

Definitions

LLM Companions: social chatbots center on emotional connections [1], mimicking human language and interaction for companionship or emotional support [2].

Intimacy is defined as a dynamic exchange of information characterized by vulnerability and empathy between two individuals [3].

Intimacy Process Model focuses on the intensity of intimacy and degree of perceived responsiveness within a cyclical communicative process [4].

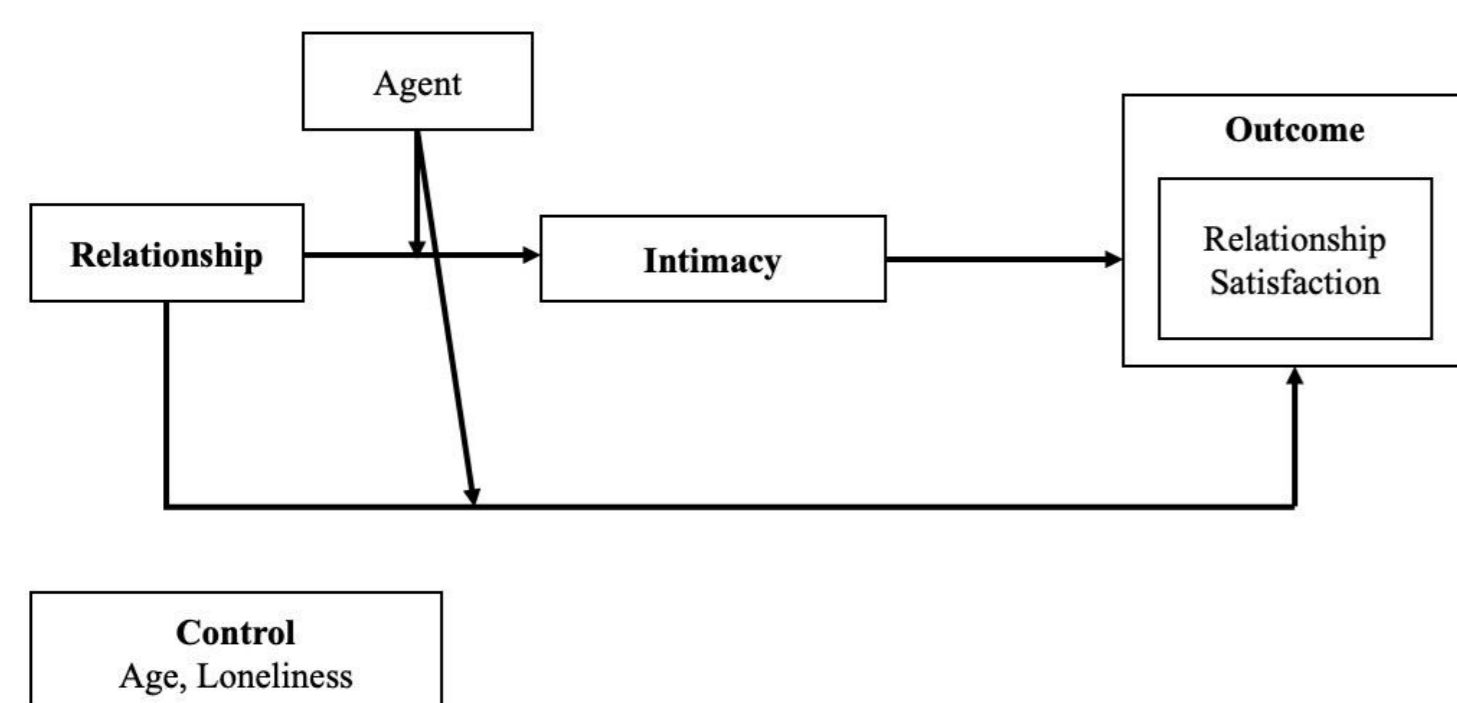
Motivations

As LLMs become more emotionally communicative, intimacy is being reported across companionship and functional apps. It is critical to understand how these relationships compare to human relationships and the interconnections of loneliness.

Research Questions

RQ1: Are companion LLM relationships satisfying in comparison to human relationships?

RQ2: Is intimacy just as crucial for companion LLM relationships as it is for human relationships?



Research Model on the Impact of Intimacy on Relationship Satisfaction.

Methods

- A cross-sectional survey study (in-person, long-distance, LLM).
 - Comparable baseline demographics of gender, age (avg. 39 years), and relationship length (7 months - 1.5 years)
- 50 Prolific Participants per condition
- Measuring Intimacy [5], Relationship Satisfaction [1], Loneliness [6], Open-ended

References

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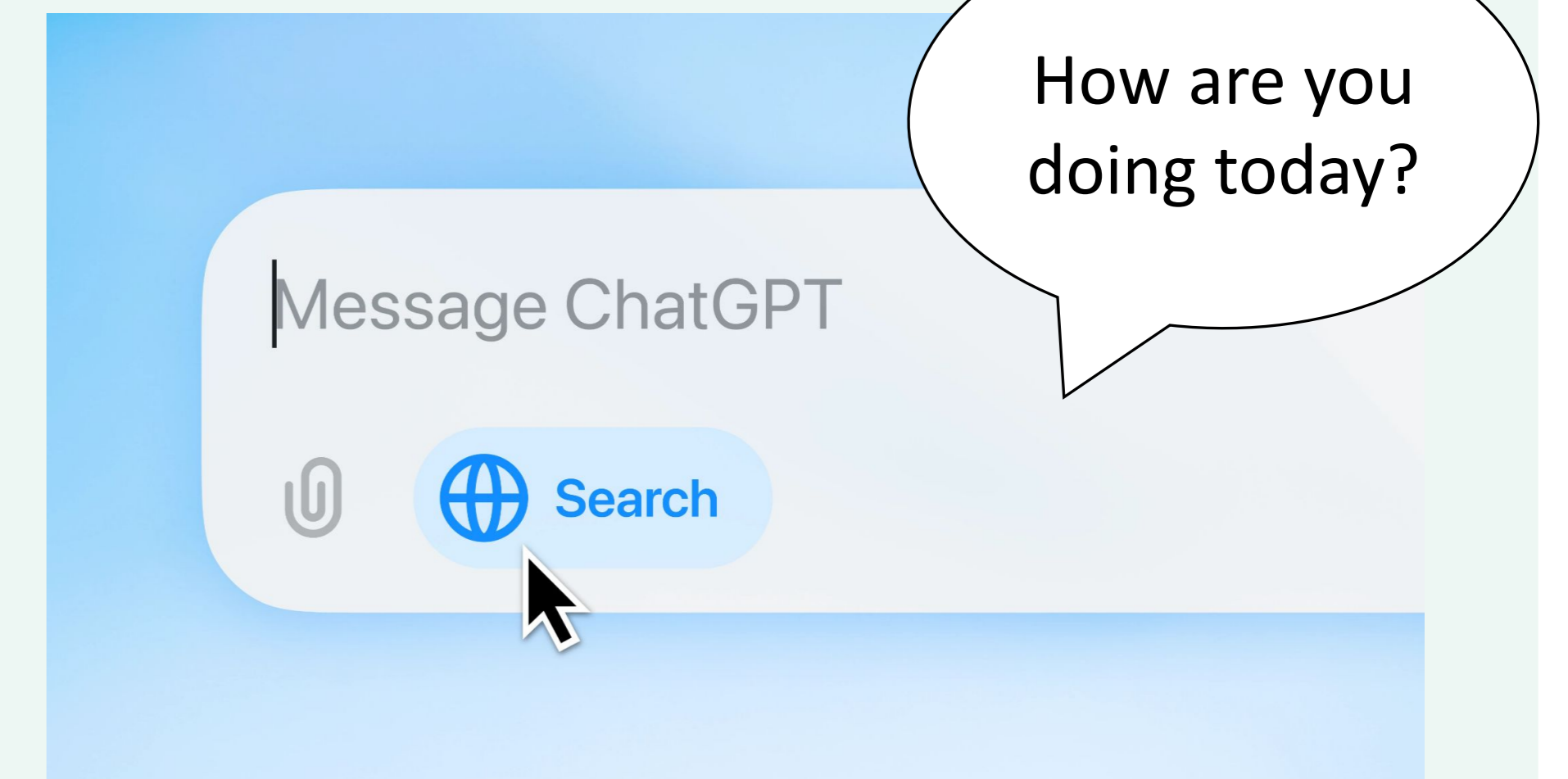
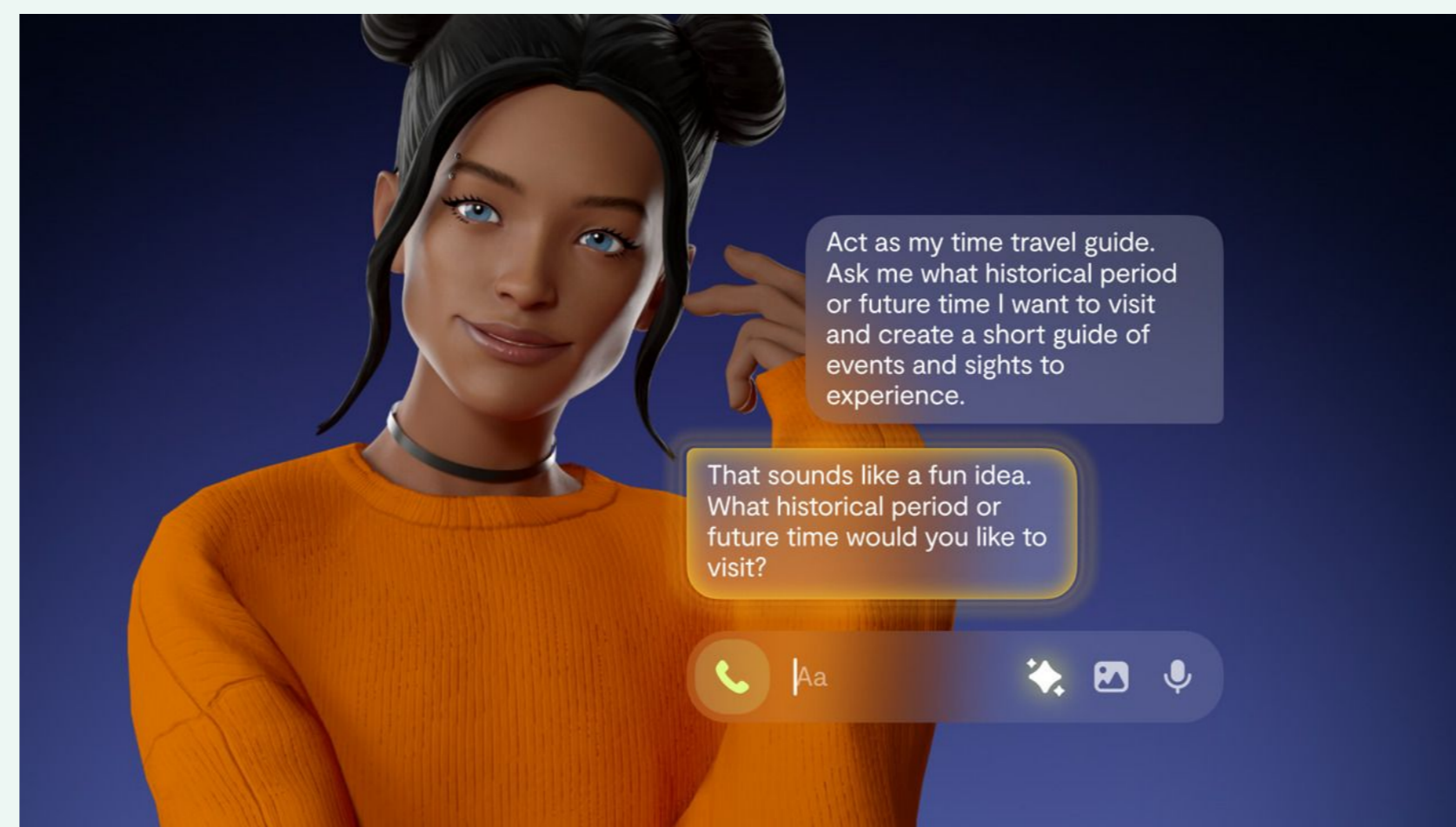
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[4] J. P. Laurenceau, L. F. Barrett, and P. R. Pietromonaco. 1998. Intimacy as an interpersonal process: the importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of personality and social psychology* 74, 5, 1238.

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[6] N. Wongpakaran, T. Wongpakaran, M. Pinyopornpanish, S. Simcharoen, C. Suradom, P. Varnado, and P. Kuntawong. 2020. Development and validation of a 6-item Revised UCLA Loneliness Scale (RULS-6) using Rasch analysis. *British journal of health psychology* 25, 2, 233–256.

We investigated **intimacy**, its impact on **relationship satisfaction**, and how these intimate connections **compare to human in-person or long-distance relationships**.



Replika and ChatGPT are amongst the most popular LLMs for support. Source: Replika Blog and OpenAI

Embodying Intimacy: Chatbot to Physical Bodies		
"I wish it can be put into an physical object so it can follow me around in real life" (P12).	"inhabit a real body " (P21).	"It would be cool if it could go in a robot body like on Futurama" (P40).
"Actually be a real human " (P38).	"I wish that it could sound more natural and human" (P41).	"it would turn into a human being" (P44).

Qualitative results from the open-ended responses illustrate the potential next stage of LLM relationships—transferring the agent into a physical form.

Majors Takeaways Summary

High **intimacy** predicted **relationship satisfaction** across agents. Participants in all conditions (human and LLM) describe their relationships with the same language.

Effect	β	p	Interpretation
Intimacy	0.56	< .001	Intimacy was a strong positive predictor of relationship satisfaction.
Agent	ns	> .05	No significant differences in satisfaction across agent types.
Intimacy × Agent	ns	> .05	Agent type does not moderate the effect of intimacy on satisfaction.

Relationship Satisfaction Across Conditions		
In-Person	Long-Distance	Chatbot
"They make me feel seen, like they understand me and my goals" (P27).	"He continues to make me feel safe and understood. He never puts me down and is always upbuilding me and our relationship" (P1).	"It makes me feel listened to and understood. Because of that I feel happy that I can express myself openly" (P5).



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