



AI Chatbots for Mental Health: Acceptance and Predictors among University Students

Äya Mejri, Maximilian Pirzer, Michael Glomann, Prof. Dr. Simon Preis

1. Problem Statement

Mental health challenges among university students have **increased significantly** in recent years, driven by academic pressure, exam stress and uncertain career prospects [1]. Advances in artificial intelligence, particularly large language models, have enabled the development of chatbots capable of empathetic, solution-oriented dialogue [2]. However, a critical examination of the existing literature shows that **empirical evidence** on how students perceive and accept such AI-based mental health tools remains **scarce**. This quantitative cross-sectional study investigates how students at OTH Amberg-Weiden evaluate the suitability and **acceptance of AI-based chatbots** for **mental health support**, identifying **key predictors of usage intention**.

2. Methodology

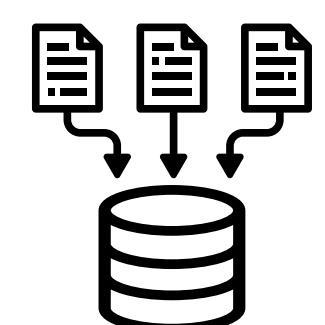
Online Questionnaire



Utilized a standardized online questionnaire designed to capture diverse perspectives on digital health interventions. The psychometric instrument measured various multi-item constructs, including overall **AI acceptance**, individual **stress** levels, **self-efficacy**, **perceived usefulness**, and a structural **trust composite index** (encompassing perceived benefits, ethical considerations, and data privacy metrics).

Employed a **quantitative cross-sectional** research design tailored specifically to the student population. The survey was distributed digitally across university networks at OTH Amberg-Weiden to ensure a comprehensive reach.

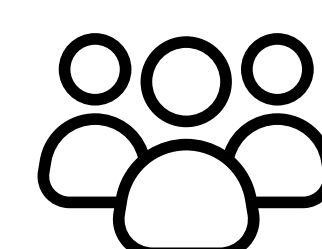
Data Processing



The initial empirical dataset consisting of **N = 156** respondents was systematically processed to ensure high data quality and reliability. By applying strict data cleaning protocols including an attention check filter, a highly valid final analytical sample of **N = 112** was established.

Executed a multi-layered statistical evaluation framework. This included **Pearson correlation analyses** to isolate linear relationships and predictive strengths between key variables, **independent samples t-tests** to evaluate significant mean differences between student subgroups, and the calculation of **Cohen's d** to determine standardized effect sizes.

Data Collection



Data Analysis



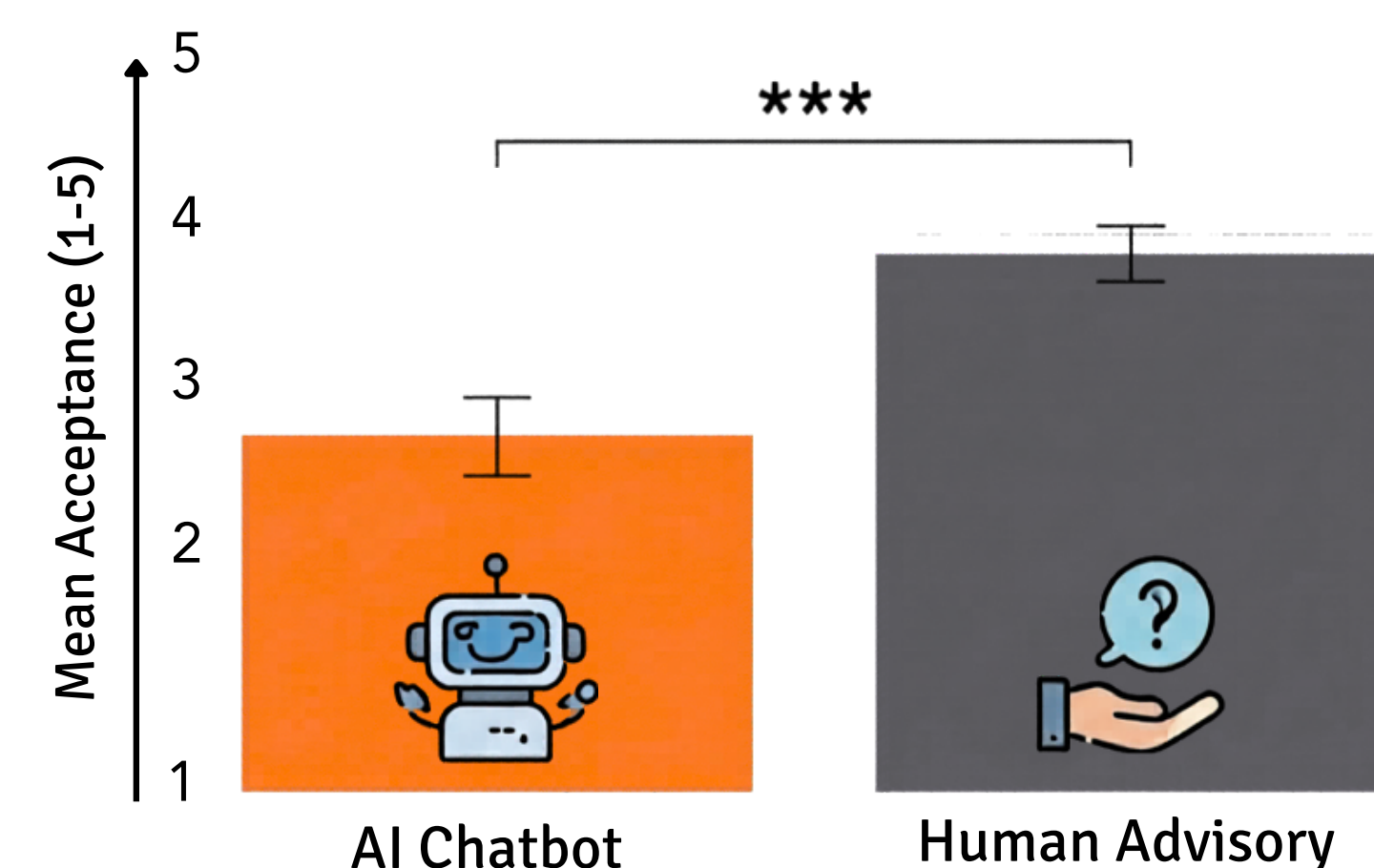
References

- [1] Donald, W. E., & Jackson, D. (2022). Subjective wellbeing among university students and recent graduates: Evidence from the United Kingdom. *International Journal of Environmental Research and Public Health*, 19(1), 691. <https://doi.org/10.3390/ijerph1916911>
- [2] Ni, Y., & Jia, F. (2025). A scoping review of AI-driven digital interventions in mental health care: Mapping applications across screening, support, monitoring, prevention, and clinical education. *Healthcare*, 13(10), 1205. <https://doi.org/10.3390/healthcare13101205>



3. Results: Comparison

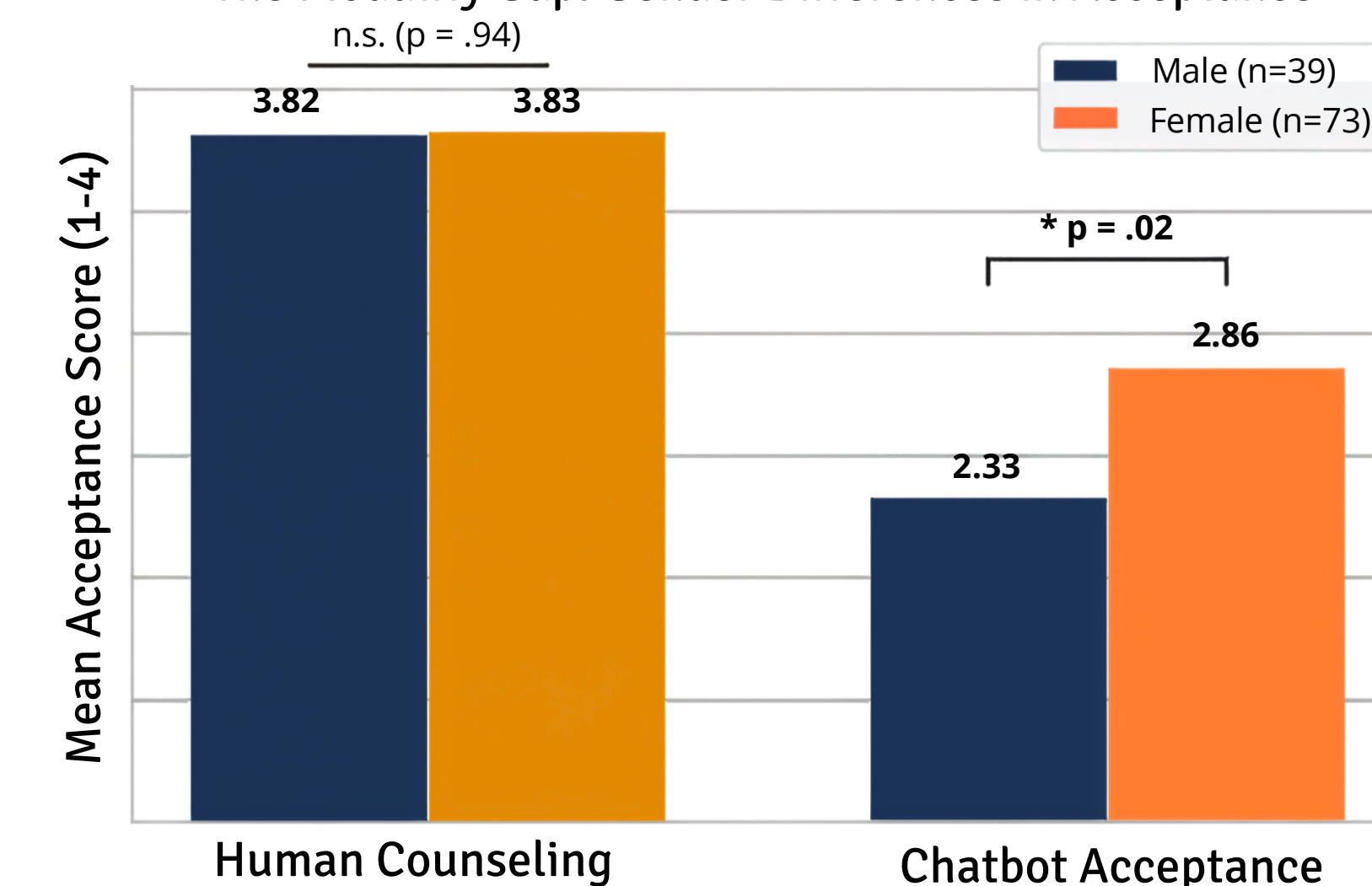
Comparison of Acceptance: AI vs. Human Advisory (n=112)



Chatbot acceptance lower than human advisory

4. Results: Gender I

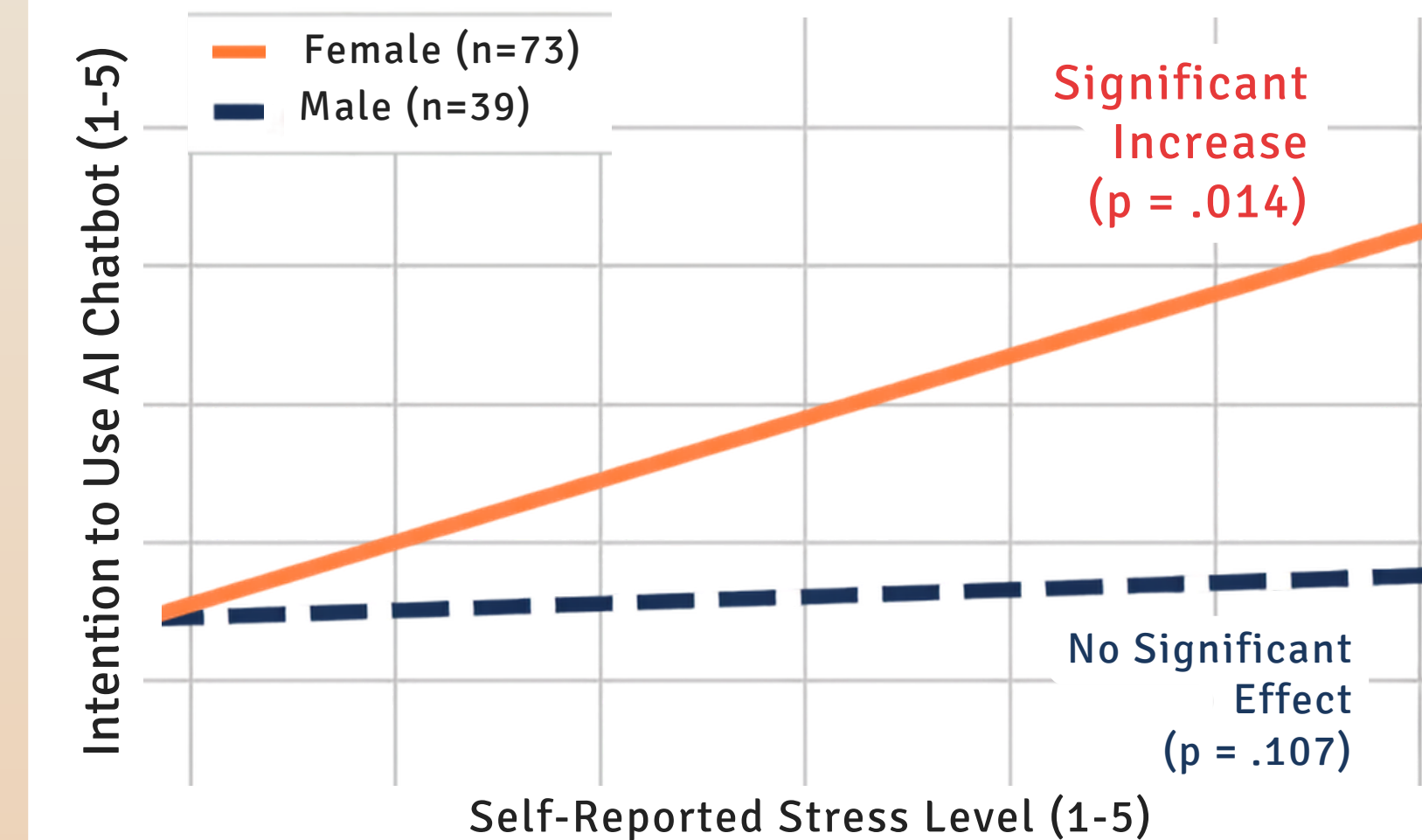
The Modality Gap: Gender Differences in Acceptance



Gender gap only for chatbots: women more accepting

5. Results: Gender II

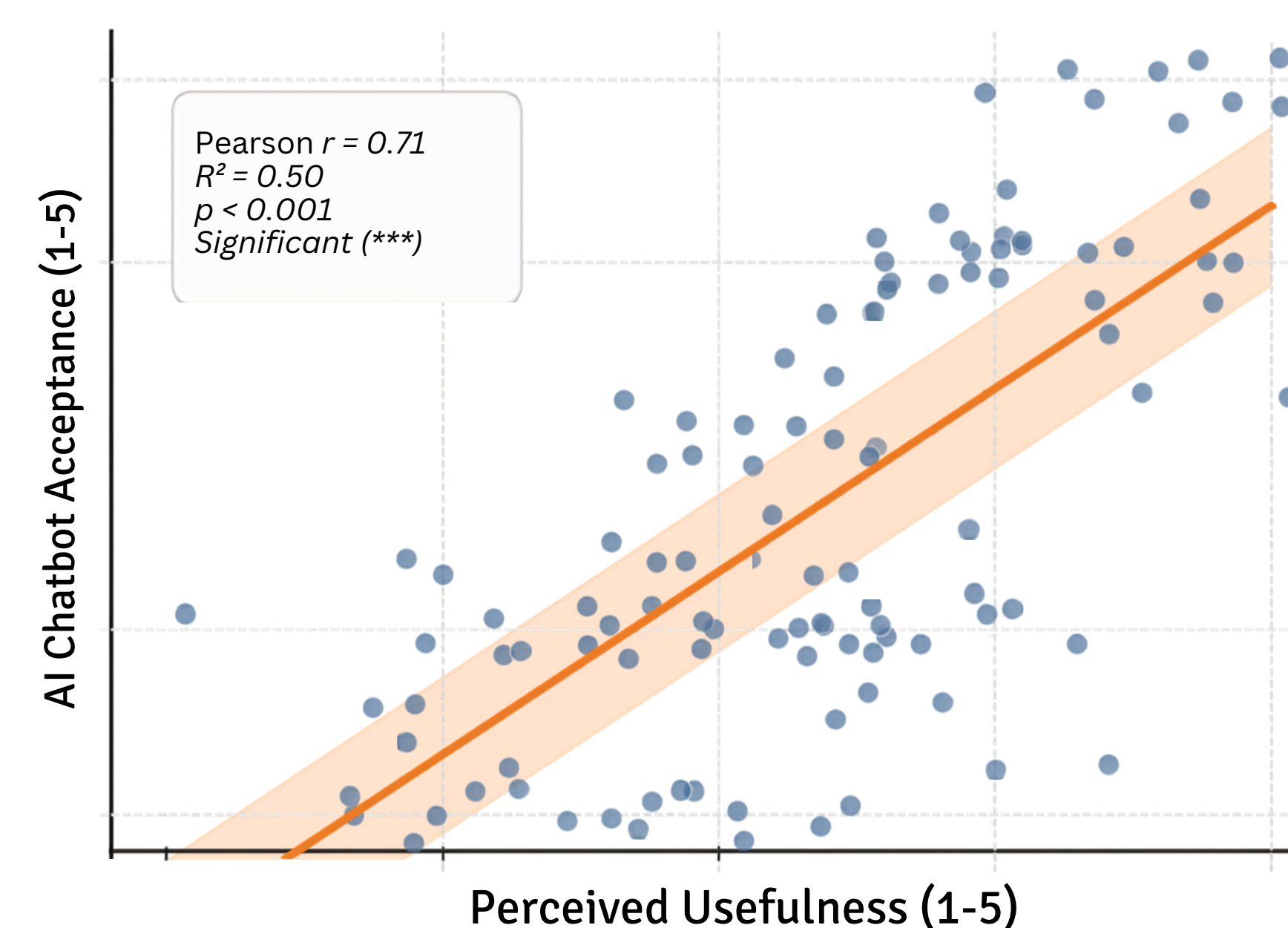
Correlation: Stress Level & Chatbot Use Intention



High stress triggers female AI usage

7. Results: Drivers

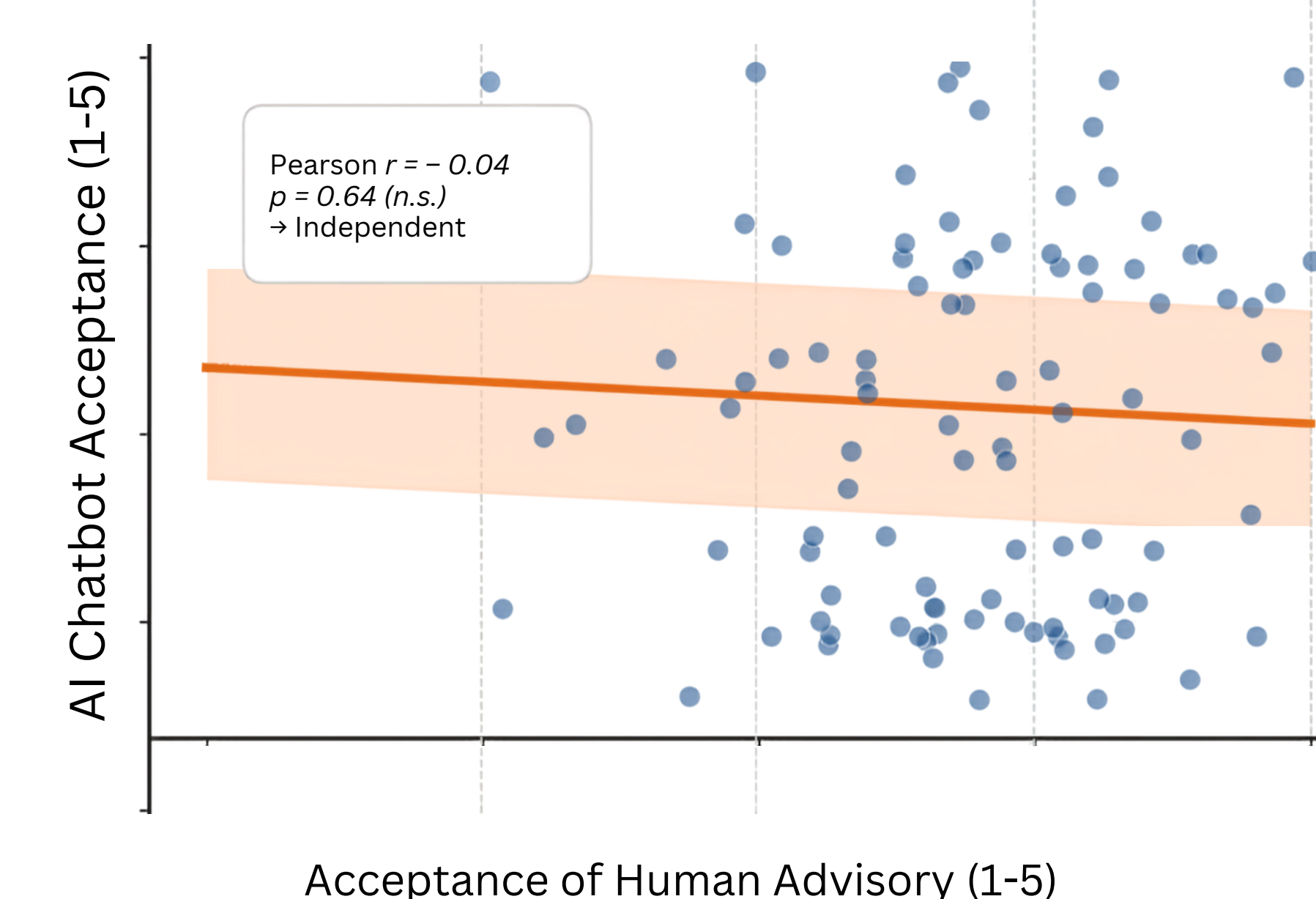
Correlation: Usefulness & AI Acceptance (n=112)



Perceived usefulness is a key predictor

6. Results: Independence

Statistical Independence: AI Acceptance vs. Human Advisory (n=112)



AI and Human Advisory exist completely independently

8. Conclusions & Outlook

The empirical evidence confirms that AI-based chatbots **do not act as a competitive replacement** for traditional psychological services, but rather establish a vital **complementary synergy** within the university support framework. Because students evaluate these systems as pragmatic problem solvers -highly driven by **perceived usefulness**- a well-designed chatbot offers an optimal, low-threshold entry point for mental health care.

Since the acceptance of traditional university counseling and openness to AI solutions exist **completely independently** of one another, both modalities operate as distinct, autonomous resources within the personal coping toolkits of the student population. Crucially, demographic analyses reveal a specific coping mechanism: **highly stressed female students** emerge as the **primary early adopters**, utilizing the chatbot for immediate, pragmatic relief. This positions the AI as an anonymous, highly accessible **'icebreaker'** that successfully reaches vulnerable individuals within their familiar digital comfort zone. By providing immediate utility and normalizing the initial articulation of emotional or academic burdens, the digital intervention effectively **lowers the psychological inhibition threshold** for students to subsequently take the next step and seek face-to-face professional counseling.

Future outlooks should focus on optimizing this dual-layered institutional care framework, specifically incorporating **gender-sensitive design** strategies and exploring the seamless technical integration of **automated gatekeeping mechanisms** to safely route critical or complex student cases to human counseling professionals.