Turkish Consumers' Attitudes Towards Artificial Intelligence: A Quantitative Study

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Abstract

This study explores the attitudes of Turkish individuals towards artificial intelligence (AI) and whether these attitudes alter according to demographic factors like age, gender, and education. Data were collected via an online survey between June 16 and June 22, 2025, from social media users. 322 valid responses were collected in total. The survey used the General Attitudes towards Artificial Intelligence Scale (GAAIS) developed by Schepman and Rodway (2023), which measures both supportive and cautious perspectives toward AI. Findings indicate that participants generally have a positive attitude toward artificial intelligence while also demonstrating a certain level of awareness regarding its potential risks. Younger participants and those with higher educational backgrounds tended to have more favorable attitudes, whereas older individuals and those with lower education displayed more reserved or neutral positions. When examined by gender, no statistically significant differences were identified between male and female participants in either positive or negative attitude scores, suggesting similar perceptions among men and women. By providing updated insights into how Turkish consumers approach AI, this research contributes to academic literature on technology adoption and human–machine interaction and supports and extends current academic knowledge. The findings also underline the importance of considering demographic differences when assessing societal readiness for new technologies, offering a basis for future studies in this field.

Keywords: Artificial Intelligence (AI); Attitudes; Türkiye; Demographic Factors

Introduction

Attitudes toward artificial intelligence (AI) encompass individuals' cognitive, emotional, and behavioral tendencies regarding these systems. As human-machine interaction intensifies, while positive perceptions of AI emerge, various concerns and anxieties also arise. Positive attitudes facilitate the acceptance of AI applications, whereas negative views may slow down the integration of AI technologies

into daily and professional life. Therefore, understanding the attitudes of individuals—especially those involved in fields such as healthcare and education where AI usage is frequent—has become a significant focus of many studies.

The existing literature reveals a growing number of studies examining AI-related attitudes. These investigations often aim to measure the perceptions of university students, healthcare professionals and students, employees from various sectors, and the general public toward AI. Research conducted in Türkiye on AI and attitudes similarly follows this trend. However, due to the dynamic nature of AI, characterized by continuous evolution and rapid advancements, research in this field must also adapt accordingly.

This study aims to assess the positive and negative attitudes of individuals in Türkiye toward AI technologies. Using the "The General Attitudes towards Artificial Intelligence Scale (GAAIS) by Schepman and Rodway (2022), the research will examine if these attitudes significantly vary in terms of demographic factors (age, gender, and education level).

Literature Review

Recent technological advancements have brought remarkable developments in AI and AI technologies, increasingly utilized across diverse disciplines from information technology and engineering to communication, healthcare, education, telecommunications, and psychology; thus have attracted growing academic interest (Chiu & Chai, 2020; Sindermann et al., 2021). AI is often a topic of debate in terms of its advantages and disadvantages, including ease of use, applicability, creativity, ethical and legal considerations. AI was first introduced by John McCarthy at the Dartmouth Conference in 1956 (Zhang & Lu, 2021) and defined as the capability of digital machines to perform tasks that typically require intelligent beings (Chiu et al., 2023; Fetzer, 1990). Tasks once only executable by humans are now achievable through computer-based systems, enabling AI to integrate into both professional environments and everyday activities (Olhede & Wolfe, 2018; Zhang & Chen, 2020). This widespread adoption has accelerated academic research on attitudes and perceptions toward AI's positive and negative dimensions (Calvo-Rubio & Ufarte-Ruiz, 2022; Caparros et al., 2022).

Attitudes toward AI remain a frequently addressed topic in current academic discussions. ttitudes toward AI remain a frequently addressed topic in current academic discussions. Ajzen (1989) defines attitude as cognitive, emotional, and behavioral tendencies toward any object, event, or phenomenon. Thus, attitudes toward AI encompass the full range of users' positive and negative inclinations. AI applications, increasingly present in daily life through human-machine interaction, are received with both acceptance and skepticism or fear (Sindermann et al., 2021).

Anderson et al. (2018) surveyed 979 experts who generally agreed that AI's rise will benefit most individuals in the near future, though they also emphasized potential threats such as reduced human agency, restricted freedom, and job losses. Another study by Cave et al. (2019) in the UK deployed a comprehensive survey to understand public perceptions of AI, gathering views on eight widely accepted statements—four positive and four negative—about AI's nature and effects. Findings revealed that 42% of participants had a reasonable understanding of AI, while 25% equated AI with robots. Most respondents expressed concern about AI becoming more powerful than humans and lacking sufficient control, highlighting prevalent anxieties.

In 2020, the Pew Research Center conducted a global survey measuring AI perceptions across 20 societies, finding that 53% viewed AI as positive progress for societal development, while 33% regarded

it negatively. Gender-based analysis showed men generally held more favorable views than women, e.g., in Japan, 73% of men saw AI positively compared to 56% of women (Johnson & Tayson, 2020).

Research on AI's impact also frequently targets the education sector. In 2025, a study investigating attitudes of undergraduate video game design students toward AI and its role in generating visual content found that, despite some fears of AI posing threats, participants believed the benefits outweighed the drawbacks (Sáez-Velasco et al., 2025). AI applications such as OpenAI's ChatGPT, noted for conversational ability and potential to enhance learning experiences, have garnered growing attention in this field. A 2024 narrative review synthesized empirical studies exploring ChatGPT's acceptance among educators and students, identifying factors such as perceived usefulness, ease of use, trust, and social influence as key determinants (Kfairy, 2024). Similarly, quantitative research assessing university students' AI attitudes revealed they use AI as a resource in their academic work and learning processes (Escalante Jimenes, 2024).

AI systems designed to mimic human behavior are increasingly applied in healthcare, necessitating measurement of public reputation, perception, and attitudes. A recent survey involving 600 adults in Florida, USA, showed more favorable views toward AI in health tasks not requiring direct doctor interaction, while concerns persisted regarding AI use in treatment processes involving direct patient-doctor contact (Witkowski et al., 2024). Studies also indicate patient apprehension about AI's accuracy in diagnosing rare diseases and emphasize the need for AI to function within trustworthy patient-doctor relationships (Hallowel et al., 2022).

Further research in the medical field compared trust levels in AI use across dermatology, radiology, and surgery, finding greater confidence in dermatology applications (Yakar et al., 2022). Healthcare professionals' attitudes are also studied; an American Medical Association report from 2025 indicated a 4% decrease from 2023 in doctors reporting more excitement than concern about AI, with trust increasing as oversight improves (Diaz, 2025).

In Türkiye, various academic investigations have examined AI attitudes across sectors. A descriptive study with 270 adults found no significant demographic differences in AI attitudes, which tended to be positive (Köseoğlu & Köse, 2025). Research on public library staff revealed more favorable views toward AI's economic and routine task benefits than concerns about surveillance or potential risks (Kavak, 2024). Studies with Turkish language teacher candidates reported moderate AI attitudes, varying by classroom level, usage, and knowledge (Sarıkaya & Kavan, 2024). Dental students showed awareness of AI's advantages in data integration, speed, objectivity, and diagnostic accuracy, while expressing greater concern about empathy effects compared to professionals (Yılmaz et al., 2024). Nurses' attitudes correlated positively with gender, age, tenure, marital status, and parenthood, while education, health status, and work variables did not significantly affect attitudes (Kandemir & Azizoğlu, 2024).

The growing impact and adoption of AI in daily life, coupled with technological advances, correspond with an increase in national and international research across various domains. These studies assess general public attitudes and focus on specific fields such as health and education. As AI becomes more integrated into our lives, we see a corresponding increase in academic research, both in Türkiye and internationally. This study attempts to identify Turkish consumer attitudes. In doing so, it provides a current dataset of consumer perceptions toward AI.

Research

This section presents the aim of the study, the research methodology and key findings.

Purpose and Method of the Study

The main goal of this research is to explore Turkish individuals' attitudes toward artificial intelligence and weather it vary significantly based on certain demographic variables, namely age, gender, and level of education. In line with this objective, the following hypotheses have been formulated:

H1: Positive attitudes toward artificial intelligence differ significantly depending on (a) age, (b) gender, and (c) educational background.

H2: Negative attitudes toward artificial intelligence differ significantly depending on (a) age, (b) gender, and (c) educational background.

A questionnaire was utilized as the primary data collection tool in this study. The survey was designed as a single form consisting of two sections. The first section included three multiple-choice questions aimed at identifying participants' demographic characteristics. The second section featured 20 statements related to attitudes toward artificial intelligence, measured using a five-point Likert scale ranging from *strongly agree* to *strongly disagree*. These items were designed to assess both positive and negative perceptions of AI technologies

The sample group of the study was selected from among active social media users. Between June 16 and June 22, 2025, participants were reached through platforms such as WhatsApp, Instagram, and LinkedIn. They were invited to complete the survey via a shared link directing them to the online platform Webanketa. A total of 322 valid responses were collected, and all statistical analyses were carried out based on this dataset. To ensure that each participant completed the survey only once, IP-restriction settings were activated within the survey system.

In this study, the scale items were adapted from *The General Attitudes towards Artificial Intelligence Scale (GAAIS): Confirmatory Validation and Associations with Personality, Corporate Distrust, and General Trust*, a 2023 article by Astrid Schepman and Paul Rodway. The GAAIS scale demonstrated high reliability. The Cronbach's Alpha coefficient for the Positive Attitude sub-dimension was calculated as 0.928, while the Negative Attitude sub-dimension yielded a value of 0.896. These results indicate that the scale possesses strong internal consistency and reliably measures attitudes toward artificial intelligence.

Statistical Analysis of Data

The data obtained, were evaluated using the IBM SPSS Statistics for Windows, Version 22.0 (SPSS INC., Chicago, IL, USA). To determine the descriptive characteristics of the participants, frequency and percentage analyses were used and mean and standard deviation statistics were used to examine the scale. To determine whether the research variables showed a normal distribution Kurtosis and Skewness values were examined (Table 2). According to Tabachnick and Fidell (2013) a normal distribution is accepted when the results regarding the kurtosis and skewness values of the variables are between +1.5 and -1.5 and according to George and Mallery, (2010) it is +2.0 and -2.0. For our study, it was determined that the variables showed a normal distribution. Independent groups t-test, Anova and post hoc analyses were used to examine the differences in scale levels according to the descriptive characteristics of the participants.

Findings

Table 1. Distribution of the Participants According to Descriptive Characteristics

	Frequency (n)	Percentage (%)
Age		
18-28	114	35,4
29-39	94	29,2
40-50	51	15,8
51 and above	63	19,6
Gender		
Male	143	44,4
Female	179	55,6
Education Level		
High school and below	31	9,6
Bachelor's degree	216	67,1
Master's degree	42	13,0
Doctorate (PhD)	33	10,2

The findings regarding the descriptive characteristics of the participants are presented in Table 1.

Table 2. Mean Scores of Attitudes Toward Artificial Intelligence

	N	Mean	SD	Min.	Max	Scale Range	Kurtosis	Skewness	Alpha
Positive Attitude	322	3,682	0,701	1,000	5,000	1-5	0,963	-0,781	0,928
Negative Attitude	322	2,936	0,654	1,380	4,500	1-5	-0,497	0,096	0,896

Higher scores on both subscales indicate more positive attitudes toward artificial intelligence. A high score on the "Positive Attitude" represents individuals who support the benefits and use of AI, while a high score on the "Negative Attitude" subscale refers to those who perceive the potential risks of AI as less threatening.

The average score for the Positive Attitude subscale is 3.682 (SD = 0.701), with scores ranging from 1 to 5 based on Table 2. This suggests that participants generally hold a favorable view of artificial intelligence. On the other hand, the Negative Attitude subscale has an average score of 2.936 (SD = 0.654), and also ranging between 1 and 5. This shows that participants may have a neutral or slightly negative perspective regarding the adverse aspects of artificial intelligence.

These findings indicate that participants generally have a positive attitude toward artificial intelligence, while also demonstrating a certain level of awareness regarding its potential risks.

Table 3. Variation in Attitudes Toward Artificial Intelligence Based on Descriptive Characteristics

Demographic Characteristics	n	Positive Attitude	Negative Attitude
Age		Mean ± SD	Mean ± SD
18-28	114	3,828±0,541	2,988±0,629
29-39	94	3,646±0,801	3,016±0,695
40-50	51	3,691±0,667	2,750±0,609
51 and above	63	3,464±0,773	2,873±0,650
F=		3,868	2,305
p=		**0,010**	0,077
PostHoc=		1>4 (p<0.05)	
Gender		Mean ± SD	Mean ± SD
Male	143	3,711±0,762	2,999±0,691
Female	179	3,659±0,649	2,886±0,621
t=		0,658	1,553
p=		0,511	0,121
Education Level		Mean ± SD	Mean ± SD
High school and below	31	3,094±0,866	2,581±0,560
Bachelor's Degree	216	3,701±0,654	2,921±0,646
Master's Degree	42	3,843±0,563	3,137±0,646
Doctorate (PhD)	33	3,904±0,722	3,110±0,672
F=		9,944	5,398
p=		**0,000**	**0,001**
PostHoc=		2>1, 3>1, 4>1 (p<0.05)	2>1, 3>1, 4>1, 3>2 (p<0.05)

F: ANOVA Test; t: Independent Samples T-Test; PostHoc: Tukey, LSD

According to the table, attitudes toward artificial intelligence significantly differ based on age and educational level. A statistically significant difference was observed in positive attitude scores among age groups (p = 0.010), indicating that individuals aged 18–28 exhibit more favorable attitudes toward AI compared to those aged 51 and above. However, no significant difference was found between age groups in terms of negative attitude scores (p = 0.077).

When examined by gender, no statistically significant differences were identified between male and female participants in either positive or negative attitude scores (p > 0.05). On the other hand, educational level showed significant variation in both sub-dimensions. Participants with a university degree, a master's, or a doctoral degree demonstrated more positive attitudes toward AI than those with a high school education or lower (p = 0.000). Regarding negative attitudes, individuals with a master's or doctoral degree had higher scores compared to those with only a high school or undergraduate education (p = 0.001).

Discussion and Conclusion

This study explores the attitudes of Turkish customers toward artificial intelligence and compares the findings with those of previous research in the literature. The results reveals that, while participants accept the potential risks related with Artificial Intelligence, their overall attitude toward it in general is positive.

According to a study by Grassini and Ree (2023), younger people see artificial intelligence as a positive technical development, whereas older people see it as a possible danger. Baisch (2022) also discovered that younger generations are more receptive to the benefits that technology provides, whereas elderly people react to it differently on an emotional and cognitive level. Our study show consistent results with the existing literature.

Also our study reveals that there is no discernible difference in the positive or negative opinions regarding AI between male and female participants when the gender variable is taken into account.. Additionally, studies indicate that gender has little effect on public perceptions of AI. Although men are more interested in AI than women, Kovačević and Demic (2024) could not find any discernible difference in opinions overall. Furthermore, Jiang and Qi (2024) contended that people's interactions with technology are far more important in predicting AI adoption than gender.

One notable determinant of attitudes toward AI is educational background. Study shows that those who have earned bachelor's, master's, and doctoral degrees have more favorable opinions on artificial intelligence. Postgraduate degree holders, however, also seem to be more conscious of the dangers posed by AI. According to Kharroubi et al. (2024), people's attitudes regarding AI improve as they become more aware of technology advancements as their educational attainment rises. In a different study, Chaya and Salman (2023) looked at how education level affected AI adoption and discovered that people with more education embrace AI faster.

Based on these results, it may be hypothesized that raising public understanding of AI, especially among the elderly and less educated, could help AI technology become more widely accepted. Targeted awareness campaigns and educational initiatives could help allay people's worries about AI's uses while also boosting public confidence in the technology. To better examine attitudes about AI, future research could incorporate other sociodemographic, psychological, or cultural factors. Furthermore, the results may be more broadly applicable if the sample size is increased. We think the current study's results will serve as a guide for future research and offer a significant and worthwhile foundation for scholarly investigations in this field.

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