

Not All AI Anxiety Is Equal: Differential Predictors of AI Attitudes



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Background

- Research indicates widespread adoption of AI in higher education, with 22% of undergraduates utilizing these models "very frequently" for their studies (von Garrel & Mayer, 2023).
- AI use remains controversial, with research finding both favorable and unfavorable outcomes associated with positive attitudes toward AI.
- Given that positive attitudes toward AI correspond with a wide range of both advantageous and harmful effects, it is important to explore the psychological factors driving their perspective to truly understand why individuals hold these views.
- Kaya et al. (2022), found that knowledge of AI, AI learning anxiety, AI configuration anxiety, and job replacement anxiety predict positive attitudes toward AI among Turkish university students.
- The current study aimed to investigate if AI anxiety and AI literacy predict AI attitudes among U.S. college students.

Method

Participants

- 89 Introductory Psychology students.

Measures

- **AI Literacy Scale** - Only the AI fundamentals subscale was used, which measures understanding of the technical fundamentals of AI. Higher scores indicate greater levels of understanding.
- **AI Anxiety Scale** - Measures anxiety around AI. Higher scores on the subscales indicate greater anxiety. This measure has 4 subscales:
 - **Learning anxiety** - Measures anxiety about learning to use AI.
 - **AI configuration anxiety** - Measures anxiety about humanoid AI (e.g., robots).
 - **Job replacement anxiety** - Measures anxiety about AI taking human jobs.
 - **Sociotechnical blindness** - Measures anxiety about AI's broader societal impact.
- **Attitudes Towards Artificial Intelligence Scale (ATTARI-12)** - Measures attitudes toward AI. Higher scores indicate positive attitudes towards AI.

Procedure

- Participants completed an online survey

Results

Multiple Regression Analysis

- A multiple regression analysis was performed to examine whether AI fundamentals, AI anxiety, AI configuration anxiety, Job replacement anxiety, and sociotechnical blindness predict attitudes towards AI.
- The model explained 40% of the variance in attitude scores ($R^2 = .40$, $F(78, 5) = 12.09$, $p < .001$).
- AI anxiety negatively predicted positive attitudes towards AI ($\beta = -0.42$, $p < .001$).
- AI configuration anxiety positively predicted positive attitudes towards AI ($\beta = 0.97$, $p < .001$).

Discussion

Findings

- AI anxiety negatively predicts positive attitudes towards AI while configuration (humanoid) anxiety positively predicts them.
 - Configuration anxiety may reflect more complex engagement with AI rather than purely negative perceptions
- Inconsistent with Kaya et al. (2022), who found AI learning anxiety and AI knowledge predict positive attitudes toward AI
 - Potentially due to our younger sample, differences in instrumentation, or differences in analysis.

Future Research

- Acquire larger more diverse samples.
- Experimentally manipulate AI configuration anxiety.
- Investigate other predictors such as perceived usefulness and acceptability of AI use.

Lower AI anxiety and higher humanoid anxiety predicted more positive attitudes toward AI.



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