

The Impact of Artificial Intelligence on Organisational Behavior: A Risky Tale between Myth and Reality for Sustaining Workforce

By Zeinab Younis¹, Marwa Ibrahim^{2*}, Habiba Azzam³

ABSTRACT:

Purpose: This research paper examines quantitatively the impact of Artificial Intelligence (AI) as an independent variable on three organisational behavior components as dependent variables: job satisfaction, personality, and attitudes.

Design/methodology: The sample of our study includes alumni graduates of the past two years reflecting on post-covid19 era as young workforce from Cairo, Egypt. It is important to note that there is no sufficient data regarding the impact of AI on OB testing this bracket of young population workforce, and highlighting specific components in the study of OB.

Findings: This research finding revealed that AI can explain 46.5 % of Organizational Behavior which refers to the importance of AI usage among organizations and how this might change the current organizational environments.

Research Limitations: This research is limited by the fact that the sample encompassed a specific bracket of the young workforce age ranging from 20-35 years old even though they come from different backgrounds.

Practical Implications: AI tools can enhance employees job satisfaction as well as it can help mitigate cognitive biases and groupthink, developing a decision-making culture that is more objective and data driven.

Originality: Therefore, the utility of this research on the academic level highlights the fact of identifying major concerns and formulations of essential conclusions to get a deeper understanding of the relationship between the different variables stated. On the practical level, it sheds light for several organisations on the danger of technology replacement of employees due to the invasive impact of AI usage.

Keywords: Artificial Intelligence, Personality, Attitudes, Job Satisfaction, Organisational Behavior.

1. Introduction

AI is considered a science and an art. It is a double-edged sword that fight so many battles. This triggers the loss of human judgement and decision making that require complex and emotional intelligence skills that robots don't offer (Arkin, 2010). Brynjolfsson and McAfee (2014), advocate that advances in technology have already led to significant job displacement and income inequality in many industries. Therefore, a policy of risk management to minimize the negative impact of this transition and the number of ethical implications associated with it on human workers is highly needed. Innovation in AI domain might be dazzling with self-driven vehicles, to systems that

¹The British University in Egypt "BUE", Faculty of Business Administration, Faculty of Business Administration, Economics, and Political Science, Cairo, Egypt. Address: El Sherouk City, Suez Desert Road, Cairo 11837 – P.O. Box 43.

*Corresponding Author.

operate most of our transportation vehicles such as cars, trains, and planes (ex: self-driven cars), to home and self-assistant machines, to machines that make our dinner, and even machines that plan our monthly budget for us. However, we need to preserve human wellbeing and prosperity rather than its replacement, so some approaches are adopted as proactive strategy: first the investment in education and training programs that prepare humans for new jobs and industries that emerge because of technological advances (Autor, 2015). Another approach is to review more specific regulations and policies that organize the responsible use of robotics and artificial intelligence in various industries (Brynjolfsson and McAfee, 2014). Thirdly, develop ethical guidelines that ensure the responsible use of AI and protect human values and interests (Floridi and Taddeo, 2018). Moreover, investing in research and development that focuses on the development of AI systems that are aligned with human values and goals (Bostrom and Yudkowsky, 2014). These approaches must unite under the umbrella of protecting privacy and negotiating an upgrading scale of skills. The question here is: are these approaches enough? The answer entails a deep analysis of the impact of AI on some crucial components of OB field such as job satisfaction, personality, and attitudes.

Artificial intelligence refers to a branch of computer science that includes building and creating smart machines that require human intelligence, and that are utilized to perform and achieve various tasks (Khan, 2021).

In the world of AI and especially in the dawn of Covid19 era, there was an increase in AI usage in different sectors to minimize interaction and transmission of the pandemic. Machinery systems and computers replaced individual's work starting from diagnosing illness, to shopping and delivering groceries. In the health sector and medical services, AI technology helped to develop treatment and vaccines and to trace the pandemic (Zhou et al., 2020). While in the Supply chain management in several industries, it treated the disruption of several global supply chain operations (Xu et al., 2021). Moreover, virtual assistants invaded the world of marketing worldwide providing customer support and relevant inquiries (Rao et al., 2021). Applying AI tools to optimize remote work according to Huang et al. 2020, virtual meeting platforms, such as chatbots and ChatGPT, among work teams were introduced to increase connection and uninterrupted line of communication between workers and even students recently. Artur Strzelecki (2023) in a study on a state university in Poland, tested the students' acceptance for the use of technology tool ChatGPT in education, and advocated the unified theory of acceptance and use of new technology (UTAUT2) in his models of studies in higher education. These new tools of technology can be listed as animation (Dajani & Abu Hegleh, 2019), lecture capture system (Farooq et al., 2017), e-learning platforms (Zacharis and Nikolopoulou, 2022), mobile devices (Hoi, 2020) and learning management systems (Raza et al., 2022). These can reflect more on Generative AI, which refers to a category of AI in algorithms and models that can enable applications such as image synthesis and text generation (Stanford University AI Index).

The department of IT and HR in most organisations had plans focused on the two types of AI: one based on capabilities, and another based on functionalities and both kinds constituted a threat to several indicators of job satisfaction, personality, and attitudes of employees under study.

Firstly, starting with AI based on capabilities there are three types: narrow AI, general AI, and super AI. Narrow AI refers to any type of AI machine or device that focuses on only one narrow task, and this type cannot perform beyond its limitations. For example, Alexa or Siri, which listens to human voice commands, can sometimes answer to some commands by “I’m sorry I don’t understand” or “Sorry, I don’t get it”, and therefore this type of AI has challenges performing tasks outside its capabilities.

Secondly, general AI which is also called “Strong AI”, this type could learn any type of intellectual task that humans can learn. This type is not fully achieved yet, but to create this type of AI, humans need to find a way to make machine-conscious programs with a set of various cognitive abilities. An example of this is Fujitsu’s K-computer which is one of the strongest attempts at achieving Strong AI – took 40 min to simulate a single second of neural activity or “nervous system”. Thirdly, super AI is the type that exceeds human intelligence, not only that, but can also perform tasks better than humans themselves, and its existence is still hypothetical (Khan, 2021).

Moving on to the second type of AI, which is based on functionalities, there are four different types: reactive machines, limited memory, theory of mind, and self-aware machines. Firstly, starting with reactive machines, this type of AI is the most basic form which does not have past memory and works only with present data. For example, IBM deep blue which is a device that sees pieces on a chess board and reacts to them- can make predictions on most optimal moves. Secondly, limited memory is a type of AI that makes decisions through learning from past data, but its memory is short. For example, self-drive cars or cars with the feature of “auto-park”. Thirdly, theory of mind is a type of AI understand people’s emotions and thoughts. This type is not yet fully achieved, and a recent example is Sophia and Kimset which are humanoid robots that can understand human emotions and respond through speech. Finally, self-aware AI is the type that not only understands humans, but also perceives and evokes human emotions, and has emotions and beliefs of its own and this type is not achieved yet (Khan, 2021).

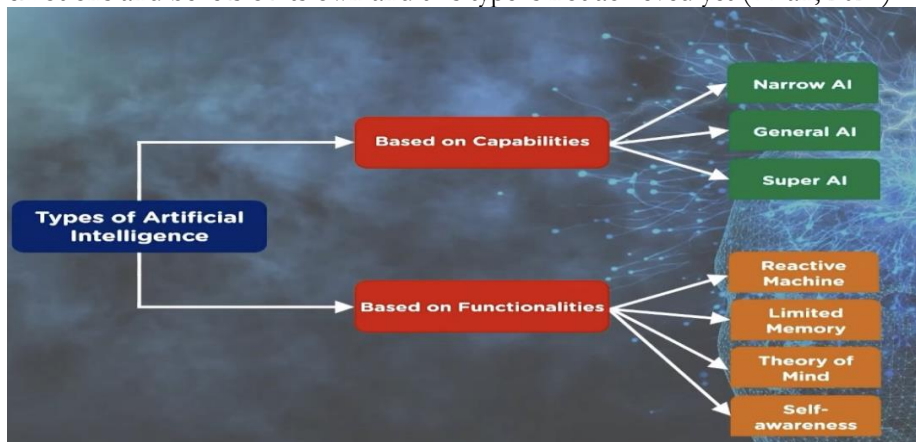


Figure 1: retrieved from Khan, H. (2021). *Types of AI | Different Types of Artificial Intelligence Systems. 1-13.*

1.1 Artificial Intelligence (AI) and Job Satisfaction

Job satisfaction refers to the pleasurable emotional state that is brought because of an individual's employment and positive job experience (Bhargava et al., 2021).

Employees' job satisfaction is seen through their attitudes and behaviors towards their work and through their interactions within their workplace.

Accordingly, employee satisfaction is one of the core factors that leads to an organisation's success. Many SMEs nowadays have generated a tremendous effort towards developing and adapting AI in their business strategy to improve and increase job satisfaction, performance, and productivity, but is developing and implementing AI improving employee's job satisfaction or not? When talking about job satisfaction, one of the main models mainly utilized by many researchers is the Job Characteristic Model (JCM) which was established by Oldham and Hackman (1976) and is still popular to our present time. This model displays the relation between some job characteristics and how employees respond to their work. Training, and recognition, had a positive impact on job satisfaction as they reflect perceived organisational support, and provide opportunities for skill utilization which is a part of job design characteristics model. (Rhoades and Eisenberger, 2002). The JCM consisted of five different components and the research is employing only the first three from the following: (Skill Variety - Task Identity - Task Significance – Autonomy- Feedback)

However, with the risk of perceived job security when applying AI in the workplace, employees start to doubt their value, worth, and significance when their duties change and the threat of layoffs occurs, which might potentially have a detrimental impact on their self-esteem, job satisfaction and on their overall level of life satisfaction. In other research, it was found that regardless of the type of job, employees' exposure to new technologies and technological implementation increases an individual's job satisfaction because of the increased task complexity, and therefore employing new technology improves job satisfaction (Bhargava et al., 2021). The crucial point here is clear communication and constructive feedback at all levels of introducing a new technology in the workplace which yields to positive results in the levels of job satisfaction (Morrison, 2004).

According to a study on RAIAs (Robotics, Artificial Intelligence, and Automation) effect on job satisfaction, the results revealed that employees in different industries responded to AI differently. For example, in the pharmaceutical industry, employees were satisfied with their job, and they appreciated their work design when the AI was implemented because of the task upskilling, and the new learning opportunities it provided them with. However, another group of people within a different industry were dissatisfied with their job and perceived the implementation of RAIAs negatively as they felt that it decreased their opportunities in teamwork, job rotation, and also, they thought it limited for them their career opportunities (Bhargava et al., 2021).

Furthermore, another study on employees in Gig economy of short-term contracts, and the underlying free market system revealed that employees are satisfied with their Gig work, but when AI is implemented and workers must deal with system-mediated work, they are dissatisfied, and they perceive AI negatively because they feel like it will replace them and make their input transient (Braganza et al., 2022).

Moreover, another Korean study investigated the effect of anxiety of being replaced by AI and how this effects employee's job satisfaction in the fourth industrial era. It was revealed that many employees experienced job anxiety from the fear of being replaced by AI which has a negative effect on job satisfaction. This is because anxiety of being replaced causes employees to have negative perceptions about the job such as job uncertainty (Rhee and Jin, 2021).

1.2 Artificial Intelligence (AI) and Personality

Scholars have been examining the key personality traits that may influence people's perception and attitudes towards artificial intelligence (AI) in the past few years, but results are still in their early stages. Personality characteristics generally refer to consistent tendencies that influence a person's ideas, feelings, and behaviors (Kaya, et al., 2022).

The Big-Five Personality Model, created in 1992 by Costa and McCrae, is one of the key models that is widely recognized and used nowadays among many other personality theories. It specifies five basic personality traits which are: openness to experience, agreeableness, extraversion, conscientiousness, and emotional stability. The update of the model to Ocean model replaced emotional stability with neuroticism to include the factors related to biological transmitters of the brain affecting this area creating a wider range of mindfulness to absorb challenges of new innovations that might cause anxiety in the workplace (Myung 2018). For the first trait which is openness, people here tend to be open to try new things, they are also open-minded, they like to be innovative and creative, and they like taking risks and new challenges. People who are extroverts are sociable, energetic, like to have strong social interactions, easily make new friends, and enjoy being the center of attention. Furthermore, agreeableness refers to individuals who are highly cooperative with others, tender, mainly concerned about others and feel empathy for people, caring, and enjoy helping others. Conscientious people are organized, pay attention to details, prioritize what is important, and they like setting schedules and preparing. Finally, neuroticism correlates which is a personality trait by which we can measure levels of stress, worry, and anxiety (Kaya, et al., 2022). AI is a product of consequences and may not reach a personality classification in the obsolete sense as studies are still immature, however automation through AI and machine learning are helpful to manage human complexities in dealing with future process industries on different levels. But can it predict personality through scanning of an eye and risk a threat of privacy? (Krajčoviech, 2018). Well, that's the actual risk between myth and reality as what we identified in the past as science fiction is reflected in so many new innovations in the present.

Several attempts were researched parallel to the role of the Big Five different personality traits on Artificial Intelligence, the results revealed very interesting findings: For an Agreeableness personality trait, it was found that more agreeable people have more tolerant behaviors and attitudes towards the negative aspects of new technologies such as AI. Not only that, but they also tend to be more accepting, warm, pleasant, and get along with people around them more effectively which activates a cognitive set of characteristics that helps them to better adjust to daily life changes such as use of new technologies and AI, which indicates a positive relation between agreeableness individuals and AI. According to (Haydon, 2020), a study on the effects of AI on Agreeableness showed that

there is no significant relationship between Agreeableness and trusting Intention in AI, however, there is a significant relationship between Agreeableness and the continuance usage of AI. For extroverts, there was both a weak and positive relation with the usage of AI. For individuals who are open to experience, they tend to have positive attitudes towards AI and new technology from a user preference angle, because they tend to be innovative, creative, like to try new things, and take risks and challenges, and as a result they perceive that AI is easy to use and grants them a greater tendency to adopt innovations. However, the results also displayed that other extroverts also have negative attitudes towards using AI because they felt that these new technologies that facilitate social interactions reduce the individual's social interaction with others. For conscientiousness individuals and AI, the results revealed that they do not have either a significant positive or negative attitude towards AI, but since conscience individuals are highly aware of the negative aspects that new technologies and AI bring, they inhibit a more negative behavior towards AI. This was in parallel with neuroticism as it revealed that emotionally unstable individuals have way fewer forgiving behaviors and attitudes towards AI, on the contrary, emotionally stable people are less worried towards using AI. (Kaya, et al., 2022).

1.3 Artificial Intelligence (AI) and Behaviour /Attitudes

According to a study on different types of AI machines, and the attitudes and behaviour induced towards their use in Germany, China, and the UK.

The respondents were introduced to some AI machines such as Google AlphaCo; Siri created by Apple; Alexa created by Amazon; Google Home; Google Self-driven cars and Atlas created by Boston Dynamics and the authors measured their behaviour towards these AI machines from the perspective of trust and usage (acceptance and fear of AI). The results revealed that individuals in Western nations don't seem to think job loss to be a significant reason to be afraid of AI. Also, except for the Chinese sample who displayed high risk in using AI, all others displayed highest scores on the Acceptance scale and lowest scores on the Fear scale. Overall, the results indicate that individuals in Germany and UK have a more positive attitude towards AI (Sindermann, et al., 2020).

Moreover, another systematic review which also investigated the attitudes and behaviour of all students in the healthcare sector towards artificial intelligence revealed some interesting results. The authors found out that almost 76% of all healthcare students displayed positive and promising attitudes and behaviour towards AI, however the rest of the studies (24%) displayed AI as a threat and has negative attitudes and behaviours towards AI (Baigi, et al., 2023).

Furthermore, another study conducted on HR professionals in Australia and their behaviours and attitudes towards AI in the Fourth Industrial era revealed that most had negative significant results towards AI. Their attitudes and behaviours were monitored and studied through focus groups and an online survey that was distributed to Australian HR professionals (ages 36 to 65 which a bracket from middle age to seniority). The study showed that many HR professionals lack the attitudes, skills, and competences necessary to handle the difficulties posed by the effects of AI on their workplaces, future HR roles, systems, and processes. Although many of the respondents in their answers did not plan to utilize Fourth Industrial Revolution technologies (such as AI), but soon these

technologies might be valuable for their businesses and help with enhancing job performance, increasing productivity, and simplifying jobs for staff (Nankervis, et.al, 2021).

2. Research Framework:

There are several models used to identify complex relationship between AI and OB components relevant to the study:

1. The **Human-AI Interaction Framework**: This model proposes that the relationship between humans and AI entails three key aspects: communication, trust, and control. Communication refers to the interaction between humans and AI, trust refers to the extent to which humans rely on AI, and control refers to the degree of influence humans have over AI (Yan et al., 2020).

2. The **Technology Acceptance Model (TAM)**: This model suggests that the adoption and use of AI in organizations is influenced by two key dimensions: perceived usefulness and perceived ease of use. The first refers to the degree to which AI is seen as beneficial, while the second refers to the extent to which AI is seen as easy to use and understand (Venkatesh and Davis, 2000).

3. The **Job Characteristics Model**: This model suggests that the impact of AI on employee job satisfaction and performance can be assessed through the five key job characteristics: skill variety, task identity, task significance, autonomy, and feedback (Hackman and Oldham, 1976).

4. The **Social Exchange Theory**: This model proposes that the relationship between humans and AI can be understood as a social exchange, influenced by the perceived costs and benefits of using the technology and based on reward system where both parties give and receive benefits. (Blau, 1964).

5. The **Resource-Based View (RBV) of the Firm**: This model proposes that the adoption and use of AI in organizations is influenced by the organization's resource base, including its knowledge, skills, and abilities. It suggests that organizations working in AI-related fields are more likely to adopt and successfully implement AI in their operations (Barney, 1991).

From the previous, the research conceptual framework can be constructed as follows:

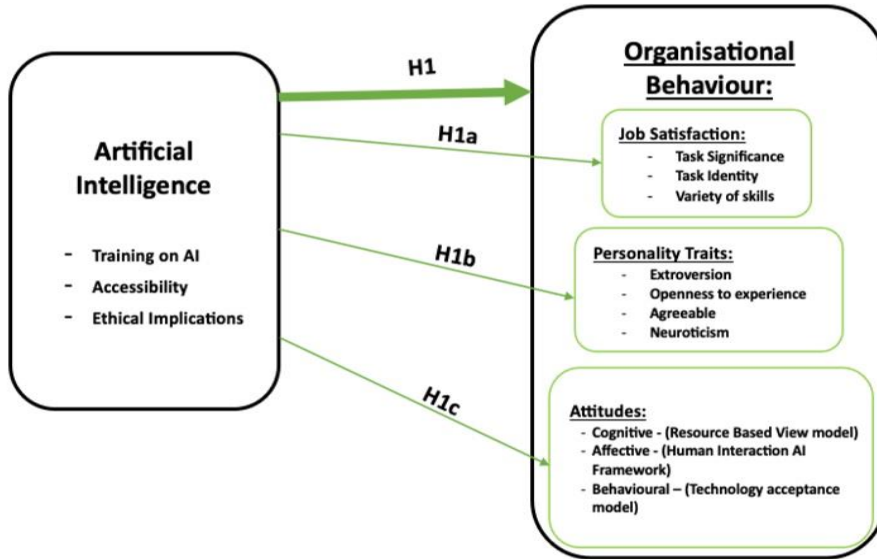


Figure 2: Proposed Research Framework
Source: Developed by the Researchers

2.1 Operational Definitions of Variables tested by the survey within the framework suggested.

Artificial intelligence: A software system called artificial intelligence (AI) uses data sources to either make autonomous judgements or support people in making decisions (Swed and Alibrahim, 2022).

Personality: A robot's or software system's personality is defined as its capacity to communicate both logically and emotionally with other individuals. We reject this idea because it is illogical, and robots can't experience emotions (Lahuerta-Otero and Gutiérrez, 2022).

Job satisfaction: When talking about the context of AI, job satisfaction refers to the degree of contentment and fulfillment felt by those working in jobs linked to machine learning, data science, or other AI-related professions. It focuses primarily on the happiness, satisfaction, and wellbeing of staff members who are directly involved in the creation, implementation, or use of AI technology (Nankervis et al., 2019). It also reflects on the components of the job characteristics model relevant to task significance, identity, and variety of skills.

Attitudes: In the context of artificial intelligence, attitudes relate to the evaluative judgements, beliefs, and views that individuals or groups have on AI technologies, applications, and their effects on many facets of society. The attitudes people have toward AI include their positive or negative orientations, preferences, and perceptions (Sindermann et al., 2020).

3. Methodology and Sampling

3.1 Sampling plan:

This research paper used cross sectional data, and reflected a set of independent and dependent variables, the independent variable is the Artificial intelligence, and the dependent variable is the organizational behavior which is represented within three main dimensions: job satisfaction, personality, and attitudes.

The research population includes respondents all of which are university graduate all over Egypt. The research sample is a non-probability judgmental sample drawn from university graduates' alumni who are the young workforce ranging from ages 20 to 35 years in Cairo. Based on (Braganza, Chen, Canhoto & Sap,2022; kaya et al 2022; Rhee & Jin 2021; Sekaran, 2003) the sample size is determined to be 384 respondents with a 95% coefficient of confidence and 5% error limits.

The research data were collected using interviewer administered online survey. Moreover, the survey was declared to be anonymous so that the answers of the respondents reflected the true feelings and behaviors. Although, the study might include a percentage of biased responses. However, the results confirmed that the survey was reliable and valid.

The data collection tool of the current research applies a quantitative online survey. A 5-point Likert scale was used to answer the survey questions which gives respondents five options for responses to the given statement or question, allowing them to express their degree of agreement or sentiment with the statement or topic on a scale from strongly disagree to strongly agree. This questionnaire will include 5 sections measuring the following:

- 8 general questions about AI as an Independent Variable.
- 6 questions about Job Satisfaction (related to Skill Variety, Task Identity and Task Significance)
- 8 questions about Personality (using extroversion, openness to experience, agreeableness, and neuroticism from the Ocean model).
- 2 questions about the cognitive component of attitudes and behaviour which is knowledge and skills (using Resource Based View model).
- 3 questions about the affective component of attitudes and behaviour which is the level of trust (using Human Interaction AI framework).
- 2 questions about the behavioural component of attitudes and behaviour (using technology acceptance model).

3.2 Data Collection

Respondents were asked to complete the survey based on their usage of AI in the working environment. 384 questionnaires were initially collected, and 216 of them were valid for analysis. This following part will tackle the research sample socio-demographic characters of the selected sample, the following table is an overview of these demographics in terms of frequency and percentage.

Table 1: description of demographic characteristics among survey participants (n=216). The below table shows that 69% are artificial intelligence users, while 31% are not artificial intelligence users.

Variable	Frequency	Percentage
Gender		
Male	57	26.4%
Female	159	73.6%
Age		
18 – 24	51	23.6%
25 – 34	165	76.4%

Table 2: description of demographic characteristics among survey participants (n=216)

Are you an artificial intelligence (AI) user?		
	Frequency	Percent
No	66	30.6
Yes	150	69.4
Total	216	100.0

The below table reveals that 57% of the sample has AI implementation in their companies, while 47% has not AI implementation in their companies.

Table 3: description of demographic characteristics among survey participants (n=216)

Is AI implemented within your company?		
	Frequency	Percent
No	93	43.1
Yes	123	56.9
Total	216	100.0

4. Measurements Reliability and Validity

The researchers relied on Cronbach Alpha Coefficient and factor analysis for Measuring reliability and validity of the independent variable (Artificial Intelligence/AI) dimensions & the dependent variable (Organizational Behavior).

The results showed that total reliability coefficient and intrinsic validity for the whole research constructs are (0.683) to (0.831); highly internal consistency based on the average inter-item correlation. Likewise, all communalities' values for all components are greater than 0.5 which indicate the high validity of these items, all values of loadings are greater than 0.5 indicates a high correlation between the survey questions. Also, AVE values indicate that the constructs could explain more than 50% of the statements which indicate high internal validity.

4.1 Inferential Data Analysis

The Normality tests' results revealed that all study variables were not normally distributed because the significance value of those variables were below 0.05. However, since the valid collected sample is 216 responses hence, according to Sekaran (2003), a research study sample size which is above 30 to 50 participants can run parametric tests especially in multivariate research. Moreover, running a parametric test when the data variables are normally distributed can be violated if the study's sample size is large or moderate and results can still reflect precision and accuracy (Green and Salkind, 2005).

4.2 Descriptive Statistics of Constructs and Statement Items

The descriptive analysis included Minimum, Maximum, Mean, Standard Deviation, and Coefficient of Variation for each statement and the respondents tended to agree to all the statements related to the AI usage, job satisfaction, personality, attitudes as the mean values are around 4. Moreover, the homogeneous variable, with lowest variance, is the "Attitudes" with COV equals 14.5% while the highest variance, is the "Job satisfaction" with COV equals 18.3%.

Pearson’s Correlation Coefficient test was applied for the current research variables, revealing that there is a significant positive relationship between Use AI, and each of Job satisfaction, Personality, Attitudes, as the significance value is less than 0.05.

In this part the researchers aimed to compare the variables of the study between who use and who do not use AI, also between who implement and who not implement AI in their company, and the results were as follows:

Table 4: Are you an artificial intelligence (AI) user?

	Are you an artificial intelligence (AI) user?		
	No	YES	P-value
Job satisfaction	3.3596	3.8327	0.000
Personality	3.4731	3.7525	0.001
Attitudes	3.5872	3.9045	0.000
Organizational Behavior	3.4700	3.8299	0.000

It is clear from the above-mentioned table (4) and graph that the average for all variables of the study is greater for who use AI than for who not use AI, and this difference are significant as the p-value for all variables are less than 5%.

Table 5: Is AI implemented within your company?

	Is AI implemented within your company?		
	No	YES	P-value
Job satisfaction	3.439	3.873	0.000
Personality	3.549	3.755	0.009
Attitudes	3.659	3.919	0.001
Organizational Behavior	3.547	3.849	0.000

It is clear from the above-mentioned table (5) and graph that the average for all variables of the study is greater for who implement AI than for who do not implement AI, and this difference are significant as the p-value for all variables are less than 5%.

5. Model Testing

5.1 Granger Causality Test

The following table illustrates the values of Granger causality test for the main variables.

Table 6: Granger Causality test

Null Hypothesis:	Obs	F-Statistic	Prob.
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JOB_SATISFACTION does not Granger Cause USE_AI	210	1.38953	0.2389
USE_AI does not Granger Cause JOB_SATISFACTION		6.53996	0.0000
PERSONALITY does not Granger Cause USE_AI	210	0.46883	0.7586
USE_AI does not Granger Cause PERSONALITY		6.63383	0.0000
ATTITUDES does not Granger Cause USE_AI	210	1.37980	0.2424
USE_AI does not Granger Cause ATTITUDES		6.59972	0.0000

From the above table the researchers can conclude that:

- AI granger cause job satisfaction, but not vice versa this with confident 95%.
- AI granger cause personality, but not vice versa this with confident 95%.
- AI granger cause attitudes, but not vice versa this with confident 95%.

5.2 Multivariate Regression Model

In this model, we have three dependent variables and one independent variable.

Table 8: model coefficients

Model	Adjusted R Square
Job satisfaction	0.765
Personality	0.735
Attitudes	0.783

In the column labeled Adjusted R Square, the predictor variable explains 76.5%, 73.5%, 78.3%, of the variance in the outcome variables.

Dependent Variable	Parameter	B	Std. Error	T	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Job satisfaction	Intercept	.927	.215	4.314	.000	.504	1.351
	Use AI	.711	.055	13.001	.000	.603	.818
Personality	Intercept	1.819	.207	8.799	.000	1.411	2.226
	Use AI	.476	.053	9.063	.000	.373	.580
Attitudes	Intercept	1.854	.192	9.662	.000	1.476	2.232
	Use AI	.503	.049	10.318	.000	.407	.600

It is clear from the previous table that:

- AI has significant positive impact on job satisfaction, that increasing the use of artificial satisfaction, with coefficient = 0.711.
- AI has significant positive impact on personality, increasing the use of artificial satisfaction, with coefficient = 0.476.
- AI has significant positive impact on attitudes, increasing the use of artificial satisfaction, with coefficient = 0.503.

6. Discussion

6.1 Conclusion

The purpose of current paper is to examine the impact of the Artificial Intelligence usage on the Organizational Behavior. This resulted in proposing one hypothesis and three sub hypotheses; whereas the main one is related to Organizational Behavior, while the other three hypotheses are related to testing the impact of using the Artificial Intelligence on OB components such as job satisfaction, personality traits and attitudes. It is suggested through the results that more investigation in the future studies should cover the variable of attitude as there could be limitations to the study due to the impact of AI on organisational behavior components which can vary across different cultural and societal contexts of the respondent's demographic location. This is reflected in the difference of respondents' answers on question (1) and Question (2) regarding whether they were using AI or not and the formal implementation of AI inside their organization. Some moderating indicators of attitude reflection could be further tested to reflect the urgency, accessibility, and the presence of social pressure regarding AI excessive usage. According to Robbins (2022), the relationship between attitude-behavior is likely to develop strength if an attitude refers to something with which there is a direct past personal or learning experience, therefore the university graduates in Cairo might differ in the perspective of AI usage then graduates from other governorates in Egypt and even to a more global reflection from university graduates worldwide.

Moving to the research model results which revealed that the AI explains 71.1% of job satisfaction, as the belief that AI usage can replace/ease some simple administrative tasks accordingly it will increase the job satisfaction by 0.711 as the results in this paper showed. This increase in job satisfaction with 0.711 can be in the short term and might have negative impacts on the future leading to dissatisfaction out of fear of job displacement or ethical concerns. When simple administrative tasks are replaced by AI, low caliber graduates in higher education can face difficulty. Moreover, on an ethical platform intensive knowledge about AI usage and training provided to high caliber of university graduates can leave the less advantaged in a tough position as well. Further research can tackle the topic of ethical leadership in the equal opportunities' distribution of mentoring and training on AI usage in the workplace.

Moreover, the results show that AI explains only 47.6% of personality traits, which is partially like the study of (Krajčoviech, 2018) as it concluded that Personality is not something that can be defined by AI. On the contrary, the results of (Haydon, 2020), proved that there is a significant relationship between personality Agreeableness and the continuance usage of AI.

Furthermore, AI can affect people's attitudes by 50.3%. However, this paper suggests further investigation in this effect with respect to the direction of the attitudes shaped.

This is highlighted in a study in the field (Bughin, Hazan and Ramaswamy 2017), showed that AI tools can help mitigate cognitive biases and groupthink behaviors altering attitudes towards a more objective and a data-driven decision-making organisational culture. Regarding organisational positive outcomes of decision-making processes, further research by Davenport and Ronanki (2018) presents several case studies that highlight how AI-driven decision-making has positively impacted organizations in various industries. Another study by McKinsey & Company (2017) found that AI applications can automate repetitive tasks and reduce manual errors, leading to a 20-25% increase in the time spent on value-added activities and increased efficiency and productivity. More objective measures such as organisational outcomes can be assessed by implementing AI systems reflected in cost reductions and resource optimization. Haptik, (n.d.) an AI startup, reported that implementing chatbots resulted in a 30% reduction in customer support costs as chatbots replaced the human factor in hiring. AI enhances the overall customer experience, leading to increased customer satisfaction and loyalty by providing surveys targeting customer segments and recognizing them by name to tailor their products which gives a sense of trust to the customers (Davenport & Ronanki, 2018).

6.2 Managerial Implications

This paper provided a framework for understanding the expected changes in organizational behavior that accompanies the AI usage. Such a shift towards widening the scope of AI usage will disrupt the roles and responsibilities inside the organizations which will affect the decision-making process and the creative instincts of human workforce. Accordingly, managers are expected to reinforce AI usage for continuous learning and skill development among their employees as well as increasing the job satisfaction rate inside organizations. Also, AI usage allows the business units to tackle different opportunities inside the market and it provides valuable insights that facilitate their adaptation and development according to (Kaplan & Haenlein, 2019). At last, managers can benefit from expanding the usage of AI through shaping positive attitudes among the employees towards their organizations. According to a recent study by Dr. Ishida (2023) on AI usages and threat on privacy, she displayed that AI could influence opinions and attitudes inside workplace affecting development and progressiveness of the quality of human life and societies as a whole. Despite that AI can mitigate the cognitive risks of biases but AI as a tool can introduce behavioral biases as well in terms of accessibility in usage and fair equal opportunities. Regarding developing nations AI can create biases of cultural implications as it is mostly created by multi-national technology companies reflecting on global experiences not local or customized ones. Behavioral Favoritism and distorted perceptual errors including in-group biases (Peysakhovich, 2017) can arise in AI usage as some users can have the chance to use AI developed devices in their workplace and others are left disadvantaged because of budget constraints. Also, people from same teams with common interests can produce favorable results measured by behavioral economics research rather than those from different interests. Moreover, devices and Apps of AI are humanly controlled therefore it can induce some biases by including preferential search results based on demographic or certain preferred strata of the society. These results can cause distortions based on fed biased historical data and can affect the process of decision

making in the organization. Therefore, regular audits must be maintained to ensure transparency in the use of AI tools.

7. Limitations and Direction for Future Research

However, this research is limited by the fact that the sample encompassed a specific bracket of the young workforce age ranging from 20-35 years old even though they come from different backgrounds. An additional remark is that only a proportion of the sample of this young workforce used AI despite that it is available in many sources in their organisations, which give an insightful information that the impact on OB did not reach its ceiling effect and the multi-faceted issues like fear of being replaced by these machinery and technology are still a wider area for research. The change in mindset is inevitable and this paves the way to further future research that must tackle a wider age bracket and a more encompassing population as AI can be beneficial to be used by older people in different sectors of Businesses. Another comparative study can run including the Generation Z to highlight further applications in the school curriculum preparing the younger generation for more grasping of the AI interventions without fear. This paper focused on the impact of AI on Organizational Behavior thus, the researchers believe that there might be different results if this research's idea is applied to other frameworks such as the educational institutions or consumer behavior field. Future research can pave the way to study the impact of using AI on the organizational structure, on topics like cross-cultural communication to bridge gaps between societies as well as investigating the impact of implementing AI on leaders' decisions. Since most of the respondents of this study are of the young workforce age ranging from 20-35 years old the representativeness of the sample may be one of the limitations as it may not represent the entire population. Future research could develop more expanded samples crosswise over income, ages and may add occupation as well. This paves the way for further studies to highlight a different proportion of age bracket since people from age 35 years onwards are using AI tools in different organizations and are affected by its usage. Future research can also dig deeper into how AI may raise ethical and privacy considerations within an organizational context reflecting inquiries about equal opportunities in AI usage and the mitigating privacy risks vs benefits. Further variables as individual progress of talents management, creativity and interpersonal communication needed can be discussed in context of relationship and impact of AI usage in the workplace.

References

- Arkin, R. C. (2010). The case for ethical autonomy in unmanned systems. *Journal of Military Ethics*, 9(4), pp.(332-341)
- Artur Strzelecki (2023): To use or not to use ChatGPT in higher education? A study of students' acceptance and use of technology, *Interactive Learning Environments*, DOI:10.1080/10494820.2023.2209881
- Autor, D. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), pp.(3-30)

- Baigi, S. F., Sarbaz, M., Ghaddaripouri, K., Ghaddaripouri, M., Mousavi, A. S., & Kimiafar, K. (2023). Attitudes, knowledge, and skills towards artificial intelligence among healthcare students: A systematic review. *Health Science Reports*.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), pp.(99-120).
- Bhargava, A., Bester, M., & Bolton, L. (2021). Employees' Perceptions of the Implementation of Robotics, Artificial Intelligence, and Automation (RAIA) on Job Satisfaction, Job Security, and Employability. *Journal of Technology in Behavioral Science*, pp.(106-113).
- Blau, P. M. (1964). Exchange and power in social life. Transaction
- Bostrom, N., & Yudkowsky, E. (2014). The ethics of artificial intelligence. In *The Cambridge handbook of artificial intelligence* pp.(316-334). Cambridge University
- Braganza, A., Chen, W., Canhoto, A., & Sap, S. (2022). Gigification, job engagement and satisfaction: the moderating role of AI enabled system automation in operations management. *PRODUCTION PLANNING & CONTROL*, pp.(1534–1547).
- Brynjolfsson, E., & McAfee, A. (2014). The second machine age: work, progress, and prosperity in a time of brilliant technologies. WW Norton & Company.
- Bughin, J., Hazan, E., & Ramaswamy, S. (2017). Artificial intelligence: The next digital frontier? McKinsey Global Institute.
- Chui, M., Manyika, J., & Miremadi, M. (2018). What AI can and can't do (yet) for your business. *Harvard Business Review*, 96(1), pp.(96-104).
- Dajani, D., & Abu Hegleh, A. S. (2019). Behavior intention of animation usage among university students. *Heliyon*, 5(10), e02536. <https://doi.org/10.1016/j.heliyon.2019.e02536>
- Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, 96(1), pp.(108-116).
- Farooq, M. S., Salam, M., Jaafar, N., Fayolle, A., Ayupp, K., Radovic-Markovic, M., & Sajid, A. (2017). Acceptance and use of lecture capture system (LCS) in executive business studies. *Interactive Technology and Smart Education*, 14(4), pp.(329–348). <https://doi.org/10.1108/ITSE-06-2016-0015>
- Floridi, L., & Taddeo, M. (2018). What is data ethics? *Phil. Trans. R. Soc. A*, 376(2128), 20180081
- Grauw, S., ten Bos, R., Gaggioli, A., & Lucas, G. (2021). Personality and social consequences of AI. In *The Cambridge Handbook of AI Ethics* pp.(455-475). Cambridge University Press.
- Green, S., & Salkind, N. (2005). Using SPSS for Windows and Macintosh: Understanding and analysing data. Upper Saddle River, NJ, Prentice Hall.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational behavior and human performance*, 16(2), pp.(250-279).
- Haptik. (n.d.). How Haptik Used AI Chatbots to Reduce Customer Support Costs by 30%. Retrieved from <https://haptik.ai/blog/how-haptik-used-ai-chatbots-to-reduce-customer-support-costs-by-30/>
- Haydon, R. (2020). Haydon, R. (2020). TRUST IN ARTIFICIAL INTELLIGENCE: HOW PERSONALITY AND RISK EXPERIENCE AFFECT HUMAN-AI RELATIONSHIPS. (Doctoral dissertation, San Francisco State University).
- Hoi, V. N. (2020). Understanding higher education learners' acceptance and use of mobile devices for language learning: A Rasch-based path modeling approach. *Computers & Education*, 146, 103761. <https://doi.org/10.1016/j.compedu.2019.103761>.
- Huang, L., Chen, L., & Li, Z. (2020). Artificial intelligence in fighting against COVID-19: A survey. *IEEE Transactions on Big Data*, 6(4), pp.(1094-1104).
- Kaplan, A., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, 62(1), pp.(15-25).
- Kaya, F., Aydin, F., Schepman, A., Rodway, P., Yetişen, O., & Kaya, M. D. (2022). The Roles of Personality Traits, AI Anxiety, and Demographic Factors in Attitudes toward Artificial Intelligence. *International Journal of Human-Computer Interaction*, pp.(1-18).
- Khan, H. (2021). Types of AI | Different Types of Artificial Intelligence Systems. pp.(1-13).
- Ishida, Suda (2023). The Impact of AI (Artificial Intelligence) on Global peace and Security. Forum on Cultural Diplomacy in Africa, The Institute of Cultural diplomacy Berlin, Germany, 5-8 July 2023.
- Lahuerta-Otero, E., & Gutiérrez, R. C. (2022). Artificial Intelligence and Personality Tests: Connecting Opportunities. *Journal of Innovations in Digital Marketing*, pp.(29 – 33).

- Krajčoviech, Richard (2018). AI can predict your personality. Is this dangerous? European AI Alliance. European Commission.
- McKinsey & Company. (2017). Artificial Intelligence: The Next Digital Frontier? Retrieved from <https://www.mckinsey.com/~ /media/McKinsey/Industries/Advanced%20Electronics/Our%20Insights/How%20artificial%20intelligence%20can%20deliver%20real%20value%20to%20companies/MGI-Artificial-intelligence-full-report.ashx>
- Morrison, E. W. (2004). Employee voice behavior: integration and directions for future research. *Academy of Management Review*, 29 (3), pp. (479-492).
- Myung Ja Kim, Mark Bonn, Choong-Ki Lee & Sabena S. Hahn (2018). "Effects of personality traits on visitors attending an exposition: the moderating role of anxiety attachment", *Asia Pacific Journal of Tourism*. <https://doi.org/10.1080/10941665.2018>.
- Nankervis, A., Connell, J., Cameron, R., Montague, A., & Prikshat, V. (2021). 'Are we there yet?' Australian HR professionals and the Fourth Industrial Revolution. *Asia Pacific Journal of Human Resources*, pp.(3-19).
- Nankervis, A., Connell, J. A., Cameron, R., & Montague, A. (2019). 'Are we there yet?' Australian HR professionals and the Fourth Industrial Revolution. *Asia Pacific Journal of Human Resources*.
- Peysakhovich, Alexander and Rand, David G., In-Group Favoritism Caused by Pokémon Go and the Use of Machine Learning for Principled Investigation of Potential Moderators (August 29, 2017). Available at SSRN: <https://ssrn.com/abstract=2908978> or <http://dx.doi.org/10.2139/ssrn.2908978>
- Rao, A. S., Sivaprasad, S., Saini, A., & Mitra, D. (2021). AI-enabled customer service and support during COVID-19: Challenges and opportunities. *Journal of Business Research*, 136, pp. (536-54).
- Raza, S. A., Qazi, Z., Qazi, W., & Ahmed, M. (2022). E-learning in higher education during COVID-19: Evidence from black-board learning system. *Journal of Applied Research in Higher Education*, 14(4), pp. (1603-1622) <https://doi.org/10.1108/JARHE-02-2021-0054>.
- Rhee, T., & Jin, X. (2021). The Effect of Job Anxiety of Replacement by Artificial Intelligence on Organizational Members' Job Satisfaction in the 4th Industrial Revolution Era: The Moderating Effect of Job Uncertainty. *Journal of Digital Convergence*, pp. (1-9).
- Robbins, Stephen P., and Timothy A. Judges. (2022) *Organisational Behavior* 18th ed. Pearson Education LTD.
- Sekaran, U. (2003). *Research Methods for Business: A skill building approach*. 4th Edition. John Wiley and Sons, Inc.
- Sindermann, C., Zhou, M., Wernicke, J., & Sha, P. (2020). Assessing the Attitude Towards Artificial Intelligence: Introduction of a Short Measure in German, Chinese, and English Language. *Stanford University AI Index*. (n.d.). <https://aiindex.stanford.edu/resources/glossary>.
- Swed, S., & Alibrahim, H. (2022). Knowledge, attitude, and practice of artificial intelligence among doctors and medical students in Syria: A cross-sectional online survey.
- Rhoades, L. & Eisenberger, R. (2002). Perceived organisational Support, A review of the literature. *Journal of Applied Psychology*, 87 (4), pp.(698-714).
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, 46(2), pp.(186-204).
- Xu, X., Liu, Y., Yang, A., Tang, R., Cheng, J., Hu, H., ... & Liu, Q. (2021). COVID-19 pandemic dynamics and supply chain implications: A descriptive analytics study. *International Journal of Production Economics*, 232, 107921.
- Yan, X., Xu, Y., & Ma, J. (2020). A framework of human-AI interaction: The user, the agent, and the product. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 27(2).
- Zacharis, G., & Nikolopoulou, K. (2022). Factors predicting university students' behavioral intention to use eLearning platforms in the post-pandemic normal: An UTAUT2 approach with 'learning value.'. *Education and Information Technologies*, 27(9), pp.(12065-12082). <https://doi.org/10.1007/s10639-022-11116-2>.
- Zhou, X., Snoswell, C. L., Harding, L. E., Bambling, M., Edirippulige, S., Bai, X., & Smith, A. C. (2020). The role of telehealth in reducing the mental health burden from COVID-19. *Telemedicine and e-Health*, 26(4), pp.(377-379).

Appendix (A)	
Construct	Measuring Item
<p>Artificial Intelligence (AI) Developed by the Researchers</p>	<ul style="list-style-type: none"> • The implementation of AI influences the level of efficiency in my organization • The integration of AI technologies affects my overall performance in my organization • The introduction of AI technologies impacted the Job roles and the Responsibilities within my organization • The use of AI changed my working life • I believe that training on AI technology will provide with a wider scope of usage • AI networks are accessible to all employees in my organization • AI technology is expected to impact organizational behavior for my industry in the future • The ethical implication of AI technology regarding privacy, data security, and potential misuse are controversial
<p>Job Satisfaction Brown, S. et al. (2021); Zhang, H. et al. (2019)</p>	<ul style="list-style-type: none"> • The use of AI technology in the workplace has positively impacted my level of job satisfaction • I believe that the use of AI technology reduces the monotony of repetitive tasks in my job. • When I use AI technology, the connection between myself and my manager increases • The use of AI technology, opens the venue for more significance to my work • The use of AI technology is an enhancement to my skills • AI technology usage and knowledge leads to faster promotion and upgrade of my career
<p>Personality Wang, H. et al. (2023); Lee, S. et al. (2023)</p>	<ul style="list-style-type: none"> • My personality was affected by using AI technology • AI technology can interpret my personality traits • The use of AI technology makes it easier to achieve my work-life balance • The use of AI technology opens venues for more extroversion learning • The use of AI technology increases my exposure to more experience at work • The increased use of AI technology can interfere with my work ethics on the long run • The use of AI technology is useful to manage my stress in meeting deadlines • I prefer working with AI tools than working with a disagreeable coworker
<p>Attitude Ju, B., Lee, Y., Park, S. and Yoon, S.W., (2021);Bartkowiak, G., Krugielka, A., Dachowski, R., Galek, K. and Kostrzewa-Demczuk, P.,(2020)</p>	<ul style="list-style-type: none"> • I believe that AI technology improves my learning • I believe that AI technology generates new knowledge to me <p style="text-align: center;">Affective</p> <ul style="list-style-type: none"> • I believe that the use of AI technology is a credible source of information for decision making in my work organization • I believe that the use of AI technology ensures mutual trust between myself and my coworkers • I fear that the use of AI technology can replace my position in certain tasks <p style="text-align: center;">Behavioural</p> <ul style="list-style-type: none"> • I believe that my use of AI technology helped me save time during challenging times • I believe that my behavior has to adapt to the use of AI in my domain of work

All the amended statements of the above questionnaire had been revised by Business Administration professors at the British University in Egypt.