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UTILIZATION OF ARTIFICIAL INTELLIGENCE AS A VERITABLE TOOL FOR PSYCHOSOCIAL PREPAREDNESS IN THE MODERN AGE, PERCEPTION OF PRE-RETIREMENT EMPLOYEES OF FCDA ABUJA.

By

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ABSTRACT:

Retirement preparedness in modern times has shifted from just financial planning, which has dominated discussions on retirement preparedness over the years, to the psychosocial aspect of retirement preparedness. The decade is replete with remarkable improvements in every area of human development brought about by Artificial Intelligence. However, the perception of individuals has limited the acceptance and utilization of Artificial intelligence coupled with the incredulity associated with its application in their careers especially in their psychosocial preparation for new levels of their lives such as retirement from their workplaces.

This study sought to determine the perception of pre-retirees to the utilization of Artificial Intelligence as a tool in their retirement preparedness. This study explored and analyzed the participants' views, which were drawn from 87 pre-retirement employees of FCDA Abuja using a purposeful sampling technique. Oral interviews and printed-out questionnaires were used to collect data, 3 research questions and 3 hypotheses guided this study. Statistical analysis was applied using the chi-square to determine outcomes. The null hypothesis was tested at a 0.5 confidence level. The results showed that gender had no significant difference in perception and utilization of Artificial intelligence. It was discovered that the use of Artificial intelligence was more welcomed in cases where there was human assistance in the interface than where participants had to interact with the machines directly. Also, there was appreciable acceptance from their participants when Artificial Intelligence was viewed as a benefit other than a trait to their job security. It is pertinent to mention that participants strongly expressed concerns about data privacy, which may be attributed to nationwide cyber insecurity being experienced in the locality.

KEYWORDS:

- Artificial Intelligence
- Retirement
- Psychosocial
- Preparedness
- Acceptance
- Rejection

INTRODUCTION:

BACKGROUND OF THE STUDY

New inventions and innovations are often met with skepticism or no acceptance until such innovations are proven to ameliorate and augment some aspects of our existence.

It is globally acknowledged that Artificial Intelligence is an evolving technology in which Computer systems are programmed to perform tasks that only humans could hitherto accomplish. According to Emeritus Stanford Professor John McCarthy (1955), "Artificial Intelligence is the science and engineering of making intelligent machines". It is an evolving technology that tries to simulate human intelligence using machines. These include intellectual characteristics and problem-solving attributes. The inclusion of automation in our daily living has been gradually accepted, and we find individuals cut across every age and strata of society adhering to the acceptance of this new normal. Over the last decade, there has been a rapid proliferation of Artificial Intelligence in many organizations, as rightly pointed out by Bonson et al (2022). However, there seems to be a glitch and disconnect between the use of Artificial Intelligence as a tool for successful career achievements and the personalized use of Artificial Intelligence for daily living especially in issues concerning preparations for retirement.

Retirement is a process when employees planning decisions generally focus on the real exit of an individual from a career job, which he has held for almost all his active years accompanied by changes that include his psychosocial performance, social and interpersonal, cognitive and cultural part of him that determines his motivation, relationships, unconscious dynamics that may influence his temperament, his drive, energy and generally his performance in his meaningful daily life activities as cited by Titru et al (2019). In her work, Ghilarducci (2024) portrayed retirement as "taking a dignified off-ramp from working years". However, as employees transit from workers to retirees, there arises the need to examine the extent to which the use of this technology which simplifies livelihood is accepted or adopted as a tool for preparing for their new level. Also, Lifestyle and choices for retirement readiness should entail re-modeling life quality in the remaining years after retirement, which requires preparedness. Davidson (2024) described Artificial Intelligence as "a transformative technology that is reshaping how we approach retirement planning" but there is a need to examine the extent the AI technology has been adopted by those concerned.

Psychosocial according to the Oxford English Dictionary, 2012 means "About the influence of social factors on an individual's mind or behavior, and the interrelation of behavioral and social factors". Thus Psychosocial dimension/aspects of human performance are those social and interpersonal, cognitive and cultural parts of a person that determine his motivation, relationships, and unconscious dynamics that may influence his temperament, drive, energy, and generally his performance in his meaningful daily life activities as defined by the American Journal of Occupational Therapy (vol.58, issue 6).

Kath Woodward (2015) shows psychosocial as combining the personal and social elements of human behavior. It can also mean an individual's sense of self and agency. An individual's sense of self is influenced by the social, cultural, personal, Psychological, and Spiritual contexts in which these occupations occur as given by Ramsey (2004). More explicitly, Mosey (1996) defines Psychosocial as "About intrapersonal, interpersonal, and social experiences and interactions that influence occupational behavior and development. These are aspects of personality, temperament, energy, and drive for their daily life.

No doubt, Artificial Intelligence has the potential to significantly enhance psychosocial preparedness for employees as it offers personalized support and resources but understanding employee perception and addressing their concerns will be very vital, especially in aspects of their lives that can be enhanced with Artificial Intelligence tools or applications for retirement planning which include but not limited to finance planning, communication, investment planning and tracking, health management etc.

Globally, Artificial Intelligence utilization has been employed as an effective tool to reorder or alleviate the stress and anxiety associated with the transition from worker to retiree, more so as there is the need to maintain the individual's relevance in their social, acquisition, and professional lives. Skills influenced by Artificial Intelligence have proven to be the ladder to improve life expectancy, and response to situational and environmental changes that can directly support an individual's potential. Tools like speech recognition devices, multi-lingual translators even intelligent conversational computer systems and Emotional Intelligence tools such as facial recognition and expression interpreters are all assistants that will make life easier for their users.

STATEMENT OF THE PROBLEM

Artificial intelligence technology introduced many innovations, which have affected our daily lives and our mode of living. The use of intelligent devices has simplified our lives with the numerous advantages it brings, however, the concerns of personal data disclosure and accessibility have affected its perception and utilization, especially among Pre-retirement employees. We will seek to determine how these individuals perceive Artificial Intelligence and how much they are willing to utilize automation. We shall also examine those factors that can facilitate its acceptability.

PURPOSE OF THE STUDY

The concern of this study is, therefore, to investigate how the acceptance or rejection of Artificial Intelligence technologies can support psychosocial preparedness, analyzing the sentiments of the employees and also advocate a positive outlook of Artificial Intelligence by these individuals to improve their response to automation which will, in turn, respond to their situation and could support them harness their potentials and contribute to their immediate needs communities, economically, socially, politically and otherwise even after retirement.

Studies on differences in the perception of Artificial Intelligence depending on age were conducted by Pelau et al (2018), in their research on "Difference in the perception on Artificial Intelligence Depending on Age" at the proceedings of the International Conference on Economic and Social Sciences, they analyzed this study in the area of perception of Artificial Intelligence by individuals of different age brackets. However, this study will be looking at the Utilization of Artificial Intelligence as a tool for psychosocial preparedness in the modern age, with a particular focus on pre-retirement employees from Federal Capital Development Authority Abuja Nigeria. In as much as studies have shown that Artificial Intelligence is more accepted by the younger generation than in the older people, we shall seek to find the reasons for the non-acceptance, whether it is because it is a nouvelle technology, or if it a gender issue, a social status placement factor, illiteracy or any other reason that should be addressed.

SIGNIFICANCE OF THE STUDY

This study will benefit not only the individual but also the society as it touches the psychosocial life of these individuals, and their response to situational and environmental changes that can support their potential to continue to contribute to their immediate needs, to their communities, economically, socially, politically and otherwise. A positive perception will enhance an individual's response to these things and a negative perception will only draw the individual very far from present-day realities and in the long run affect the society at large.

This study is anchored on the theory of perception because there is noticeable skepticism about the application of automation to an individual's personal life especially by the older generation; even when they have been exposed to computers in their daily work during their active days. We want to ascertain why there is a disconnection and also how much one stands to gain if these disconnects are eliminated.

THE OBJECTIVES OF THIS STUDY ARE:

1) To investigate how employees of FCDA perceive Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.
2) To examine how employees of FCDA utilize Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

3) What factors promote the acceptance or reservations of the employees of FCDA in incorporating Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement?

HYPOTHESES

The following Hypotheses were tested at a 0.05 level of probability to guide this study:

HO1: There is no significant difference between the opinion of male and female respondents with regards to how employees of FCDA perceive Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

HO2: There is no significant difference between the opinions of male and female respondents concerning how employees of FCDA utilize Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

HO3: There is no significant difference between the opinions of male and female respondents concerning factors that promote the acceptance or reservations of the employees of FCDA in incorporating Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

EMPIRICAL STUDIES

In their presentation titled "Difference in the Perception of Artificial Intelligence Depending on Age" Pelau et al (2018) determined the perception of different segments of consumers regarding the use of smart devices and forms of artificial intelligence. By applying the discriminant analysis, they tested the impact of demographic characteristics such as age, gender, and income on the perception of situations in which artificial intelligence is used. The result of the research showed that analyzed perception is different depending on age, in the sense that the younger generation rather accepts Artificial intelligence, for demographic factors gender, and income, no significant difference was observed.

As was noted by Walubengo et al (2022) in their study on "Effects of Psychological Preparedness on Pre-Retiree Retirement Planning Behaviour", retirement planning had recently seen a shift to Psychological and social preparedness from financial planning which before now was the only consideration made on retiree preparedness. The study analyzed quantitative data using descriptive interferential statistics with the Statistical Package for Social Science version 25.0 for Windows. The study found that Psychological preparedness significantly influences retirement planning behaviors thus it should not be dominated by financial planning and preparedness.

Lusardi et al(2007) in their write-up on "Financial literacy and retirement preparedness: Evidence and implications for financial Education programs" pointed out that most older people in different countries are woefully under-informed about financial literacy which in turn have serious implications for their retirement planning and preparedness.

This current study looks at Artificial Intelligence perception in Pre-retirees especially in FCDA Abuja, its acceptance and utilization as a veritable tool for retirement preparedness. It will seek to find the relevance, advantages, impact, and factors that will enhance acceptance and the use of Artificial Intelligence. It will also address the reason for rejection of the use of Artificial Intelligence on the part of the employees if any, and make suggestions on the way forward. This study explored and analyzed the participants' views drawn from 87 pre-retirement employees of FCDA Abuja 10 years to retirement. The study applied the chi-square statistical analysis using collected data to determine the result.

METHODOLOGY

RESEARCH DESIGN: This study used the survey research design thus interviews and questionnaires were administered to participants.

AREA OF STUDY: The study was conducted in the Federal Capital Development Authority (FCDA). FCDA was established in 1996 following the creation of Abuja as the new capital city of Nigeria. It was the arm in charge of planning and managing the capital city, hence the moving of Government staff of different grade levels from Lagos, the former capital of the country, to Abuja. As of 2023, the establishment boasts a staff strength of over 5,000 professionals from different strata of society.
The establishment is made up of Secretariats and Departments. The Secretariats include Area Council Services, Education, Transportation, Agriculture and Rural Development, Youth Development, Women Affairs, Health and Human Services, while the Departments Include Development Control, Abuja Geographic Information Systems (AGIS), Abuja Environmental Services, and the Department of Development Control, etc.
Professionals in different field are employed at several departments such as Teachers, Nurses, Engineers, Administrators, Town planners, Architects, and also Estate Valuers, which makes it easier to interact with these diverse calibers of individuals. Since its inception, the establishment has turned out a good number of retirees with the passing years hence the quest of how prepared these individuals are to face the society after their retirement more especially in this modern age where automation has come to replace our traditional ways of doing things. What is the perception of these individuals towards Artificial Intelligence and how much of it are they willing to accept as a tool for retirement preparedness?

POPULATION: The employee population within the FCDA is currently estimated at above 5000 individuals thus it is necessary to reduce those to be sampled to manageable proportions. The study focused on staff with less than 10 years to retirement.
The sample size was made up of 87 respondents, which were drawn mainly from the staff of the Head Office and particularly from the Department of Development Control and the Education Departments.

SAMPLING TECHNIQUE: Purposive sampling technique was employed to gather insights as the aim was to test individuals close to retirement and also with different working backgrounds, genders, orientations, and grade levels whose sentiments may not be the same.

INSTRUMENT OF DATA COLLECTION: Printed-out survey Questionnaires and oral interviews.
VALIDATION AND RELIABILITY: The instrument was passed through a validation and reliability test.
METHOD / PROCEDURE FOR GATHERING DATA: Participants were hesitant to give out their e-mail addresses nor were they willing to fill out an online questionnaire unless the researcher was willing to individually go through it with them while they select their answers. Thus, the resolve to use hard-copy printouts of the questions, which facilitated the work. A few oral interviews were also used. Questionnaires were administered to the Participants through their Departmental Heads to facilitate ease and convenience of completion and the questionnaires were collected three days later. In the meantime, follow-ups with phone calls and reminders were done through the Heads of Departments as most participants were field workers at their site offices and seldom found time to sit in the office. The Participants were asked about their experiences with Artificial Intelligence tools perceptions of these tools in the context of retirement, and the psychosocial challenges they face. Most were reluctant to access the questions online consequently, hard-copy printouts were mostly attended to. Also, a personal interview was used to complement data generated with a questionnaire to provide much-needed information on the study. It also enabled the researcher to verbally shed more light on areas that may not be well explained in the questionnair

METHOD OF DATA ANALYSIS

The data collected through questionnaires were analyzed using simple percentages, tabulations, and frequency distributions.
The chi-square statistical method was used to test the hypotheses.

Formula: $X^2 = \frac{\Sigma(f_o - f_e)^2}{f_e}$

where f_o = observed frequency
f_e = expected frequency
Σ = summation
X^2 = chi-square

The analysis procedure for the chi-square statistical method as stated by Chisenell (1973) is as follows:

Set the null hypothesis (Ho) and alternative hypothesis (H_1)
Construct a contingency table for observed frequency (f_o)
Construct a contingency table for expected frequency (f_e) by multiplying a row total by the corresponding column total and dividing the result by the grand total i.e

$$f_e = \frac{\text{Row total x Column total}}{\text{Grand total}}$$

Degree of freedom = (R-1) (C-1)
Where R = Row
C = Column
A 5% significant (allowance for error) which is standard for research study would be employed.
Calculate the chi-square value using the formula:

$$X^2 = \frac{\Sigma(f_o - f_e)^2}{f_e}$$

Read off the table chi-square value (X^2 tab) from the chi-square table using a 5% level of significance on the column and the calculated degree of freedom on the row.

Compare the calculated chi-square value with the table chi-square value.
Give Decision Rule.

The Null Hypothesis is rejected where the value of the calculated chi-square is greater than the value on the chi-square table, otherwise, we will accept the Hypothesis.

BACKGROUND OF RESPONDENTS:
GENDER OF RESPONDENTS (Table 1)

SEX	NUMBER OF RESPONSES	PERCENTAGE
Male	52	60
Female	35	40
Total	87	100

The table shows that 60% of respondents are male, while their female counterparts constitute 40%. This shows that the male respondents are the majority.

AGE DISTRIBUTION OF RESPONDENTS (Table 2)

RESPONSES	NUMBER OF RESPONSES	PERCENTAGE
BELOW 30	4	4.5
31 - 40	5	5.75
41 - 50	20	23.0
51 – 60	57	65.5
61 to retirement	1	1.25
Total	87	100

From the table, the highest percentage of 65.5% falls between the ages of 51-60. This shows that the highest number of respondents are between the ages of 51-60

ACADEMIC QUALIFICATION OF RESPONDANTS (Table 3)

QUALIFICATION	NUMBER OF RESPONDENTS	PERCENTAGE
WAEC	7	8.1
NCE/ OND	31	35.6
DEGREE AND ABOVE	49	56.3
OTHERS	-	-
TOTAL	87	100

The highest percentage, 56.3%, are holders of a Bachelor's Degree or above, which means that the highest number of respondents are Degree holders or above.

POSITION HELD BY RESPONDENTS (Table 4)

RESPONDANTS GRADE LEVEL	NUMBER OF RESPONDENTS	PERCENTAGE
BELOW G/L 7	15	17.2
G /L 8-10	22	25.3
G /L 12-14	46	52.9
ABOVE G /L 15	4	4.6
TOTAL	87	100

From the table, the highest percentage which is 52.9% constitute those in Grade levels 12-14. This shows that the majority of the respondents are senior staff.

RESULTS AND FINDINGS

The results of the study are presented by the research questions and hypotheses.

RESEARCH QUESTION I: How do employees of FCDA perceive Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement?

AI PERCEPTION BY RESPONDENTS (Table 5)

PERCEPTION	Positive	Neutral	Negative	Total
Male	30	12	10	52
Female	20	10	5	35
Total	50	22	15	87

Calculate expected frequency ($\mathbf{f_e}$)

$\mathbf{f_e}$ = (Row Total) X (Column Total)
Grand Total

Expected value:

$\mathbf{f_e}$ Male and Positive

$$\frac{52 \times 50}{87} = 29.89$$

$\mathbf{f_e}$ Male and Neutral

$$\frac{52 \times 22}{87} = 13.16$$

$\mathbf{f_e}$ Male and Negative

$$\frac{52 \times 15}{87} = 8.97$$

$\mathbf{f_e}$ Female and Positive

$$\frac{35 \times 50}{87} = 20.11$$

$\mathbf{f_e}$ Female and Neutral

$$\frac{35 \times 22}{87} = 8.84$$

$\mathbf{f_e}$ Female and Negative

$$\frac{35 \times 15}{87} = 6.03$$

Calculate the Chi-Square (X^2)

Formular: $X^2 = \frac{\Sigma(f_0 - f_e)^2}{f_e}$

where f_0 = observed frequency
f_e = expected frequency
Σ = summation
X^2 = chi-square

Male and Positive

$$\frac{(30-29.89)^2}{29.89} = \frac{(0.11)^2}{29.89} = 0.0004$$

Male and Neutral

$$\frac{(12-13.16)^2}{13.16} \quad \frac{(-1.16)^2}{13.16} = 0.0989$$

Male and Negative

$$\frac{(10-8.97)^2}{8.97} \quad \frac{(1.03)^2}{8.97} = 0.1183$$

Female and Positive

$$\frac{(20-22.11)^2}{20.11} \quad \frac{(0.11)^2}{20.11} = 0.0006$$

Female and Neutral

$$\frac{(10-8.84)^2}{8.84} \quad \frac{(1.16)^2}{8.84} = 0.1629$$

Female and Negative

$$\frac{(5-6.03)^2}{6.03} \quad \frac{(-1.03)^2}{6.03} = 0.1771$$

Summation: Σ

$X2 = 0.0004 + 0.0989 + 0.1183 + 0.0006 + 0.1629 + 0.1771 = 0.5582$

Degree of freedom = (R-1) (C-1)

Where R = Row i.e (2) (male and female)

C = Column (3) (Positive, neutral & negative)

$df = (2-1)(3-1) = 1 \times 2 = 2$

Critical value: for $\alpha = 0.05$ and $df = 2$

The critical value is approximately 5.99

The calculated Chi-square statistic 0.5582 is less than the Critical value of 5.99

Conclusion: We accept the null hypothesis. This means that there is no significant difference between male and female employees' perceptions of Artificial Intelligence based on the data provided

TEST HYPOTHESIS:

Ho There is no significant difference between male and female respondents about how employees of FCDA perceive Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

RESEARCH QUESTION I1: How do employees of FCDA utilize Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement?

DESCRIPTION OF RESPONDENTS USE OF AI (Table 6)

DESCRIPTION	Very regularly	Regularly	Occasionally	Total
Male	40	5	7	52
Female	20	8	7	35
Total	60	13	14	87

RESPONDENTS IN FAVOUR OF **ASSISTED** UTILIZATION OF AI (Table 7)

AGE	NUMBER OF POSITI RESPONSES	PERCENTAGE
BELOW 30	4	4.5
31 - 40	5	5.75
41 - 50	20	23.0
51 – 60	57	65.5
61 to retirement	1	1.25
Total	87	100

From Table 6, the highest percentage 100% is ok using AI with the help of a middleman. This shows that all the responses are in favor of the assisted use of AI.

The null hypothesis is tested using Chi-square statistical methods:
Formular: $X^2 = \frac{\Sigma(f_o - f_e)^2}{f_e}$

The expected frequency (Fe) is calculated thus:

f_e Male, Very regularly $= \frac{52 \times 60}{87} = 35.69$

f_e Male, regularly $= \frac{52 \times 13}{87} = 7.80$

f_e Male, occasionally $= \frac{52 \times 14}{87} = 8.37$

f_e female, Very regularly $= \frac{35 \times 60}{87} = 24.14$

f_e female, regularly $= \frac{35 \times 13}{87} = 5.20$

f_e female, occasionally $= \frac{52 \times 14}{87} = 5.63$

Calculate the Chi-Square (X2)
Formular: $X^2 = \frac{\Sigma(f_o - f_e)^2}{f_e}$

where f_o = observed frequency
f_e = expected frequency
Σ = summation
X^2 = chi-square

Male very Regularly = $\frac{(40-35.69)^2}{35.69} = \frac{(4.31)^2}{35.69} = 0.525$

Male, Regularly = $\frac{(5-7.80)^2}{7.80} = \frac{(-2.80)^2}{7.80} = 1.012$

Male Occasionally = $\frac{(7-8.37)^2}{8.37} = \frac{(-1.37)^2}{8.37} = 0.227$

Female very Regularly = $\frac{(20-24.14)^2}{24.14} = \frac{(-4.14)^2}{24.14} = 0.711$

Female, Regularly = $\frac{(8-5.20)^2}{5.20} = \frac{(2.80)^2}{5.20} = 1.51$

Female Occasionally = $\frac{(7-5.63)^2}{5.63} = \frac{(1.37)^2}{5.63} = 0.323$

Summation: Σ
X2 = 0.525 + 1.012 + 0.227 + 0.711 + 1.15 + 0.323 = 4.31

Degree of freedom = (R-1) (C-1)
Where R = Row i.e (2) (male and female)
C = Column (3) (Positive, neutral & negative)
df = (2-1) (3-1) = 1 x 2 = 2

Critical value: for α = 0.05 and df = 2
The critical value is approximately 5.99
Comparing X2 with critical value,
The calculated Chi-square statistic 4.31 is less than the Critical value of 5.99
4.31 < 5.99
Conclusion: we accept the null hypothesis.
We conclude based on the hypothetical data that there is no significant difference between male and female employees in how they utilize AI.

TEST HYPOTHESIS
HO2: There is no significant difference between the opinions of male and female respondents with regards to how employees of FCDA utilize Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

RESEARCH QUESTION I11: What factors promote the acceptance or reservations of employees of FCDA to incorporating Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement?

FACTORS THAT PROMOTE ACCEPTANCE OF AI (Table 8)

FACTORS	BENEFIT AWARENESS	TRAINING & SUPPORT	JOB SECURITY	Total
Male	30	15	7	52
Female	20	10	5	35
Total	50	25	12	87

The null hypothesis is tested using Chi-square statistical methods:
Formula: $X^2 = \frac{\Sigma(f_o - f_e)^2}{f_e}$
The expected frequency (Fe) is calculated thus:

f_e Male, Very regularly = $\frac{52 X 50}{87} = 29.89$

f_e Male, regularly = $\frac{52 X 25}{87} = 14.94$

f_e Male, occasionally $= \frac{52 \times 12}{87} = 7.17$

f_e female, Very regularly $= \frac{35 \times 50}{87} = 20.11$

f_e female, regularly $= \frac{35 \times 25}{87} = 10.10$

f_e female, occasionally $= \frac{52 \times 12}{87} = 4.83$

Calculate the Chi-Square (X2)

Formula: $X^2 = \frac{\Sigma(f_0 - f_e)^2}{f_e}$

where f_0 = observed frequency

f_e = expected frequency

Σ = summation

X^2 = chi-square

Male, Benefit awareness = $\frac{(30-29.89)^2}{29.89} = \frac{(0.11)^2}{29.89} = 0.0004$

Male, Training & support = $\frac{(15-14.94)^2}{14.94} = \frac{(0.06)^2}{14.94} = 0.0002$

Male, Job Security = $\frac{(7-7.17)^2}{7.17} = \frac{(-0.17)^2}{7.17} = 0.0040$

Female, Benefit awareness = $\frac{(20-20.11)^2}{20.11} = \frac{(-0.11)^2}{20.11} = 0.0051$

Female, Training & support = $\frac{(10-10.10)^2}{10.10} = \frac{(-0.1)^2}{10.10} = 0.0010$

Female Job security = $\frac{(5-4.83)^2}{4.83} = \frac{(0.17)^2}{4.83} = 0.0061$

Summation: Σ

X2 = 0.0004 + 0.0002 + 0.0040 + 0.0051 + 0.0010 + 0.0061 = 0.0168

Degree of freedom = (R-1) (C-1)

Where R = Row i.e (2) (male and female)

C = Column (3) (Positive, neutral & negative)

Df = (2-1) (3-1) = 1 x 2 = 2

Critical value: for $\alpha = 0.05$ and df = 2

The critical value is approximately 5.99

Comparing X2 with critical value,

The calculated Chi-square statistic 0.0168 is less than the Critical value of 5.99

Conclusion: we accept the null hypothesis.

We conclude based on the hypothetical data that there is no significant difference between male and female employees on how they utilize Artificial Intelligence.

TEST HYPOTHESIS

HO3: There is no significant difference between the opinion of male and female respondents with regards to factors that promote the acceptance or reservations of employees of FCDA to incorporating Artificial Intelligence as a veritable tool for psychosocial preparedness for retirement.

DISCUSSIONS:

The objective of the study was to investigate how pre-retirement employees perceive and utilize Artificial Intelligence. Also to examine factors that affect its acceptance by the employees.
In the course of this study, the following was discovered:

1. Respondents expressed a growing awareness of Artificial Intelligence Tools. Participants acknowledged that these resources are often easily accessible and user-friendly.
2. They noted that Artificial Intelligence tools facilitate learning about lifestyle changes, which they might not have expected and were not exposed to but for this technology.
3. The participants agreed that Artificial Intelligence offers personalized resources and recommendations based on their peculiar needs. However, they question its ability to understand and address their emotional needs.
4. The social status of the respondents played no significant role in their acceptance or rejection of Artificial Intelligence, however, we cannot overlook the fact that the internet plays a role in the use of Artificial Intelligence and the cost of the internet is not cheap.
5. Education and exposure to technology played a major role in positive perception of the importance of utilizing Artificial Intelligence.
6. With the help of an assistant, more respondents were more confident and willing to utilize Artificial Intelligence (see Table 7)

LIMITATIONS OF THE METHODOLOGY

In this study, certain shortcomings of the method applied were visible. Some of these include:

1. Participants were reluctant to access the questionnaire online even though it was their best bet as they could answer the questions on the go.
2. The majority of them considered the research a waste of time claiming that it will not serve any useful purpose to them as most opine that working for the Government lives one with little or nothing to fall back on thus financial plans, tourism, and investment plans are mere fantasy that they may not attain even after retirement.
3. Some of the respondents who took the questionnaires never returned them while the ones who saw the questions online only attended to it when the administrator was there to read it out to them.

The last point raised here showed that people were more willing to use automated machines with the assistance of a middleman or a mediator between the machine and them. Their skepticism about divulging their details especially online is palpable. At every point they required someone whom they would hold responsible should their personal opinion be seen as counterproductive.

4. In addition, there was the possibility of bias in the responses received. In some cases, the respondents were seen trying to impress the administrator with the questions rather than expressing their sincere opinion on the subject matter.

5. Socially, they fear that the embrace of the use of Artificial Intelligence will cause a withdrawal from gatherings and human interaction, which might in turn promote loneliness and eventually, depression.

6. Considering the diverse cultural background and their unique needs. Religion and its effect on people's mode of life cannot be overlooked. The mentality and mindset of some participants were also a major determinant of their perception of AI. They also fear that machines without souls and emotions will give out Artificial Intelligence recommendations that may not fully address their peculiar individual situations.

7. The fear of over-dependence on automation is another factor that impedes the full acceptance of AI by these Pre-retirees. The addictive nature of AI tools which the younger generation is battling is also a factor for its rejection by these participants.

RECOMMENDATIONS:

1. This work has discussed that Artificial Intelligence is the ability of machines to improve retirement preparedness, however, while AI can serve as a valuable tool for psychosocial preparedness, its limitations must be acknowledged. A balanced approach that incorporates human interaction alongside AI intervention is essential for addressing the needs of Pre-retirement employees.

2. Introduction of the use of Artificial Intelligence in the schedule of courses and trainings for employees in the course of their work will not only facilitate their work but will help eliminate fear and enhance trust in the use of automation which will in turn increase their willingness to use AI in retirement planning and enhance their psychosocial preparedness. Automation Programs should be designed to cover not only financial but necessary psychosocial needs of employees. Instead of randomly coming up with programs, that may not encourage personalized use of AI, training courses should include courses on psychological and social preparedness with AI. Relevant organizations should make concerted efforts to bring their employees up to speed with this evolving technology, which will address their psychosocial needs.

3. A supportive working environment that will combine AI with human interaction will better prepare employees for the transition to retirement.

4. Training, workshops, online courses, peer mentoring, and technical training on tools or applications such as social engagement apps, travel planning apps, and financial and health management apps which could enhance employees' ability to make a living after retirement should be introduced to these individuals in preparation for retirement.

5. Virtual counselors and online support forums should be introduced within organizations as this will help improve workers' perception of Artificial Intelligence in the course of their jobs, and their daily living.

6. Factors that were noted in the course of this research (see Table 8) such as Benefit awareness, training support, and job security will help convince these workers that AI is not intended to run them out of their jobs but to help facilitate their work.

7. Assurance that AI does not cause job loss but job facilitation will encourage a positive perception. Job security is every employee's topmost concern.

REFERENCES:

Titrus G. Gathiira, Stephen M. A. Muathe & James M. Kilika, (2019) Psychosocial Programmes and employees Retirement Preparedness: Empirical Evidence From the Educational Sector in Kenya. (International Journal of Business Administration, Sciedu Press, Vol. 10(2), Pages 85-95, March.

Ruth Ramsey (2004) Psychosocial aspect of Occupational therapy (American Journal of Occupational Therapy (vol.58, issue 6) Novrmber - December.

Emeritus Stanford Professor John McCarthy (1956), Dartmouth Conference on Artificial Intelligence, Dartmouth College Press

Teresa Ghilarducci, 2024, Work, Retire, Repeat, University of Chicago Press

Kath Woodward (2015), Psychosocial studies an introduction. Routledge Taylor & Francis Group London.

Rescuing Retirement, Teresa Ghilarducci & Tony James (2018), Colombia University Press

Exploring Artificial intelligence (1988) American Association for Artificial Intelligence, Morgan Kaufmann Publishers

Smart Retirement Harnessing AI for your golden years (2024) Dizzy Davidson Pure Water Books, August

Anne Cronin Mosey, (1996) Occupational Therapy Configuration of a Profession, Ravent Press, December

Corina PELAU, Bogdan NISTOREANU and Irina ENE (2018), "Difference in the perception of Artificial Intelligence Depending on Age" International Conference on Economic and Social Sciences, University of Bucharest University of Economic Studies, Romania, Vol. 1(1), pages 466-472, April.

Rose Walubengo and S Kipchumba (2022), "Effects of Psychological Preparedness on Pre-Retiree Retirement Planning Behaviour" International Journal of Research and Innovation in Social Sciences, Vol.6 (5), Pages 679-692, May

Annamaria Lusardi and Olivia s Mitchell (2007) in their write-up on "Financial literacy and retirement preparedness: Evidence and implications for financial Education programs" Working Papers 144, University of Michigan Retirement Research Center.

Enrique Bonson & Michaela Bednarova (2022), "Artificial Intelligence Disclosures in Sustainability Reports: Towards an Artificial Intelligence Reporting Framework", Lecture notes on Information Systems and Organisation, Digital Transformation in Industry, Pages 391-407, Springer.

APPENDIX

My name is Nkechinyere Chinedu-Okoro, I am conducting research in fulfillment of my Master's Degree in Business administration at Learn to Live Business School, UK. I am reaching out to you to participate in my research work with the topic: "UTILIZATION OF ARTIFICIAL INTELLIGENCE AS A VERITABLE TOOL FOR PSYCHOSOCIAL PREPAREDNESS IN MODERN AGE, PERCEPTION OF PRE-RETIREMENT EMPLOYEES OF FCDA ABUJA".

Kindly oblige me by responding to the following questions:
PLS TICK SELECTED RESPONSES. For this questionnaire, we shall abbreviate Artificial Intelligence to AI.

Gender: MALE ( ) FEMALE ( )

Age Range: 21-30
31-40
41-50
51-60

Qualification: WAEC/SSC
NCE
DEGREE / HND
POSTGRADUATE

Grade Level: Below G/L 7
G/L 8-10
G/L 12-14
G/L 15 & Above

(1) Are you acquainted with the use of Artificial Intelligence? (Yes) (Not much) (No)
(2) How much can you describe your use of AI? (Occasionally)(Regularly)(Always)
(3) What is your view about AI and its application in everyday living?
(Positive) (Not certain) (I can do without it)
(4) Do you think that your level of literacy affects your view of AI (Yes) (No)
(5) Does gender play any role in the perception of AI (Yes) (No)
(6) Are you willing to use AI devices if they are introduced to you? (Yes) (No)
(7) Do you think AI can help improve your daily living as an employee?
(Yes) (No)
(7b) If yes, kindly enumerate how

_____

_____

(8) Has AI been useful to your Psychosocial life (inter/ intra personal, social interactions that influence occupational behavior) (Yes) (No)
Please, give details _____

_____

(9) What do you think are the primary concerns of pre-retirement employees?

_____

_____

(10) Can you use AI as an effective tool to address these concerns? (Yes) (No)

(11) Do you have plans for post-retirement (Yes) (No)

(12) Do you think you are ready to take on these plans and achieve them with the help of AI? (Yes) (No)

(13) What factors influence your position on effectiveness in using AI?

_____

_____

(14) What can be done to enhance the acceptance and use of AI by pre-retirees?

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