudice and constraints within the data represent a significant constraint regarding the application of ChatGPT in the public sector. Additionally, the absence of surrounding circumstances, constrained involvement, and absence of direct engagement with healthcare experts represent essential limitations regarding ChatGPT in the public sector. Yu (2023) showed that remarkable capacity presents notable hurdles for human intellect while also presenting unprecedented prospects. The advent of ChatGPT Plus is poised to profoundly influence the endeavours and lifestyles of billions, embodying substantial characteristics of the technological revolution.

Generally, ChatGPT holds promises for enhancing education, but there are also various limitations to consider. Here are some of them (Božić & Poola, 2023):

- **Bias and Inaccuracies**: GPT's effectiveness relies on the quality of its training data. If the data contains biases or inaccuracies, GPT may produce language with similar biases or inaccuracies.
- **Lack of Contextual Understanding**: GPT generates text based on patterns in the training data but lacks true comprehension of context or meaning.
- **Ethical Concerns**: Implementing GPT raises ethical issues regarding data privacy, security, and potential misuse.
- **Dependence on Technology**: Increased reliance on GPT in education may lead to diminished critical thinking and problem-solving skills among students.
- **Technical Requirements**: Utilizing GPT in education necessitates technical infrastructure like high-speed internet and specialized software, which may pose challenges for certain schools or students.
- **Need for Training and Support**: Effective integration of GPT in classrooms requires adequate training and support for teachers and students, demanding additional resources and investment.

2.2 Employee Retention

Employee retention pertains to an organization's capacity to keep its workforce within its ranks. Broadly, it encompasses the efforts made by employers to retain their employees within the company (Harika & Bindu, 2020). On the other hand, employee retention involves the act of keeping an employee within your organization. It involves implementing strategies to motivate and attract staff to stay with the company for an extended period. It is a purposeful and organized effort aimed at fulfilling the various needs of

employees and ensuring their continued employment with the organization (Ilyas, 2019). Moreover, Prakash (2022) showed that employee retention denotes an organization's capability to maintain its workforce. Effective human resources are essential for the proper functioning of any organization. To secure workforce stability, top management must implement measures to create a pleasant and appealing workplace.

There are many factors that affect employee retention that can be reviewed as follows (Tambajong, Saerang & Pandow, 2018; Harika & Bindu, 2020):

- **Employee Performance**: The primary factor affecting employee retention is employee performance.
- **Employee Engagement**: Employee engagement is another significant factor impacting employee retention.
- **Employee Productivity**: Employee productivity serves as a key determinant of employee retention.
- **Motivation**: Motivation plays a crucial role in influencing employee retention.
- **Trust in Your Employees**: It's crucial for employers to trust their employees. During the hiring process, HR managers must assess the commitment of potential employees to the organization and believe that they are capable of fulfilling specific tasks and handling challenges in the workplace.
- **Empowering Employees**: Employers should promote and support employees in undertaking both mandated and voluntary tasks. To attain organizational objectives, companies employ various HR practices that directly impact the individual, procedural, and contextual aspects of job performance.
- **Efficient Communication**: Success in any organization or business is contingent upon two critical factors: optimal cash flow and effective information flow.
- **Maintain High Morale**: Employee morale refers to the overall attitude, satisfaction, and outlook of employees within the organization.
- **Cultivate a Positive Work Environment**: A vital retention strategy that encourages employees to stay with the organization is fostering a positive and supportive workplace atmosphere.

George, George, and Martin (2023) showed that ChatGPT has many potential opportunities for the organization as a whole, ChatGPT provides the following opportunities:

Healthcare: ChatGPT can serve as a valuable tool in patient engagement, providing round-the-clock assistance and guidance.

Finance: AI has indeed brought about a paradigm shift in the finance sector. Its ability to automate tasks like fraud detection and risk analysis has significantly bolstered security measures. ChatGPT's function in providing customer support and personalized financial guidance greatly enhances user experiences.

Retail and E-commerce: The integration of ChatGPT in virtual shopping assistants and customer service platforms is improving interactions and raising revenue.

Education: ChatGPT's conversational abilities can augment student support by delivering immediate assistance along with customized educational content.

Human Resources: ChatGPT can assist in constructing conversational agents that provide career advice, address HR inquiries, and administer employee surveys, and therefore optimizing HR operations and improving employee experiences.

Customer Service: ChatGPT's powerful conversational capabilities facilitate the management of complicated issues, reducing the burden on human customer service professionals and assuring prompt resolution of customer concerns.

Media and Content Creation: ChatGPT has been utilized in content generation across multiple platforms. From producing news pieces to composing social media content. ChatGPT's linguistic abilities enable content developers to provide varied and striking materials with efficiency.

Furthermore, Lozie et al. (2024) emphasized that ChatGPT offers numerous benefits for employees inside the workplace, including familiarity with and utilization of ChatGPT, raised motivation, enhanced efficiency, interactions with supervisors and management, job satisfaction, and higher morale. likewise, Iswahyudi et al. (2023) concluded that ChatGPT is a crucial tool for enhancing managerial and employee performance in the workplace. Their findings indicated that adopting ChatGPT as a decision-support instrument in human resource management offers considerable potential for improving the efficiency, effectiveness, and transparency of HR procedures. Artificial intelligence models such as ChatGPT can work as virtual assistants, supplying text-based assistance in diverse HR activities including recruitment, employee development, performance management, and support processes. By collecting pertinent data and insights regarding employees and the workplace, ChatGPT empowers HR managers to make better-informed decisions.

Consequently, in the domain of personnel selection, ChatGPT shows potential in aiding managers by evaluating interview assessments or questionnaires to assess candidates' mindsets and perceptions. Understanding attitudes can facilitate the identification of personality characteristics and cultural compatibility with the organization's values. This approach can result in

recruiting individuals who demonstrate greater emotional compatibility with the organizational environment, thereby improving both employee retention and productivity (Suriani et al., 2023).

Based on the previous review of the literature, it could be concluded that ChatGPT provides several advantages that could enhance the employee retention process in the organization. ChatGPT provides the ability to increase the motivation of employees in the organization, accordingly, ChatGPT enhances retention through motivation. In addition, ChatGPT improves the management processes and HR practices regarding employee retention.

To address this research gap, this study came to:

1. Assess the perceived effectiveness of ChatGPT as a recommendation tool for employee retention in the Omani public sector.
2. Identify and analyze the key limitations associated with using ChatGPT for employee retention purposes in the Omani public sector.
3. Examine whether statistically significant differences exist in participants' responses regarding the effectiveness and limitations of ChatGPT, based on gender, job position, and years of experience.

3. Research Methodology

3.1. Research Design

The potential efficacy and limits of ChatGPT as a suggestion tool for staff retention in the Omani public sector are investigated in this study using a quantitative research approach applying a descriptive research design. According to Drewish (2018), the descriptive research design is a methodical technique to examining and evaluating current occurrences within a specific population, location, and timeframe. By collecting empirical data and using statistical analysis to provide significant findings, this methodology makes it easier to conduct a thorough investigation of the research variables. The choice of the current study's approach was informed by the research questions and justified by the research objective to assess perceptions, trends, and potential implications of AI-based tools in workforce management. Figure 1 depicts the current research flow and procedures.

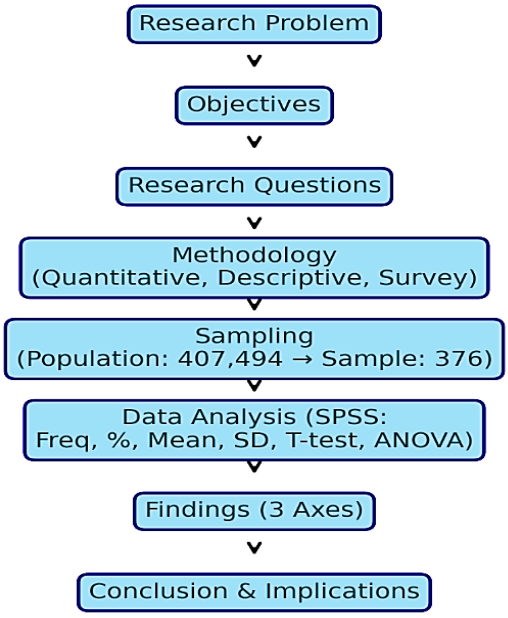

Figure 1. The Research Flowchart

3.2. Study Population and Sample

According to the most recent statistics data from the National Center for Statistics and Information (2024), the target population for this study is all administrators and employees in the Omani public sector, which comes to 407,494 employees. A simple random sampling technique was used to guarantee the representativeness and generalisability of the results since surveying the entire population would be impossible.

This study's sample size was determined using the Richard Geiger equation, which is frequently used for calculating representative sample size in large populations under given confidence intervals and margins of error. It was used to establish the sample size. The equation is expressed as follows:

$$n = \frac{\left(\frac{Z}{d}\right)^2 * (P)^2}{1 + \frac{1}{N}\left[\left(\frac{Z}{d}\right)^2 * (P)^2 - 1\right]} = \frac{\left(\frac{1.96}{0.05}\right)^2 * (0.50)^2}{1 + \frac{1}{407494}\left[\left(\frac{1.96}{0.05}\right)^2 * (0.50)^2 - 1\right]} = 383.79 \approx 384$$

The formula can be explained as follows:
N: Represents the population size, which equals (407494).
Z: Represents the standard score corresponding to a 95% confidence level, equal to (1.96).
d: Represents the acceptable level of error for a 95% confidence level, equal to (0.05).
P: Represents the coefficient of variation among the population's elements, equal to (0.5).

After distributing the questionnaires, the number of valid samples for statistical analysis was reduced to 376, accounting for 97.9% of the total, as some questionnaires had incomplete responses or were unsuitable for statistical analysis.

3.2.1 Characteristics of the study sample

The frequencies and percentages of general information for the study sample members, represented by demographic variables including gender, years of experience, and job position, were calculated as in Table 1.

Table 1. Study Sample Characteristics

Gender	**Frequencies**	**Percentages**
Male	228	60.6%
Female	148	39.4%
Total	**376**	**100%**
Years of Experience	**Frequencies**	**Percentages**
Less than 5 years	87	23.1%
From 5 to less than 10 years	162	43.1%
10 Years and above	127	33.8%
Total	**376**	100%
Job Position	**Frequencies**	**Percentages**
Employee	247	65.7%
Administrator	129	34.3%
Total	**376**	**100%**

According to Table 1, the study sample exhibited a gender distribution where males constituted 60.6%, while females accounted for 39.4%. In terms of years of experience, the highest percentage was 43.1% for those with 5 to less than 10 years, followed by 33.8% for individuals with 10 years and above, and the lowest percentage of 23.1% for those with less than 5 years. Regarding job position, 65.7% of the sample members were employees, whereas administrators represented the lowest percentage at 34.3%. Moreover, the tabulated data of study sample characteristics are visualized in Figure 2.

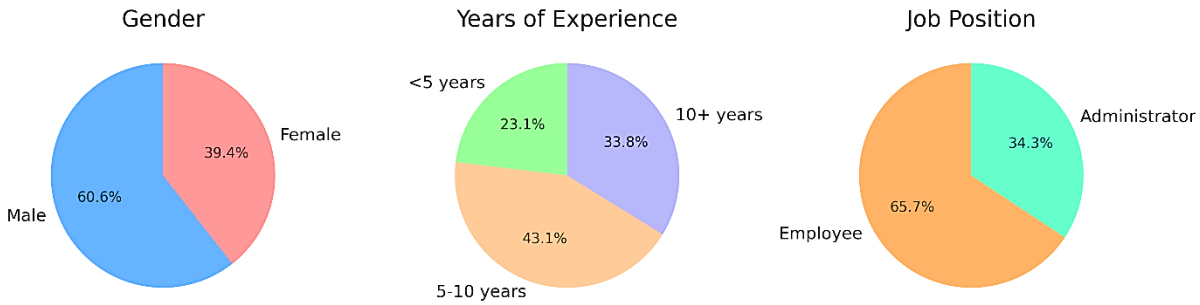

Figure 2. Study Sample Characteristics

3.3. Data Collection Instruments

The researchers built a questionnaire to investigate the potential effectiveness and limitations of using CHATGPT as a recommendation tool for employee retention purposes in the Omani public sector. A five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) was employed to evaluate the study tool, assigning scores of 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, and 5 for Strongly Agree.

The validity and reliability were confirmed through many ways, including the assessment by arbitrators, who evaluated the linguistic structure, clarity, and relevance of the statements in the questionnaire. Some statements in the questionnaire were removed, while others were rephrased as reported by over 80% of the arbitrators. Consequently, the finalised questionnaire, following arbitration, had thirty-five statements categorized into three axes: potential effecctiveness, possible limitations and affective factors.

The internal consistency reliability of the questionnaire's axes was assessed using a pilot sample of 30 individuals. This reliability was determined by calculating the Pearson correlation coefficient between the scores of each statement and the total score of the corresponding axis in the questionnaire. The results indicated high values, ranging from 0.729** to 0.877**, which were statistically significant at the 0.01 significance level. The overall construct validity of the questionnaire's dimensions was confirmed by calculating the correlation coefficients between the dimensions and the total score, all of which were statistically significant at the 0.01 level. The Cronbach's alpha reliability coefficients were computed for both the questionnaire axes and the overall score, yielding coefficients between 0.788 and 0.868. The reliability coefficients demonstrated the questionnaire's validity for application and the dependability of its results.

3.4. Data Analysis Tools

In accordance with the study's nature and the research's objectives, the data were analysed utilising the Statistical Package for the Social Sciences (SPSS), and the findings were derived by the following statistical methods: Frequencies and Percentages, Means and Standard Deviations, Pearson Correlation Coefficient, Cronbach's Alpha Coefficient, T-test, and One-Way ANOVA (Analysis of Variance).

4. Results & Findings

The current study results and main findings are presented and analysed in relation to the various dimensions of three main axes: potential effectiveness of using ChatGPT, possible limitations of using ChatGPT, and factors affecting perspectives.

4.1 First Axis Findings: Potential Effectiveness of ChatGPT in Employee Retention

To answer the first RQ, "*What is the perceived effectiveness of ChatGPT as a recommendation tool for employee retention in the Omani public sector?*", frequencies, percentages, means, and standard deviations were calculated for the dimensions of the first axis: Potential Effectiveness of Using ChatGPT. Then, these dimensions were arranged in descending order according to the mean of each dimension, as shown in Table 2.

Table 2. First Axis: Potential Effectiveness of Using ChatGPT

No.	Dimensions	Mean	SD	Response degree	Rank
1	The First Dimension: Developing Personalized Career Paths	3.16	.629	Moderate	2
2	The Second Dimension: Identifying Turnover Risk Factors	2.94	.653	Moderate	3
3	The Third Dimension: Designing Effective Reward Mechanisms	3.37	.922	Moderate	1
4	The Fourth Dimension: Providing Accessibility & Availability	2.86	.740	Moderate	4
Overall		3.08	.515	Moderate	

The data I Table 2 indicated that the overall mean for the dimensions of the first axis: Potential Effectiveness of Using ChatGPT, came with a mean of (3.08), a standard deviation of (0.515), and a (moderate) response degree. The fair answer regarding the first axis, Potential Effectiveness of Using ChatGPT, can be attributed to ChatGPT's training on extensive broad data, which lacks particular information identifying individual abilities, experiences, and interests. This results in an incomplete comprehension of the job context, including varying job needs, organizational cultures, and prospects for professional growth. This article investigated future trends and opportunities by taking into account the expanding role of AI in strategic HR planning, as well as anticipated technical developments. Adopting these technologies can lead to higher employee satisfaction, lower turnover costs, and a more stable staff.

Below is a detailed presentation for the dimensions of the first axis: Potential Effectiveness of Using ChatGPT, with further elaboration as follows.

4.1.2 Potential First Dimension: Developing Personalized Career Paths

Frequencies, percentages, means, and standard deviations were calculated for the statements of the first dimension: Developing Personalized Career Paths. Subsequently, these statements were arranged in descending order according to the mean of each statement, as shown in Table 3.

Table 3. Potential First Dimension: Developing Personalized Career Paths

No.	Statements	Mean	SD	Rank	Response degree
1	ChatGPT can conduct interviews with employees to gain insights into their unique career motivations.	3.34	1.572	2	Moderate
2	ChatGPT can create individualized development plans for each employee.	2.88	1.418	5	Moderate
3	ChatGPT can provide employees with ways to achieve better work-life balance.	3.07	1.404	3	Moderate
4	ChatGPT depends on natural language processing to analyze employee feedback.	3.53	1.509	1	High
5	Personalized experiences help address the problems of each employee.	2.95	1.362	4	Moderate
Overall		3.16	.629	Moderate	

Table 3 results indicated that the overall mean for the first dimension, developing personalized career paths, came with a mean of (3.16) a standard deviation of (0.629), and with a (moderate) response degree. The reason why the first dimension, "Developing Personalized Career Paths," obtained a (moderate) response degree can be attributed to the fact that ChatGPT analyzes text and

data but may not accurately understand an individual's unique abilities, such as emotional intelligence, creativity, and problem-solving skills. In addition, effective career path development requires comprehensive personal information about the individual, including goals, interests, educational background, and work experiences, which ChatGPT may not have access to, limiting its ability to provide useful and tailored advice. This is similar to Parveen and Alkudsi's (2024) study, they indicated that ChatGPT can offer them opportunities to obtain real-world experience and exposure to AI-driven businesses, thus improving their learning and future career possibilities.

4.1.3 Potential Second Dimension: Identifying Turnover Risk Factors

Frequencies, percentages, means, and standard deviations were calculated for the statements of the second dimension: Identifying Turnover Risk Factors, and then these statements were arranged in descending order according to the mean for each statement, and Table 4 shows the results.

Table 4. Potential Second Dimension: Identifying Turnover Risk Factors

No.	Statements	Mean	SD	Rank	Response degree
6	ChatGPT can detect dissatisfaction with career development opportunities or organizational conflicts.	2.66	1.273	5	Moderate
7	ChatGPT can gather qualitative and quantitative data about employees to identify those with high-risk factors	3.27	1.507	1	Moderate
8	ChatGPT can analyze data for pain points that could indicate increased turnover risk.	2.74	1.375	4	Moderate
9	Leaders may provide ChatGPT with employees' data to monitor changes in attitudes and behaviors.	3.16	1.536	2	Moderate
10	ChatGPT may aggregate its findings into a complete report emphasizing employees with turnover risk factors.	2.85	1.492	3	Moderate
Overall		2.94	.653	Moderate	

As shown in Table 4, it was informed that the overall mean for the second dimension, "Identifying Turnover Risk Factors," came with a mean of (2.94) with a standard deviation of (0.653) and a (moderate response degree. The reason why the second dimension, "Identifying Turnover Risk Factors," obtained a (moderate) response degree can be attributed to the complexity of discerning turnover risk factors, which requires a deep understanding of the psychological, social, and economic factors influencing employee behaviours, which ChatGPT may not accurately comprehend, resulting in unreliable outcomes. In addition, Hülter, Ertel, and Heidemann (2024) showed that Chat GPT is a single predictor that affects employee turnover prediction (strong, positive/negative contribution) on average, considering all employees.

4.1.4 Potential Third Dimension: Designing Effective Reward Mechanisms

Frequencies, percentages, means, and standard deviations were calculated for the statements of the third dimension: Designing Effective Reward Mechanisms, and then these statements were arranged in descending order according to the mean for each statement, as tabulated in Table 5.

Table 5. Potential Third Dimension: Designing Effective Reward Mechanisms

No.	Statements	Mean	SD	Rank	Response degree
11	ChatGPT assesses current employee recognition and incentive programs to identify any strengths or flaws.	3.74	1.507	1	High
12	ChatGPT may perform a survey for employees to learn their preferences for various award methods.	3.06	1.396	5	Moderate
13	ChatGPT can create a scalable system for providing individualized incentives based on performance.	3.25	1.520	3	Moderate
14	ChatGPT can help implement new incentive schemes for rewarding distinguished employees.	3.18	1.594	4	Moderate
15	ChatGPT's analytical skills enable leaders to develop incentive schemes that are data-driven and employee-centric.	3.62	1.501	2	High
Overall		3.37	.922	Moderate	

The results pertinent to the third dimension, shown in Table 5, indicated that the overall mean for the third dimension, "Designing Effective Reward Mechanisms," was (3.37), with a standard deviation of (0.922), and a (moderate) response degree.

The reason why the third dimension, "Designing Effective Reward Mechanisms," obtained a (moderate) response degree can be attributed to the fact that ChatGPT lacks effective punitive mechanisms to deal with undesirable behaviour. This means it may not learn to avoid generating harmful or offensive text, and it might be challenging to accurately determine rewards that reflect the quality of the text because text quality is inherently subjective and depends on the context.

4.1.5 Potential Fourth Dimension: Providing Accessibility & Availability

The frequencies, percentages, means, and standard deviations for the statements of the fourth dimension: Providing Accessibility & Availability have been calculated. These statements were then arranged in descending order according to the mean for each statement, as shown in Table 6.

Table 6. Potential Fourth Dimension: Providing Accessibility & Availability

No.	Statements	Mean	SD	Rank	Response degree
16	ChatGPT's availability and accessibility make it a highly valuable tool for supporting employee retention efforts.	2.71	1.363	4	Moderate
17	ChatGPT allows for on-demand access to resources and answers, boosting employee satisfaction.	3.04	1.519	1	Moderate
18	ChatGPT interacts with each employee in a consistent, unbiased manner, avoiding the potential for favoritism	2.63	1.352	5	Moderate
19	ChatGPT can reduce the workload of human employees by automating some HR and management duties.	3.01	1.497	2	Moderate
20	ChatGPT language is continually updated to deliver more detailed and relevant information over time.	2.92	1.422	3	Moderate

No.	Statements	Mean	SD	Rank	Response degree
Overall		2.86	.740	Moderate	

Data in Table 6 indicated that the overall mean for the fourth dimension, Providing Accessibility & Availability, came with a mean of (2.86), a standard deviation of (.740), and a (moderate) response degree. The reason why the fourth dimension, Providing Accessibility & Availability, obtained a (moderate) response degree, can be attributed to the fact that ChatGPT is considered a large language model that requires a vast number of computational resources to operate, making it difficult to ensure constant and reliable accessibility, especially for users who lack access to strong infrastructure. In addition, increased demand may lead to periods of stagnation or service interruptions, potentially impacting the user experience.

To sum up, the main findings for the first axis are briefed in Figure 3.

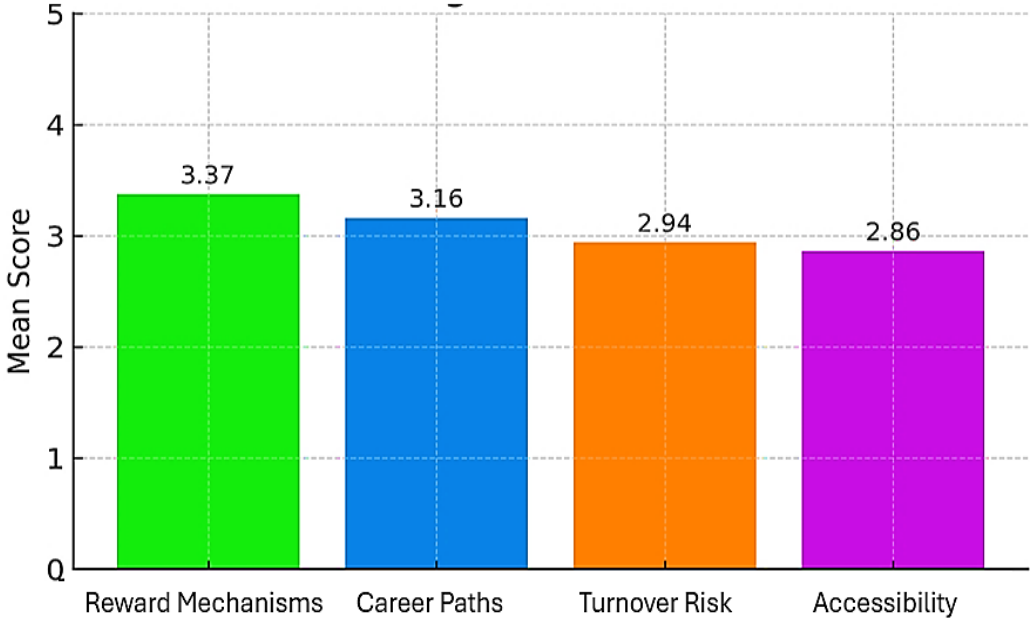

Figure 3. Potential Effectiveness

4.2 Second Axis Findings: Possible Limitations of Using ChatGPT in Employee Retention

To answer the second RQ, "*What are the key limitations associated with using ChatGPT as a recommendation tool for employee retention in the Omani public sector?*", frequencies, percentages, means, and standard deviations for the dimensions of the second axis, Possible Limitations of Using ChatGPT, have been calculated. These dimensions are then arranged in descending order according to the mean for each dimension, as shown Table 7.

Table 7. Second Axis: Possible Limitations of Using ChatGPT

No.	Dimensions	Mean	SD	Response degree	Rank
1	The First Dimension: Lack of Contextual Understanding	4.18	.663	1	High
2	The Second Dimension: Privacy and Security Concerns	3.24	.956	3	Moderate
3	The Third Dimension: Lack of Emotional Intelligence	4.07	.705	2	High
Overall		3.83	.592	High	

Table 7 indicated that the overall mean for the dimensions of the second axis, possible limitations of using ChatGPT, obtained a mean of (3.83), a standard deviation of (.592), and (high) response degree. The reason why the second axis, Possible Limitations of Using ChatGPT, obtained a (high) response degree can be attributed to the possibility of using ChatGPT to generate harmful content such as hate speech, misinformation, and propaganda, alongside its ability to gather a large amount of user data, raises concerns about privacy as it could be vulnerable to hacking, leading to data theft or the dissemination of harmful content. This is similar to the George, George, and Martin (2023) study, which indicated that concerns regarding employment displacement, ethics, data privacy, and security are significant ChatGPT limitations. In the following section, the second axis dimensions are addressed in more details.

4.2.1 Limitations First Dimension: Lack of Contextual Understanding

The frequencies, percentages, means, and standard deviations were calculated for the first-dimension statements, Lack of Contextual Understanding. These phrases were then arranged in descending order according to their arithmetic mean.

Table 8. Limitations First dimension: Lack of Contextual Understanding

No.	Statements	Mean	SD	Rank	Response degree
21	ChatGPT may struggle to fully grasp the complexities of the organization's culture.	4.48	1.098	1	Very High
22	ChatGPT may be unable to handle complex employee concerns.	3.86	1.479	5	High
23	ChatGPT may be unable to provide truly tailored, contextual recommendations.	4.24	1.253	3	Very High
24	ChatGPT may misinterpret the intent of an employee's communication which leads to inaccurate responses.	3.97	1.372	4	High
25	The lack of empathetic support may further frustrate employees and can lead to turnover intention.	4.36	1.182	2	Very High
Overall		4.18	.663	High	

Table 8 shows that the overall mean for the first dimension, Lack of Contextual Understanding, came with a mean of (4.18), a standard deviation of (0.663), and a (high) response degree. The (high) response degree for the first dimension, lack of contextual understanding, can be attributed to ChatGPT's reliance on large language models trained on massive amounts of textual data. While these models have the ability to create rich and engaging text, they may struggle to understand the precise context of the text, especially in complex or ambiguous cases. Additionally, these large language models lack realistic and global knowledge, which can lead to the generation of inaccurate or inconsistent texts. This is similar to Whalen and Mouza (2023). They indicated that ChatGPT is intended to generate writing that appears genuine, although much of the information it delivers is made up. Users are frequently unaware that ChatGPT is not an Internet search engine, reference librarian, or even Wikipedia; it is not intended to provide real information. Instead, it is designed to forecast which words work best together to produce plausible-sounding writing. As a result, some educators and content experts have already discovered faults in the mathematical and scientific data ChatGPT generated.

4.2.2 Limitations Second Dimension: Privacy and Security Concerns

Frequencies, percentages, means, and standard deviations for the statements of the second dimension, Privacy and Security Concerns, were calculated. These statements were then arranged in descending order according to their mean.

Table 9. Limitations Second Dimension: Privacy and Security Concerns

No.	Statements	Mean	SD	Rank	Response degree
26	Employees may be hesitant to share personal or confidential information with an AI system.	3.45	1.572	2	High
27	ChatGPT data processing and storage mechanisms may not be fully transparent to employees and employers.	3.03	1.536	4	Moderate
28	ChatGPT could be vulnerable to cyber threats or data breaches.	3.58	1.502	1	High
29	Once employee data is shared with ChatGPT, organizations may have limited control over how they are used.	2.96	1.492	5	Moderate
30	There may be strict data privacy regulations that govern the handling of employee data.	3.19	1.536	3	Moderate
Overall		3.24	.956	Moderate	

Table 9 indicated that the overall mean for the second dimension, Privacy and Security Concerns, came with a mean of (3.24), a standard deviation of (.956) and a (moderate) response degree. The (moderate) response degree for the second dimension, Privacy and Security Concerns, can be attributed to ChatGPT's reliance on a massive amount of text data and programming instructions for training, raising concerns about the privacy of the data used in the training process. This includes questions about how this data is collected, where it comes from, what guarantees are in place to prevent misuse or leakage of this data, and who owns and controls this data.

4.2.3 Limitations Third Dimension: Lack of Emotional Intelligence

Frequencies, percentages, means, and standard deviations were calculated for the statements of the third dimension: Lack of Emotional Intelligence, and then these statements were arranged in descending order according to the mean of each statement, as depicted in Table 10.

Table 10. Limitations Third Dimension: Lack of Emotional Intelligence

No.	Statements	Mean	SD	Rank	Response degree
31	ChatGPT cannot deeply comprehend the complex emotional drivers and personal circumstances.	4.23	1.291	2	Very High
32	Employees may suffer from professional challenges that require a level of emotional support that ChatGPT is not capable of providing.	3.93	1.425	4	High
33	Employees may be hesitant to share their true thoughts and feelings with a chatbot, which limits the effectiveness of any retention initiatives.	4.33	1.144	1	Very High
34	Scripted responses from an AI could be insensitive, which further alienates employees.	3.72	1.556	5	High

No.	Statements	Mean	SD	Rank	Response degree
35	ChatGPT impersonal responses fail to address the root causes of employee dissatisfaction or disengagement.	4.16	1.410	3	High
Overall		4.07	.705	High	

Table 10 shows that the overall mean for the third dimension, Lack of Emotional Intelligence, obtained a mean of (4.07), a standard deviation of (0.705) and a high response degree. In the first rank came statement no. (33), "Employees may be hesitant to share their true thoughts and feelings with a chatbot, which limits the effectiveness of any retention initiatives," with a mean of (4.33), a standard deviation of (1.1440, and a (very high) response degree. The (high) response degree for the third dimension's lack of emotional intelligence can be attributed to ChatGPT's reliance on a large language model trained on a massive amount of textual data. While the model demonstrates excellent ability to generate human-like text, it lacks the capacity to fully understand complex human emotions and social contexts. This limitation may lead to misunderstandings or inappropriate outcomes, as ChatGPT may not have the ability to empathize with users or understand their feelings.

To summarize, the following Figure 4 sheds light on the second axis main findings.

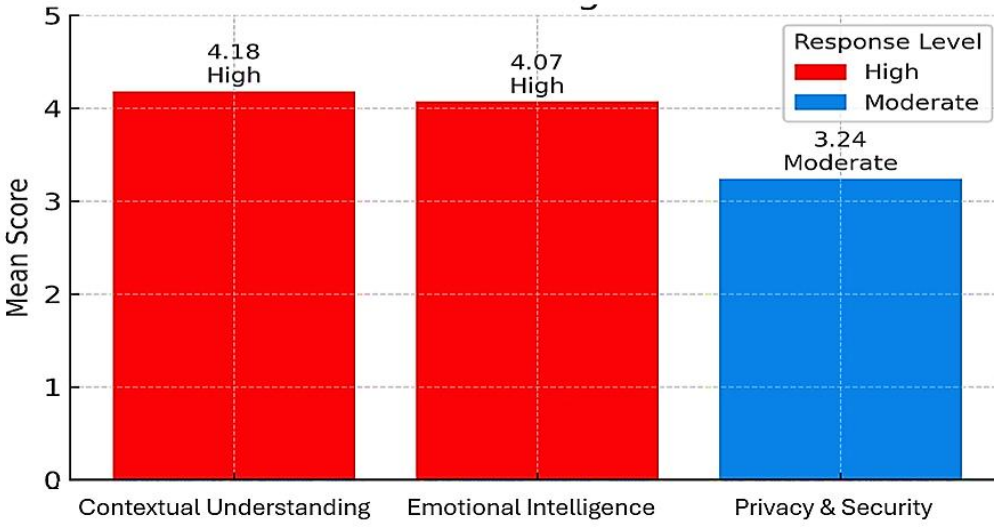

Figure 4. Limitations

4.3 Third Axis Findings: Possible Factors Affecting Perspectives

Attributed to the study variables marked as affective factors, gender, job position, and years of experience have been tested to measure how far they could influence the results of this study regarding potential and limitations.

This section presents and interprets the results that help answer the third RQ, which is, "*To what extent do gender, job position, and years of experience influence the perceived effectiveness and limitations of ChatGPT as a recommendation tool for employee retention*?".

To answer this question, the T-test and One-Way Anova were used as follows:

- ***Potential Affective Factor 1: Gender Variable***

The T-test was used to identify statistical differences according to the gender variable as follows:

Table 11. Potential Affective Factor 1: Gender Variable

Dimension	Gender	No.	Mean	SD	(T) value	df	Level of significance	Sig
The First Dimension: Developing Personalized Career Paths	Male	228	3.15	.606	.223	374	.823	Not Sig
	Female	148	3.16	.667				
The Second Dimension: Identifying Turnover Risk Factors	Male	228	2.93	.648	.033	374	.874	Not Sig
	Female	148	2.94	.664				
The Third Dimension: Designing Effective Reward Mechanisms	Male	228	3.34	.935	.885	374	.377	Not Sig
	Female	148	3.42	.901				
The Fourth Dimension: Providing Accessibility & Availability	Male	228	2.84	.676	.900	374	.368	Not Sig
	Female	148	2.91	.829				
Overall	Male	228	3.06	.479	-.798	374	.425	Not Sig
	Female	148	3.11	.566				

Table 11 indicated that there were no statistically significant differences at the significance level of (0.05) between the average scores of the study sample members regarding the potential effectiveness of using ChatGPT attributed to the Gender variable in each of the following dimensions: the first dimension: developing personalized career paths, the second dimension: identifying turnover risk factors, the third dimension: designing effective reward mechanisms, the fourth dimension: providing accessibility & availability, and the overall potential effectiveness of using ChatGPT.

This can be attributed to the fact that the primary functions of ChatGPT lie in focusing on language processing and text generation, such as translation, creative writing, and answering questions. These functions are not inherently gender-specific, meaning that ChatGPT can perform them with the same effectiveness regardless of the user's gender.

- ***Potential Affective Factor 2: Job Position Variable***

To detect any statistical differences according to the variable of Job Position, the T-test was calculated, and the results are tabulated in Table 12.

Table 12. Potential Affective Factor 2: Job Position variable

Dimension	Job Position	No.	Mean	SD	(T) value	df	Level of significance	Sig
The First Dimension: Developing Personalized Career Paths	Employee	247	3.18	.608	1.088	374	.277	Not Sig
	Administrator	129	3.11	.669				
	Employee	247	2.94	.607	.403	374	.687	Not Sig

Dimension	Job Position	No.	Mean	SD	(T) value	df	Level of significance	Sig
The Second Dimension: Identifying Turnover Risk Factors	Administrator	129	2.92	.736				
The Third Dimension: Designing Effective Reward Mechanisms	Employee	247	3.41	.915	1.206	374	.228	Not Sig
	Administrator	129	3.29	.932				
The Fourth Dimension: Providing Accessibility & Availability	Employee	247	2.89	.716	.895	374	.371	Not Sig
	Administrator	129	2.82	.783				
Overall	Employee	247	3.11	.482	1.323	374	.187	Not Sig
	Administrator	129	3.03	.572				

Table 12 indicates that the average scores of the study sample participants regarding the possible efficacy of utilising ChatGPT attributed to the job position variable did not differ statistically significantly at the significance level of 0.05 in each of the following dimensions; the development of individualised career pathways in the first dimension, the identification of risk factors for turnover in the second dimension, the design of efficient reward mechanisms in the third dimension, the provision of accessibility and availability, and the overall potential efficacy of ChatGPT in the fourth dimension.

These results can be attributed to ChatGPT's general language processing and comprehension capabilities, which allow it to execute a variety of activities independent of the users' job nature.

Additionally, ChatGPT has been developed, so people with different degrees of technical proficiency can utilize it.

- ***Potential Affective Factor 3: Years of Experience variable***

To find statistical differences based on the years of experience variable, a one-way ANOVA was carried out. Table 3 shows the findings of the One-Way ANOVA analysis used to determine how the Years of Experience variable affected the study sample's answers about the possible efficacy of using ChatGPT, as tabulated in Table 13.

Table 13. Potential Affective Factor 3: Years of Experience Variable

Dimension	Source of variance	Sum of squares	df	Square mean	F (value)	Significance
The First Dimension: Developing Personalized Career Paths	Between groups	.390	2	.195	.491	.612
	Within groups	148.197	373	.397		
	Total	148.587	375	-----		
The Second Dimension: Identifying	Between groups	1.690	2	.845	1.990	.138
	Within groups	158.327	373	.424		
	Total	160.017	375	-----		

Dimension	Source of variance	Sum of squares	df	Square mean	F (value)	Significance
Turnover Risk Factors						
The Third Dimension: Designing Effective Reward Mechanisms	Between groups	1.195	2	.597	.702	.496
	Within groups	317.244	373	.851		
	Total	318.438	375	-----		
The Fourth Dimension: Providing Accessibility & Availability	Between groups	1.866	2	.933	1.712	.182
	Within groups	203.292	373	.545		
	Total	205.159	375	-----		
Overall	Between groups	.327	2	.163	.614	.541
	Within groups	99.124	373	.266		
	Total	99.451	375	-----		

Table 13 shows that there were no statistically significant differences at the significance level of (0.05) between the average scores of the study sample individuals regarding the potential effectiveness of using ChatGPT for the variable Years of Experience in each of the following dimensions: the first dimension: developing personalized career paths, the second dimension: identifying turnover risk factors, the third dimension: designing effective reward mechanisms, the fourth dimension: providing accessibility & availability, and the Overall potential effectiveness of using ChatGPT.

Apparently, the results in Table 13 are due to ChatGPT's convenient user's interface, which makes it simple to use and learn regardless of user experience level. Furthermore, ChatGPT is a helpful tool for users with different levels of experience because it provides a wide variety of functions, from text generation to translation.
The T-test and One Way Anova were employed to identify if there are statistically significant variations in the study sample's replies regarding the possible limitations of using ChatGPT attributed to the study variables (gender – job position – years of experience), the T-test and One Way Anova, as in the following section.

- ***Limitations Affective Factor 1: Gender Variable***

The T-test was used to identify statistical differences according to the gender variable as follows:

Table 14. Limitations Affective Factor 1: Gender Variable

Dimension	Gender	No.	Mean	SD	(T) value	df	Level of significance	Sig
The First Dimension: Lack of Contextual Understanding	Male	228	4.16	.676	.629	374	.530	Not Significant
	Female	148	4.21	.643				
The Second Dimension: Privacy and Security Concerns	Male	228	3.20	.895	1.063	374	.288	Not Significant
	Female	148	3.31	1.042				
The Third Dimension: Lack of Emotional Intelligence	Male	228	4.09	.703	.536	374	.592	Not Significant
	Female	148	4.05	.710				
Overall	Male	228	3.82	.576	.593	374	.553	Not Significant
	Female	148	3.85	.617				

Table 14 indicated that there were no statistically significant differences at the significance level of (0.05) between the average scores of the study sample regarding the possible limitations of using ChatGPT attributed to the gender variable in each of the dimensions: Lack of Contextual Understanding, Privacy and Security Concerns, Lack of Emotional Intelligence, and Overall possible limitations of using ChatGPT.

This can be attributed to the fact that the potential limitations of using ChatGPT do not depend on the gender of the user, as ChatGPT is designed as a general language model, not specifically tailored to any gender.

- ***Limitations Affective Factor 2: Job Position Variable***

A t-test was utilized to identify statistical differences according to the Job Position variable as follows:

Table 15. Limitations Affective Factor 2: Job Position Variable

Dimension	Job Position	No.	Mean	SD	(T) value	df	Level of significance	Sig
The First Dimension: Lack of Contextual Understanding	Employee	247	4.17	.676	.360	374	.719	Not Significant
	Administrator	129	4.20	.641				
The Second Dimension: Privacy and Security Concerns	Employee	247	3.30	.953	1.635	374	.103	Not Significant
	Administrator	129	3.13	.955				
The Third Dimension: Lack of Emotional Intelligence	Employee	247	4.11	.670	1.358	374	.175	Not Significant
	Administrator	129	4.00	.765				
Overall	Employee	247	3.86	.591	1.283	374	.200	Not Significant
	Administrator	129	3.78	.593				

Table 15 indicated that there were no statistically significant differences at the significance level (0.05) between the average scores of the study sample individuals regarding the possible limitations of using ChatGPT attributed to the Job Position variable in each of the following dimensions: The First Dimension: Lack of Contextual Understanding, The Second Dimension: Privacy and Security Concerns, The Third Dimension: Lack of Emotional Intelligence, and Overall potential limitations of using ChatGPT.

This can be attributed to the fact that artificial intelligence, like ChatGPT, is a tool with specific capabilities and limitations, regardless of the user's job nature. These limitations will remain present.

- ***Limitations Affective Factor 3: Years of Experience Variable***

One-way ANOVA was used to identify statistical differences according to the Years of Experience variable. The following table presents these results:

Table 16. Limitations Affective Factor 3: Years of Experience Variable

Dimension	Source of variance	Sum of squares	df	Square mean	F (value)	Sig
The First Dimension: Lack of Contextual Understanding	Between groups	1.803	2	.901	2.062	.129
	Within groups	163.067	373	.437		
	Total	164.870	375	-----		
	Between groups	1.696	2	.848	.928	.396

Dimension	Source of variance	Sum of squares	df	Square mean	F (value)	Sig
The Second Dimension: Privacy and Security Concerns	Within groups	340.926	373	.914		
	Total	342.622	375	-----		
The Third Dimension: Lack of Emotional Intelligence	Between groups	1.242	2	.621	1.251	.287
	Within groups	185.122	373	.496		
	Total	186.363	375	-----		
Overall	Between groups	.410	2	.205	.583	.559
	Within groups	131.012	373	.351		
	Total	131.422	375	-----		

Table 16 indicated that there were no statistically significant differences at the significance level (0.05) between the average scores of the study sample individuals regarding the possible limitations of using ChatGPT for the variable Years of Experience in each of the following dimensions: The First Dimension: Lack of Contextual Understanding, The Second Dimension: Privacy and Security Concerns, The Third Dimension: Lack of Emotional Intelligence, and Overall potential limitations of using ChatGPT.

This can be interpreted as ChatGPT being a large language model trained on a massive dataset of texts and code instructions. Therefore, its capabilities and abilities are determined by the nature of this data, regardless of the user's experience.

5. Discussion

The main objective of this research was to discover the possibilities of ChatGPT as an effective recommendation system for enhancing employee retention within Oman's public sector. Among the main findings regarding the possibilities of ChatGPT to develop reward systems was that AI-powered systems have the possibility to assist human resource practitioners in analyzing reward systems, identifying top performers, and recommending incentive programs founded on empirical findings. Yet, the system had limitations in its ability to precisely depict qualitative performance metrics along with underlying motivational aspects that are core in long-term employee retention initiatives. The limitation may be owed to its absence of sophisticated behavioral analysis functionalities. On a related note, the examination of its ability to recognize turnover risk-causing factors was found to be moderate, owing primarily to its deficiencies in real-time sentiment analysis, along with the detection of early signs of employee discontent. In particular, the dependability of ChatGPT as a constantly available human resources guidance system was called into question, as reflected in the relatively lower score with respect to the dimension of accessibility and availability, especially when dealing with complex, dynamic, or emergent human resources issues.

Various aspects of effectiveness are associated with the application of ChatGPT as a recommending instrument towards the support of employee retention outcomes. Alkudsi (2024) suggested that ChatGPT provides scope for practical experience and interaction with AI-based companies. The findings confirmed that ChatGPT is able to create individualized career pathways (George, George, and Martin, 2023), determine employee turnover causes (Raman, Venugopalan & Kamal, 2024), develop successful incentive programs, and deliver accessibility and availability. Each of these dimensions had moderate ratings. Potential drawbacks associated with the use of ChatGPT are the absence of contextual understanding (Božić & Poola, 2023), privacy and security issues (George, George, and Martin, 2023), and a deficiency of emotional intelligence (Suriani et al., 2023). The fact that it has a high response rate is due to the potential of ChatGPT for generating harmful content in the form of hate speech, misinformation, and propaganda. Additionally, its capacity to gather massive volumes of users' data raises serious privacy concerns, as the same could make the system vulnerable to cyberattacks and thereby result in data breaches or the dissemination of harmful content. This agrees with the results of George, George, and Martin (2023), who stated job displacement worries, ethics, data privacy, and security matters were crucial ChatGPT limitations. No statistically significant differences at the (0.05) significance level were found among the members of the study sample in their mean scores on the potential effectiveness of using ChatGPT because of the gender, job title, and years of experience factors.

Furthermore, there were no differences at the significance level of (0.05) in terms of mean scores of the study sample and the potential limitations of using ChatGPT under the influence of the variables of job title, gender, and years of experience. Briefly, the research revealed that although ChatGPT has a moderate level of utility, its application is particularly noteworthy in certain specialized domains, including the development of personalized career paths, recognizing indicators related to turnover risk, crafting compensation plans, and its overall ease of use. Nevertheless, there are still several key limitations to its efficacy as an independent

HRM tool, most significantly concerning contextual sensitiveness, privacy of data, security concerns, and emotional intelligence. These issues raise ethical concerns for confidentiality, risk from monitoring, and potential weaknesses in data. Moreover, the ability of ChatGPT to form interpersonally, quantify employee health, and engage in empathetic communication—elements that are crucial for effective HR retention strategies—is undermined by the fact that it lacks emotional intelligence.

6. Conclusion, Recommendation & Implications

In an attempt to understand the potential, limitations, and emotional aspects of using ChatGPT in Human Resource Management (HRM), the research findings arrive at the significant conclusion that ChatGPT functions effectively as a supporting tool rather than a full-fledged, independent solution, though it is able to assist in HR functions concerned with employee retention to a certain extent.

The technology's intrinsic limitations, even more so in relation to contextual understanding, data privacy protection, and emotional understanding, highlight the need for human supervision of AI-supported human resource management procedures. Statistical tests also indicated that demographic factors such as gender, role at work, or duration of professional experience did not play a notable role in shaping respondents' views on the strengths and weaknesses of ChatGPT. The universality of attitude across varied demographic segments, as evidenced by the sample used by the study, demonstrates a common appreciation of the benefits and also the intrinsic limitations of AI-enabled human resource solutions, independent of particular professional backgrounds. Based on the findings of this research, this study suggests giving a user-friendly interface that is appropriate for users with different levels of experience, creating extensive educational resources to familiarize users with the capabilities of ChatGPT, offering technical assistance to users who encounter problems using ChatGPT, collecting training data for ChatGPT from various sources, including actual human conversations from various cultures and societies, and incorporating emotional artificial intelligence techniques to allow ChatGPT to comprehend and respond accordingly to user emotions.

The applied implications of this study contribute significantly to the broader discussion about the regulation of artificial intelligence and the ethical use of AI in workforce management. Public sector organizations are advised to adopt a cautious and measured strategy in the use of AI, ensuring that this technology is used to support human decision-making in human resources and not replace it. In addition, the evolution of emotional artificial intelligence can help ChatGPT better understand and respond to employee emotions, thus establishing a more flexible and sensitive human resource ecosystem. Such findings provide a preliminary framework for the development of evidence-based AI governance frameworks, offering human resource executives and policymakers critical information to optimize the benefits of AI-augmented human resource management, while rigorously upholding organizational and ethical principles.

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Conflicts of Interest: The authors declare no conflict of interest.
ORCID iD (if any):

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