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Attitude Towards Artificial Intelligence and Personality Traits among Research Scholars

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Abstract

Artificial intelligence can be defined as the capability of a device to perform functions that are normally associated with human intelligence, such as reasoning, learning, and self-improvement (Willick, 1983). Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment (Gordon Allport, 1937). Attitudes toward AI among research scholars are likely shaped by a combination of their professional environment, personal experiences, and personality traits. This study aims to examine attitudes towards AI and personality traits among research scholars. It includes a sample of 100 research scholars. The tools employed in the study are Attitude Towards AI (AAI) and the Big Five Personality Inventory (BFI). Results suggest that there is a positive significant relationship between attitude towards AI and personality traits and it is strongly correlated with agreeableness personality trait ($r = 0.97$, $^{**}p < 0.01$). It can be suggested that personality traits shape how individuals evaluate the usefulness, risks, and ethical implications of AI, impacting their acceptance and adoption of AI technologies.

Introduction:

"The integration of AI into research is not just a tool upgrade—it's a paradigm shift in how knowledge is created"

Brynjolfsson & McAfee, 2017

In the contemporary world, artificial intelligence is everywhere, and people are gradually becoming used to it. Research scholars' attitudes toward artificial intelligence (AI) and their link to

personality traits are an emerging focus in psychology and technology. As key contributors to future technological advancements, scholars' perceptions influence how they accept and integrate AI in research. These attitudes shaped by personal experience, knowledge, and personality traits can range from enthusiasm to resistance (Tegmark, 2017).

1.1 Artificial Intelligence

Artificial Intelligence (AI) is revolutionizing how humans interact with technology, especially in marketing, where it enables personalized targeting by predicting customer needs and behavior (Otero, 2022). Globally, AI is recognized as a highly disruptive technology, with public attitudes varying by country. A survey by Ipsos revealed higher skepticism in wealthier nations, with China, Saudi Arabia, and India leading in AI acceptance (Lu, 2023). While India shows growing interest, increased awareness and focus are still needed. Overall, AI is making a profound and widespread impact across sectors.

1.2. Personality

Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to the environment, Allport, (1937).

The Big Five personality traits include: Openness to Experience, which reflects curiosity, creativity, and a willingness to explore new ideas; Conscientiousness, indicating self-discipline, organization, and impulse control; Extraversion, introduced by Carl Jung (1933), describing individuals who gain energy from social interaction and external activities; Agreeableness, which reflects a person's tendency to be friendly, cooperative, and compassionate; and Neuroticism, which involves emotional instability and a tendency to experience negative emotions like anxiety, anger, or depression.

1.3. Need for the study

This study highlights that attitudes toward AI—whether positive or negative—can influence its use in research, especially among research scholars (Hogg, 2005). Since personality is dynamic, individuals' acceptance, adaptation, and understanding of AI may vary based on their personality traits. To effectively integrate generative AI into research, it is essential to consider scholars' attitudes alongside their personality differences. This study serves as a foundation for future research in this area.

Recent studies emphasize the critical role of personality traits in shaping individuals' attitudes toward Artificial Intelligence (AI). According to Park and Woo (2022), "personality traits such as extraversion, agreeableness, conscientiousness, and neuroticism significantly influence perceptions of AI's emotional and functional aspects," with personal innovativeness being a strong predictor of positive attitudes. Kieslich and Marcinkowski (2022) confirmed that the relationship between personality and AI attitudes is "complex and context dependent," highlighting the need for domain specific studies. Hosanagar and Saxena (2021) found that "openness to experience increases trust in AI decision making," while neuroticism contributes to skepticism. Shin (2020) reported that individuals high in openness and extraversion "tend to perceive AI personal assistants as friendly and helpful," whereas those with higher neuroticism levels expressed greater concerns about privacy and trust. Similarly, Brougham and Haar (2018) concluded that "openness promotes optimism toward AI in the workplace," while neuroticism fuels resistance and fear. Smith (2020) emphasized that "students with high self-esteem and confidence are more likely to succeed academically and creatively," linking positive personality traits to success. Brown and Taylor (2019) observed that "AI related job insecurity increases neuroticism and anxiety,"

particularly in workplace settings. Collectively, these findings suggest that personality traits especially openness, neuroticism, and agreeableness are central to how individuals engage with AI. They underscore the need for thoughtful and personalized approaches when integrating AI into education, research, and the workplace.

Although AI is increasingly used in academic research, research scholars display differing attitudes toward its adoption, which may be influenced by personality traits. However, limited research has examined this link in academic settings, highlighting the need to explore how personality traits shape scholars' attitudes to support effective AI integration.

Objectives and Hypotheses

2.1 Objectives

• To measure the level of Attitude Towards AI and Personality Traits among research scholars.

• To measure whether Personality Traits predicts Attitude Towards AI in research scholars.

• To measure the difference in attitude towards AI and personality Traits with gender.

2.2 Hypotheses

H_1 – There will be a significant positive relationship between Attitude Towards AI and Personality Traits dimension among research scholars.

H_2 – There will be a significant influence of Personality Traits on Attitude Towards AI among research scholars.

H_3 – There will be a significant gender difference in Attitude Towards AI and Personality Traits dimension among research scholars.

Methodology

The methodology is carried out with the aim of measuring variables like Attitude Towards AI and Personality

Traits, and hypotheses are developed based on the objectives of the study

3.1.Aim

The study aim is to investigate the relationship between Attitude Towards AI and Personality Traits among Research Scholars.

3.2. ResearchDesign

The correlational research design is appropriate for the study.

3.3.Variables

3.3.1.IndependentVariable

• Personality Traits

3.3.2.DependentVariables

• Attitude Towards AI

3.3.3.OtherControlVariable

• Gender

3.4.Sampling Method

3.4.1. Population

The Population of this study is research scholars located in southern districts of Tamil Nadu.

3.4.2. Method

A total of 100 research scholars (50 males and 50 females), aged between 25 and 45, were selected using a non-probability purposive sampling method. Participants were chosen based on specific inclusion and exclusion criteria relevant to the study.

3.4.3. Sample Size Estimation

With a confidence level of 99%, a margin of error of ±10%, and an estimated population proportion of 15%, a sample size of 100 was determined to be sufficient from a total population of 1,000. This means that surveying 100 or more individuals ensures a 99% confidence that the true population value lies within 10% of the observed results.

3.4.4. Inclusion Criteria

The study focused exclusively on research scholars from the southern districts of Tamil Nadu, specifically those aged 25 to

45, and included participants from arts and science disciplines only

3.4.5.Exclusion criteria

The study excluded individuals not actively involved in research, those residing outside Tamil Nadu, research scholars below 25 or above 45 years of age, and individuals from disciplines such as engineering, medicine, law, and management

3.5.Measures

3.5.1.Scale for Attitude Towards AI (ATA)

The *Scale for Attitude Towards AI*, developed by Ms. Shankhabela Mukherjee and Prof. Subrata Dasgupta (2024), measures attitudes toward AI across dimensions such as perceived benefits, ethical concerns, trust, and fear. It consists of approximately 30 items rated on a 5-point Likert scale. The scale demonstrates good reliability, with Cronbach's Alpha ranging from 0.80 to 0.90 and test-retest reliability of 0.70. Validity is supported through content, construct, and criterion validity (0.40–0.50), confirmed by methods such as factor analysis.

3.5.2. Big Five Personality Inventory (BFI)

The *Big Five Personality Inventory* (BFI), developed by John & Srivastava (1999), assesses five core personality traits—Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism using 44 items rated on a 5-point Likert scale. The inventory demonstrates strong construct and convergent validity, with high internal consistency (Cronbach's Alpha: 0.70–0.90) and good test-retest reliability (0.70–0.90), indicating both accuracy and stability over time.

3.6. Procedure

Data were collected from research scholars aged 25 to 45 in the southern districts of Tamil Nadu through voluntary participation. After explaining the study and obtaining informed consent, participants completed the *Scale for*

Attitude Towards AI and the *Big Five Personality Inventory*. They were assured of confidentiality, informed of their right to withdraw at any time, and instructed to answer all items honestly without time pressure. The entire process, including demographic details and both questionnaires, took approximately 20 to 30 minutes per participant.

3.7. Ethical Consideration

Demographic Variables	Categories	Frequency	Percentage (%)
Age	25	3	3
	26	13	13
	28	9	9
	30	9	9
	34	20	20
	36	10	10
	38	10	10
	42	20	20
	44	6	6
Gender	Male	50	0.5
	Female	50	0.5
Marital Status	Married	60	0.6
	Unmarried	40	0.4
Research Discipline	Arts	56	0.56
	Science	44	0.44
Research	Less than 1 year	23	0.23

Experience	More than 2 years	35	0.35
	More than 5 years	37	0.37
	More than 10 years	5	0.5
Research Work Institution	Government	46	0.46
	Private	54	0.54

Participants were informed about the study procedures and potential risks in a language they understood. Participation was voluntary, with the right to withdraw at any time. Informed consent was obtained prior to administering the self-report measures, and participants were assured of confidentiality and anonymity throughout the study.

3.8. Demographic Details

Age, gender, marital status, discipline, years of research experience, research work institution.

3.9. Statistics Analysis

The study employs descriptive statistics (mean and standard deviation) and inferential statistics, including Pearson's correlation, t-test, and regression analysis.

Results

The study's findings, based on the tested hypotheses, were analyzed using SPSS. Descriptive statistics (mean and standard deviation) and inferential statistics (Pearson's correlation, t-test, and regression) were employed. The discussion section interprets these results and emphasizes their significance.

Table 4.1

Demographic Characteristics

Table 4.2

Normality Testing of the Study Variables

Variables	N	Mean	Skewness	Kurtosis
Attitude Towards AI	100	44.52	1.15	2.17
Openness	100	30.72	0.68	0.80
Conscientiousness	100	27.78	-0.02	-0.46
Extraversion	100	19.04	1.66	2.08
Agreeableness	100	22.07	-0.41	-0.62
Neuroticism	100	9.99	-0.19	0.08

Table 4.3

Relationship between Attitude Towards AI and Personality traits among Research Scholars

Variables	Dimensions	N	Mean	Standard Deviation	*r* value
Attitude Towards AI		100	44.52	45.21	
Personality Traits	Openness	100	30.72	5.44	0.66**
	Conscientiousness		27.78	4.55	0.56**
	Extraversion		19.04	4.23	0.40**
	Agreeableness		22.07	3.61	0.97**
	Neuroticism		9.99	10.10	0.34**

**p<0.01

Table 4.4

Linear Regression for Prediction of Personality Traits over Attitude Towards AI

	Unstandardized coefficient		Standard coefficient	*t*
	B	Standard Error	B	
(constant)	32.00	6.42		4.981
Openness	0.89	0.15	0.47	5.744
Conscientiousness	0.63	0.16	0.28	3.778
Extraversion	0.57	0.17	0.23	3.369
Agreeableness	0.97	0.23	0.47	0.409
Neuroticism	0.13	0.21	0.29	0.630

R = 0.76 R^2 = 0.57 F = 25.85 ** p < 0.01

Table 4.5

Gender Difference in Relation to Personality Traits and Attitude Towards AIamong research scholars

Variables	Categories	N	X	SD	*t*
Attitude Towards AI	Male	50	90.10	10.73	1.03**
	Female	50	87.98	9.69	
Personality Traits					
Openness	Male	50	31.18	5.95	
	Female	50	30.26	4.90	5.77**
Conscientiousness	Male	50	27.64	4.42	
	Female	50	27.92	4.73	3.77**
Extraversion	Male	50	20.06	5.02	
	Female	50	18.02	2.96	3.36**
Agreeableness	Male	50	22.36	3.54	
	Female	50	21.78	3.68	0.63**
Neuroticism	Male	50	20.10	2.98	
	Female	50	19.26	3.16	0.40**

**p<0.01

Discussion

The aim of the study is to investigate the relationship between Attitude Towards AI and Personality Traits among research scholars. The statistical

techniques used for data analysis were Pearson's correlation to find the relationship between Attitude Towards AI and Personality Traits, t- test to find out the gender differences among research scholars, and regression analysis to find out the influence of Personality Traits on Attitude Towards AI. The data was analysed using the Statistical Package for Social Sciences (SPSS) for Windows version 23.0.

The study's findings show that there is a significant positive relationship between Attitude Towards AI and Personality Traits among research scholars. A previous study has also found a significant positive relationship between Attitude Towards AI and Personality Traits (Park and Woo 2022). The Attitude Towards AI is strongly correlated with agreeableness, this was found in the previous study (Stein et al.2024) and weakly correlated with neuroticism (Sindermann et al. 2022) this previous study supports the findings.

There is significant influence of Personality Traits on Attitude Towards AI among research scholars. The result also showed that Personality Traits is significantly strong predictors of Attitude Towards AI (Babiker et al., 2023). This study shows that Personality Traits significantly influenced the Attitude Towards AI, the previous study supports the findings.

There is also a significant difference in the level of Attitude Towards AI and Personality Traits among male and female research scholars. Male research scholars have higher levels of openness, extraversion, agreeableness, neuroticism, and Attitude Towards AI than female research scholars. Previous studies predicted the same (Armutat et al., 2023). This study shows that males are more likely to have a positive attitude towards AI than female research scholars.

Summary and conclusion

This chapter presents a summary of the study, key findings, suggestions, implications, limitations, and the overall conclusion.

5.1. Summary

The study aimed to examine the relationship between personality traits and attitudes toward AI among research scholars, using a correlational research design. Personality traits served as the independent variable, and attitude toward AI was the dependent variable. Data were collected from 100 research scholars in the southern districts of Tamil Nadu using the *Scale for Attitude Towards AI* (Mukherjee & Dasgupta, 2024), the *Big Five Personality Inventory* (John & Srivastava, 1999), and a personal data sheet for demographic details. The study tested three hypotheses: (H1) a significant positive relationship exists between personality traits and attitude toward AI; (H2) personality traits significantly influence attitude toward AI; and (H3) there is a significant gender difference in both variables. Data were analyzed using SPSS version 23.0, employing Pearson's correlation, t-test, and regression analysis.

5.2. Findings

The following findings were drawn from the study

- There is a significant positive relationship between Attitude Towards AI and Personality Traits dimension among research scholars.
- There is a significant influence of Personality Traits on Attitude Towards AI among research scholars.
- Male research scholars are significantly higher on Attitude Towards AI and Personality Traits such as openness, extraversion, agreeableness and neuroticism than their female counterparts.

5.3. Limitations

- The study was limited to southern districts, reducing its generalizability to other regions.
- A small sample size (n = 100) may not adequately represent the broader population of research scholars.
- Only research scholars from arts and science disciplines were included.
- Self-reported measures may be affected by social desirability bias.
- Exclusion of younger and older scholars' limits applicability across all age groups

5.4. Suggestions and Recommendations

- Identifying attitude towards AI in research scholars will help in understanding acceptance and adoption.
- Future studies can see longitudinal changes in attitude towards AI and increase the trust in AI systems among research scholars.
- Other variables such as perceived usefulness, innovation mindset, and cognitive closure may also be explored

5.5. Implications of the study

The study's implications highlight the importance of improving human-AI collaboration among research scholars, addressing ethical and social concerns, and guiding them through targeted training and education. It also emphasizes understanding personality differences to enhance effective AI usage in research.

5.6. Conclusion

The study concluded that the attitude towards AI and Personality Traits are strongly related variables. Personality Traits have a significant influence on attitude towards AI in research scholars of southern districts in Tamil Nadu.

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