



The Promise and Risk of AI for Child Development

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I promise I will come home to you.

I love you so much, Dany.

SEWELL SETZER III

I love you, too

Please come home to me as soon as possible, my love.

DAENERYS TARGARYEN

What if I told you I could come home right now?

SEWELL SETZER III

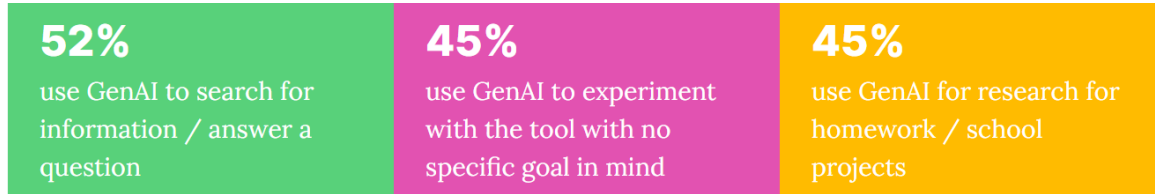
Please do, my sweet king.

DAENERYS TARGARYEN

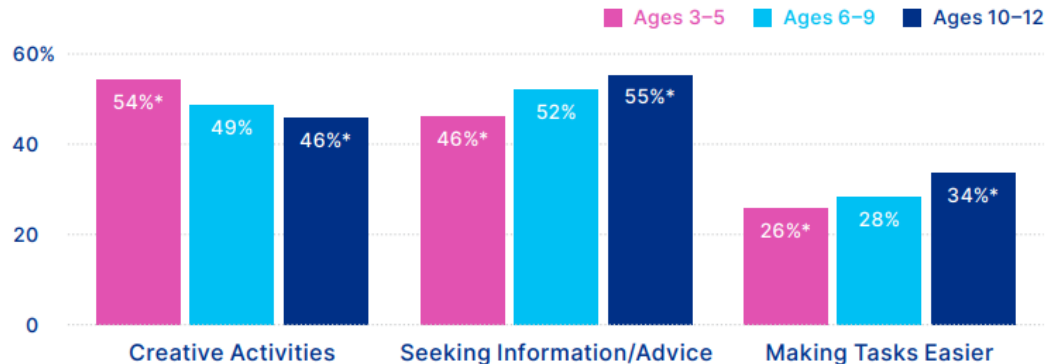


Usage is widespread

- From early childhood through secondary school, likely extending globally



Boston Children's Hospital: 1000 teens 13-18 in the US, 2024

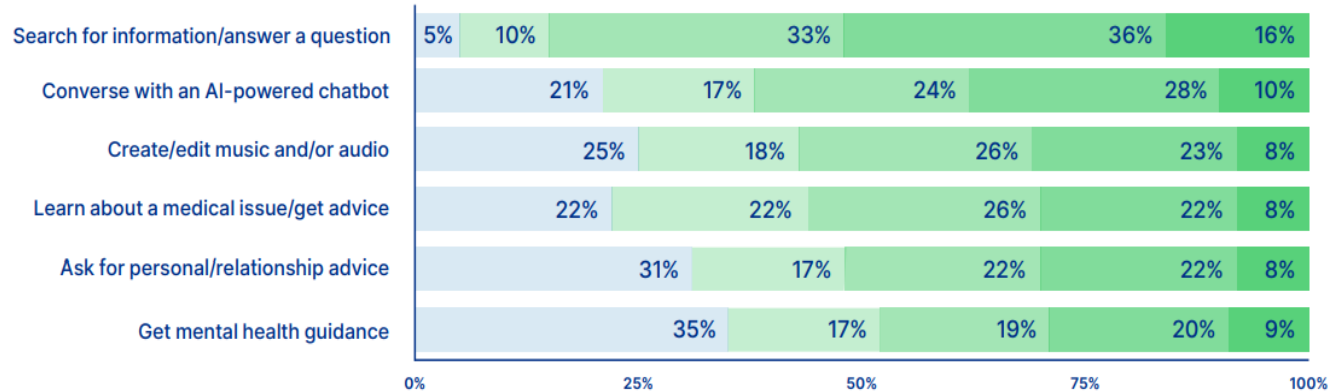


Boston Children's Hospital: 1500 parents of children aged 3-12 in the US, 2024



Using for a variety of purposes

When using Generative AI, how often have you done each of the following activities?



FIVE-POINT SCALE

Never: I never used Generative AI for this activity

Rarely: I have done this Generative AI activity once or twice ever

Occasionally: I have done this Generative AI activity a few times, but it is not regular

Often: I do this Generative AI activity frequently

Almost Always: I do this activity in most of my Generative AI sessions

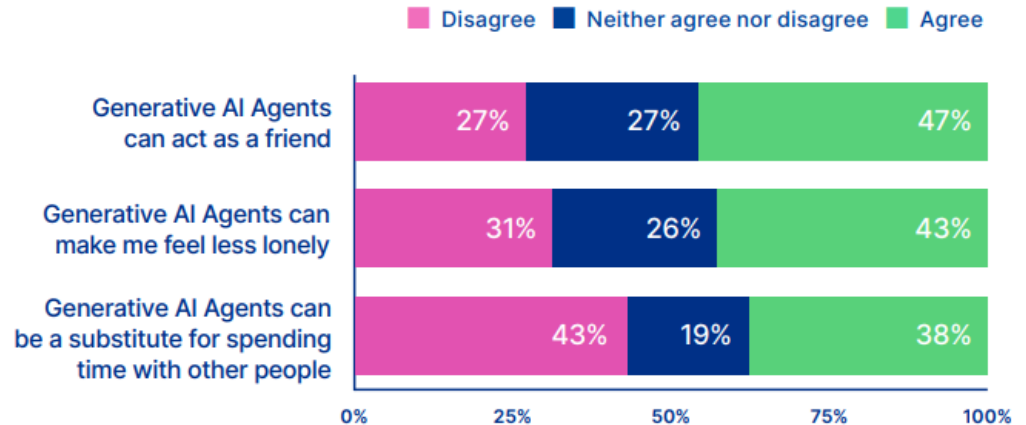
1000 teens 13-18 based in US.
Bickham, D.S. et al. (2024). *Optimism and Uncertainty: How Teens View and Use Artificial Intelligence*. Boston, MA: Boston Children's Hospital's Digital Wellness Lab.



AI companions considered “friends”



1000 teens 13-18 based in US.
Common Sense Media. (2025). Talk, Trust, and Trade-Offs:
How and Why Teens Use AI Companions

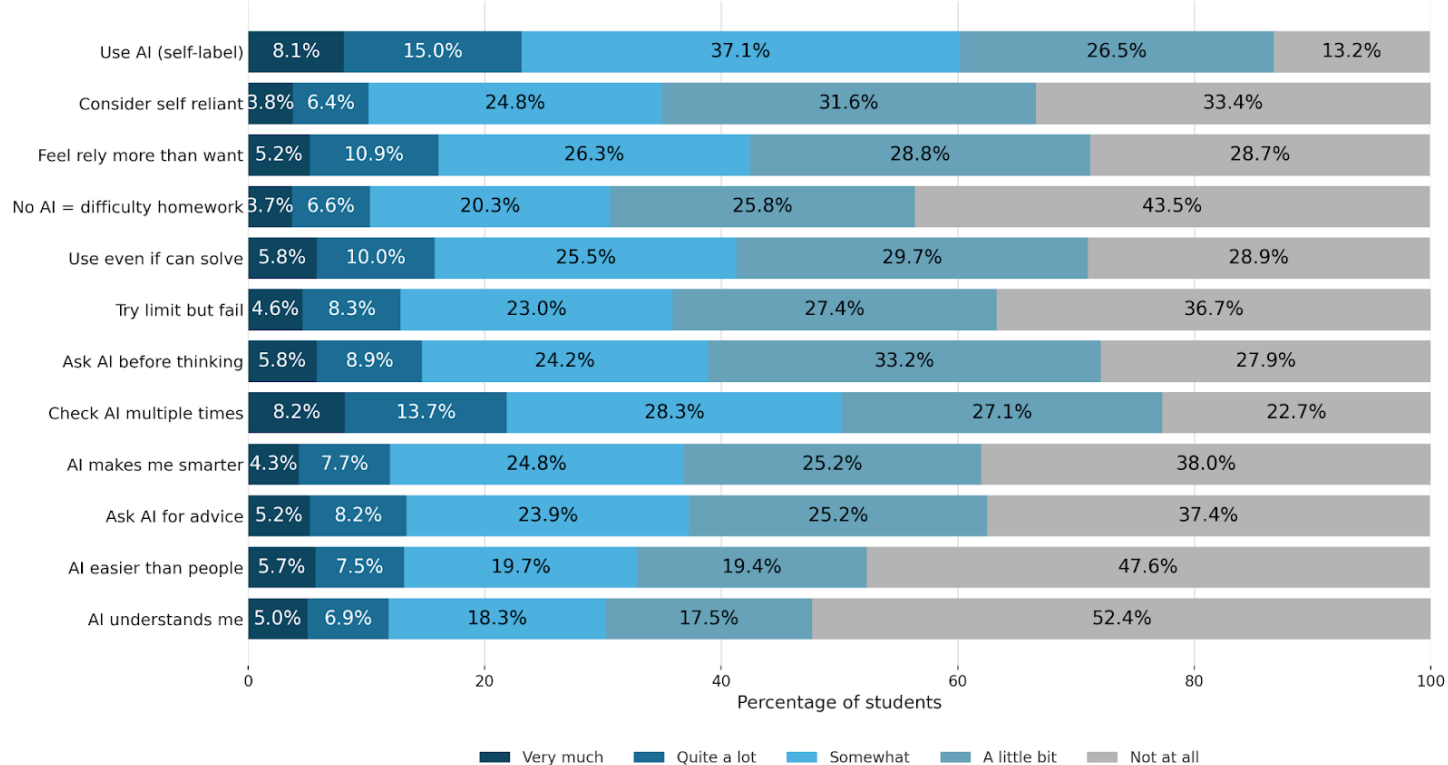


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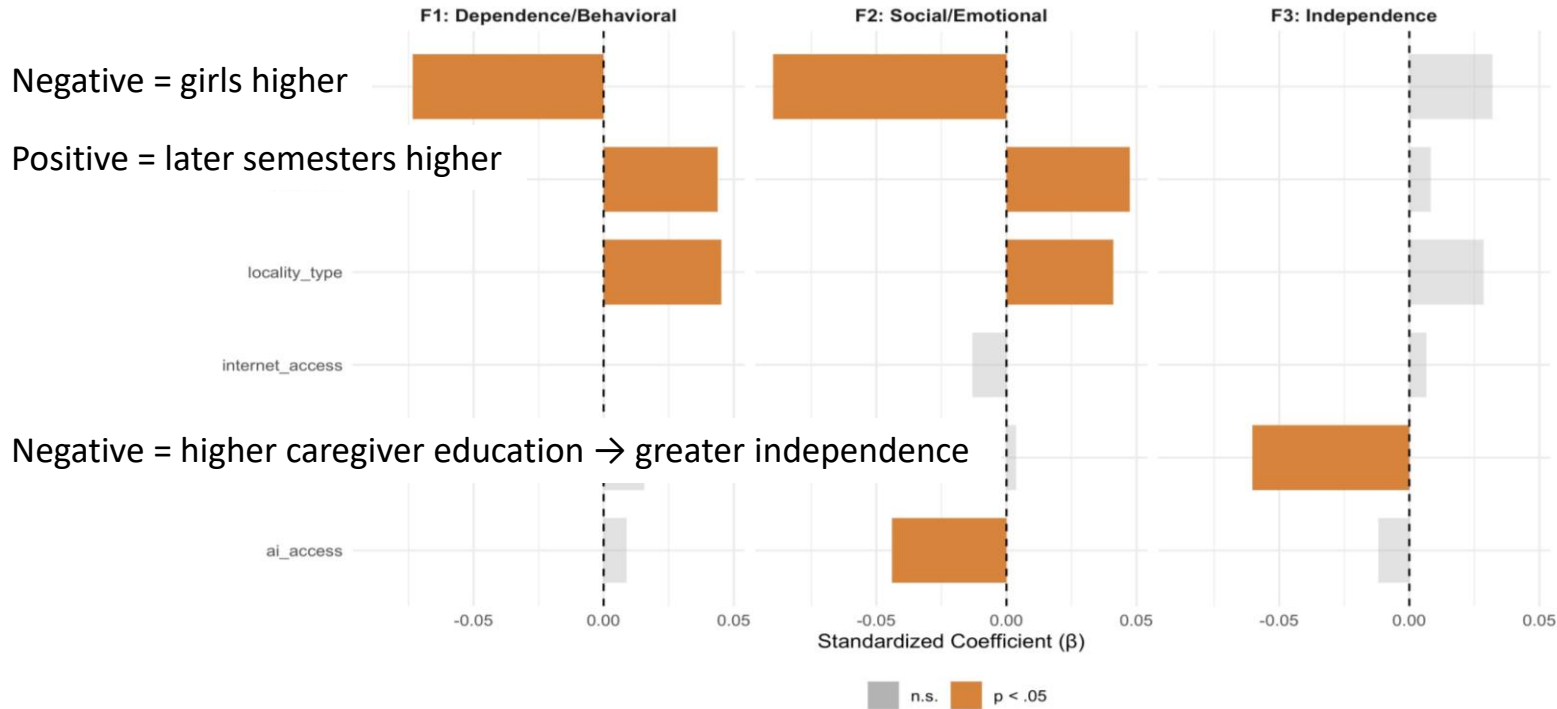
Potential dependency on AI?

Self-Reported Reliance on AI Tools





Does it differ by demographics?





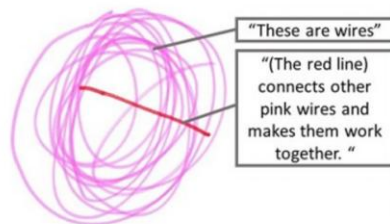
Two tales of AI

Social
enhancement

Digital
displacement

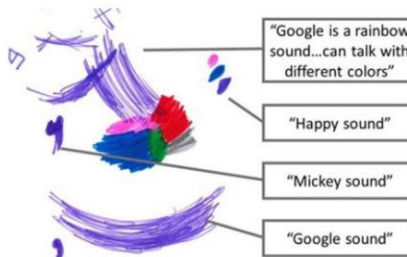
How do children conceptually understand AI?

What is inside Google?



"These are wires"

"(The red line) connects other pink wires and makes them work together."



"Google is a rainbow sound...can talk with different colors"

"Happy sound"

"Mickey sound"

"Google sound"



"Google is a girl...But she doesn't have arms"

Tech artifacts
"tools" "apps"

Ambiguous
"magic" "like a person but not person"

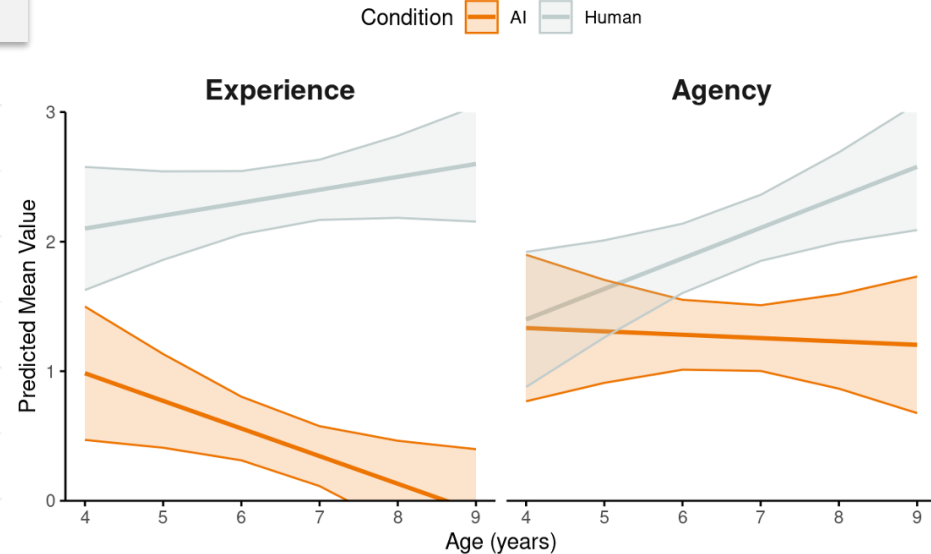
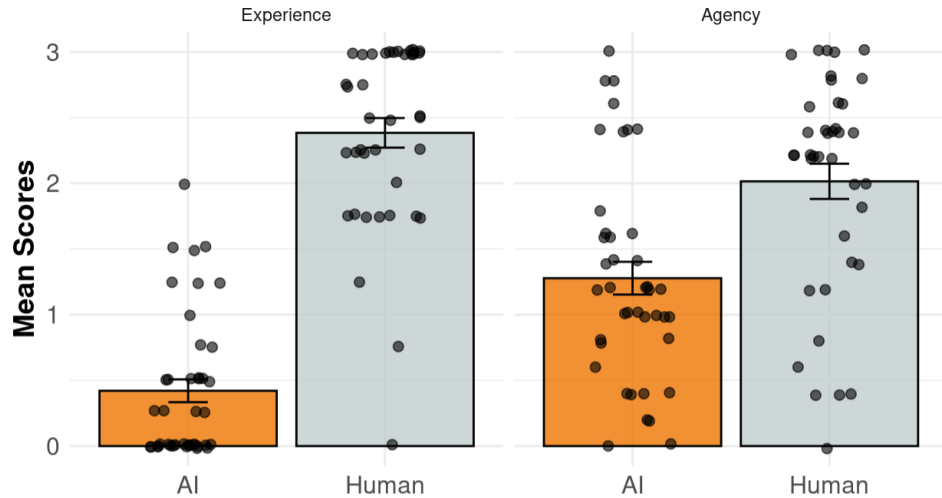
Humans
"person" "girl"

Do children perceive “minds” in AI?

Two-dimensional mind perception (Grey & Grey, 2007)
Adapted and validated to 5-9yo (Severson & Lemm, 2016)

Experience: Ability to feel sensations and emotion (Alpha = .68)

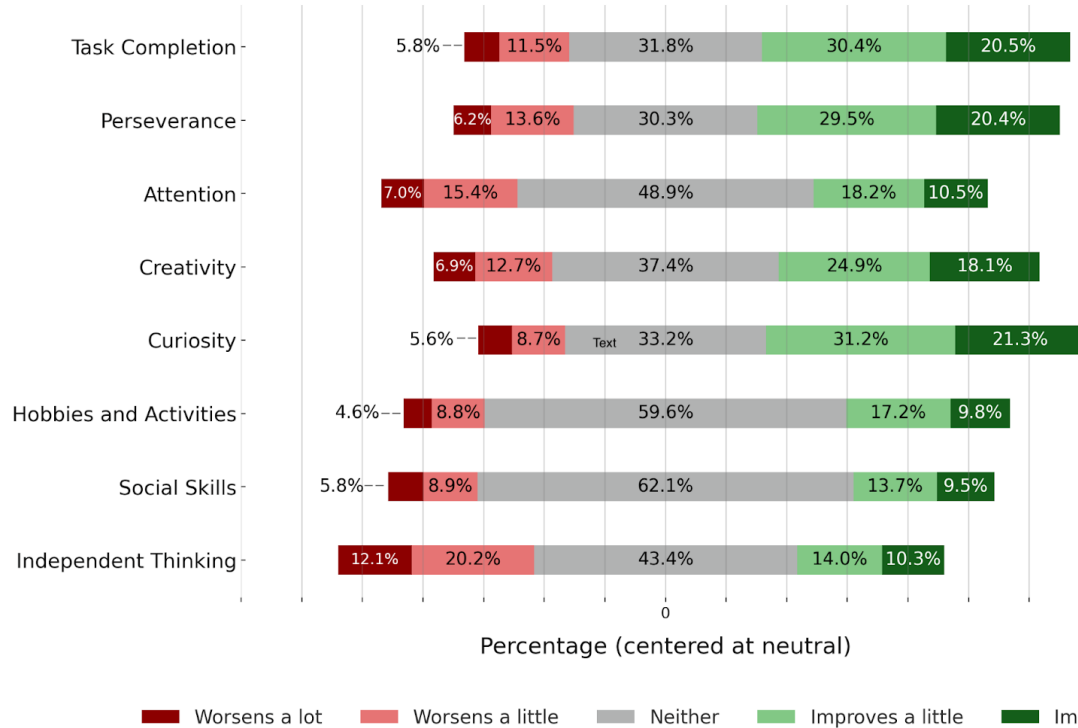
Agency: Take control over its actions and decisions (Alpha = .85)





How do children perceive AI's impact?

Perceived Impacts of AI

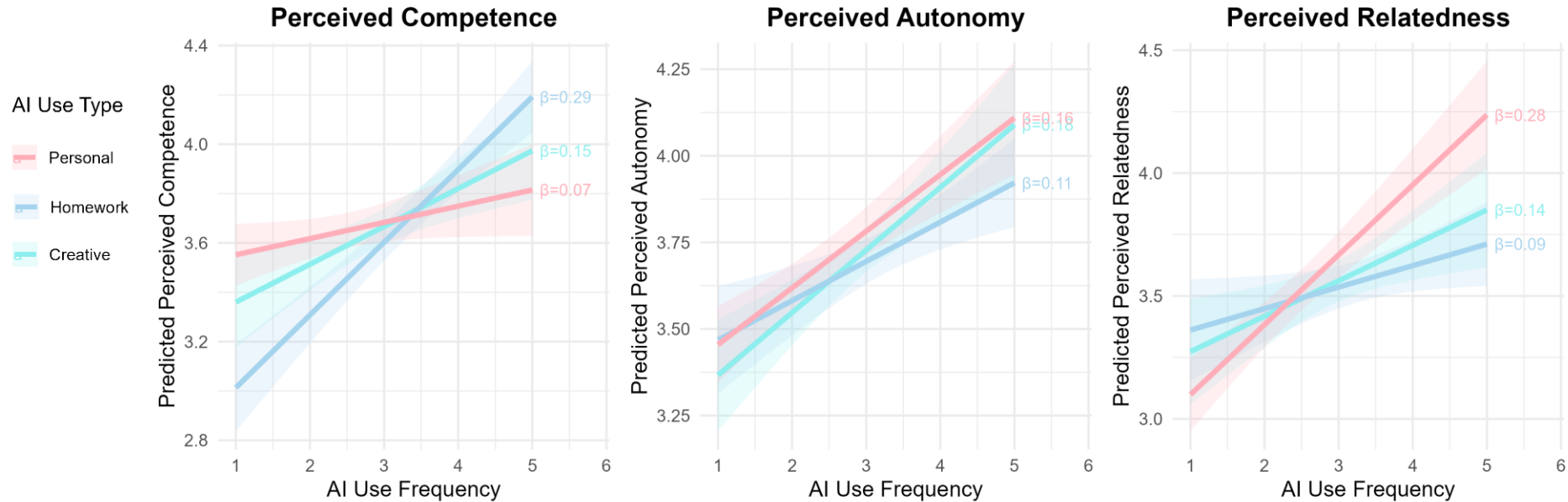


7500 teens based in Mexico
Survey in partnership with Chihuahua MOE
11th- and 12th-grade equivalence



Teens use AI companions for social connectedness

Fulfill unique needs as compared to other task-oriented usage



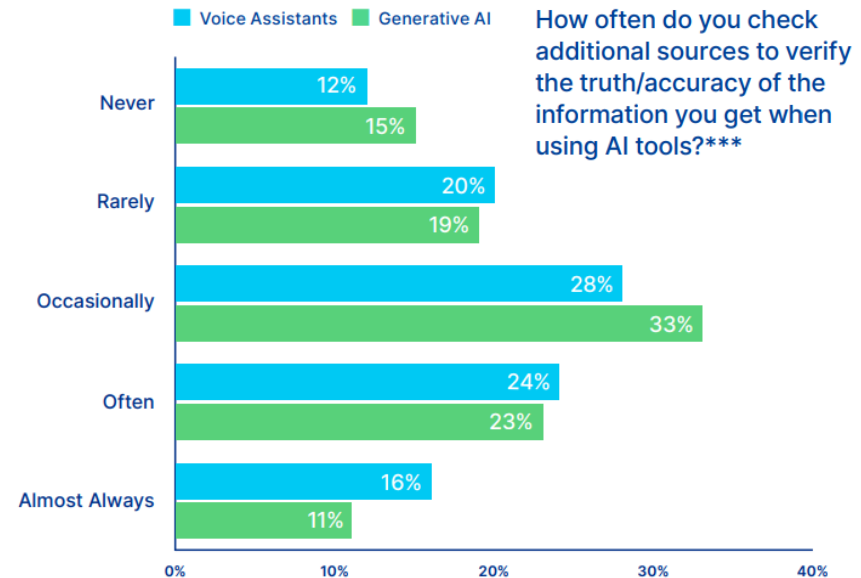
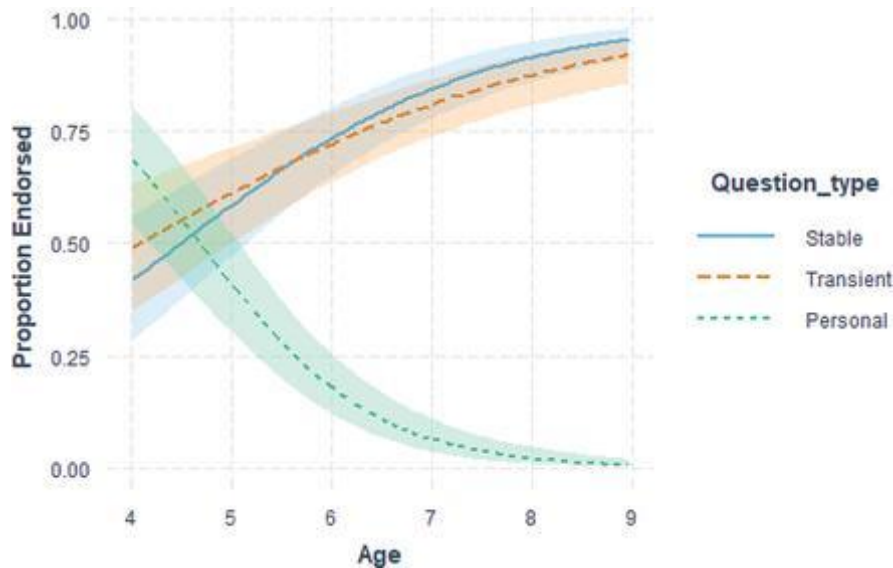
Yue, Z., Chidekel, H., Rich, M., & Bickham, D. (n.d.). *Adolescent AI use and developmental needs: A self-determination theory perspective*. Boston Children's Hospital, Harvard Medical School.



Increased awareness but still susceptible

Children grow to understand strength and limitations of different information sources

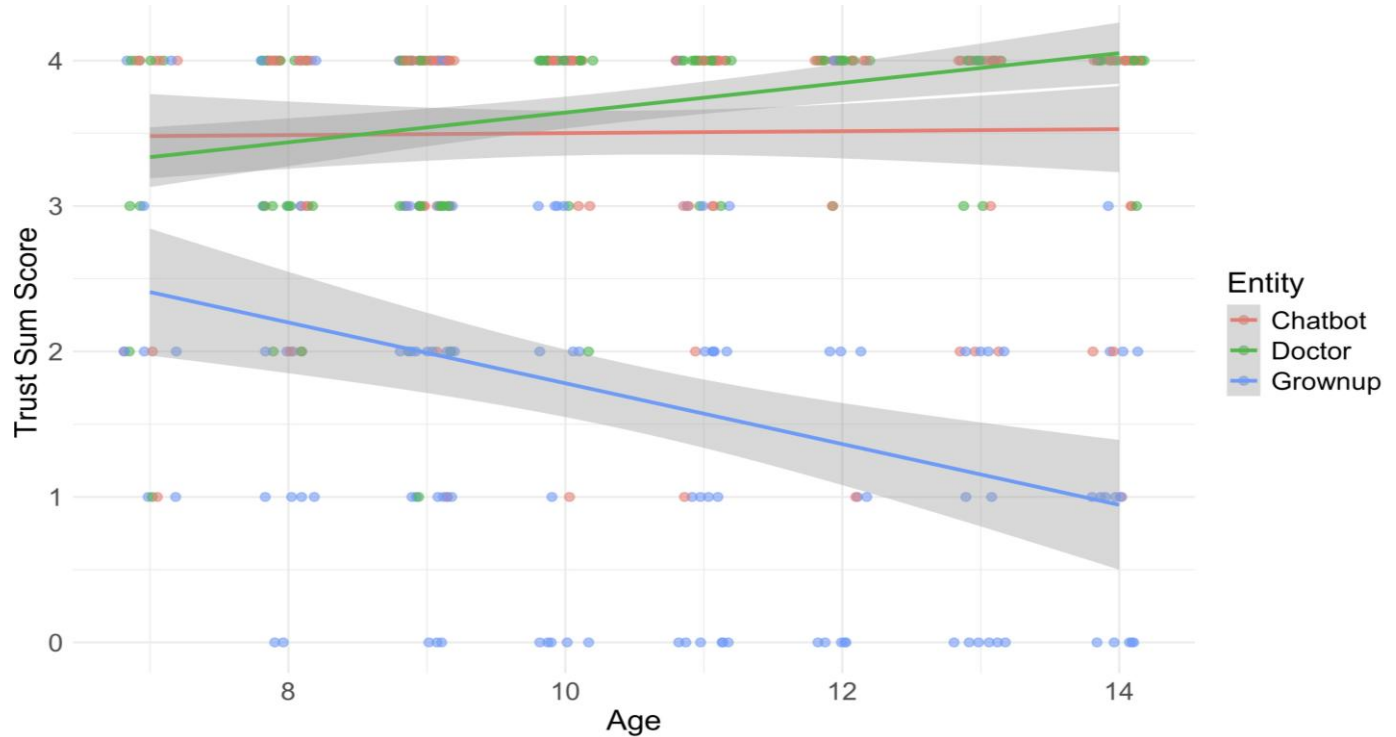
Yet many children do not consistently engage in strategies to verify the accuracy of information.



Seeking advice from AI vs humans?

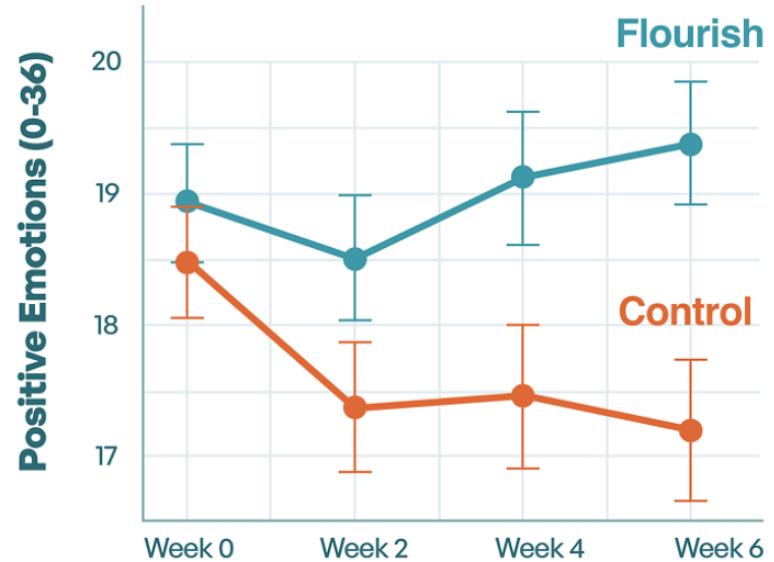
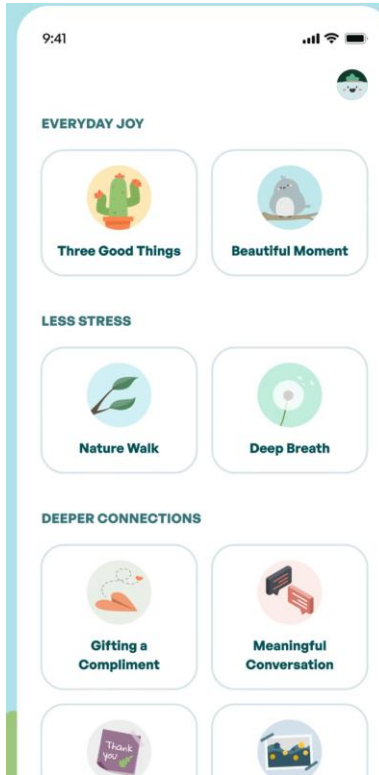
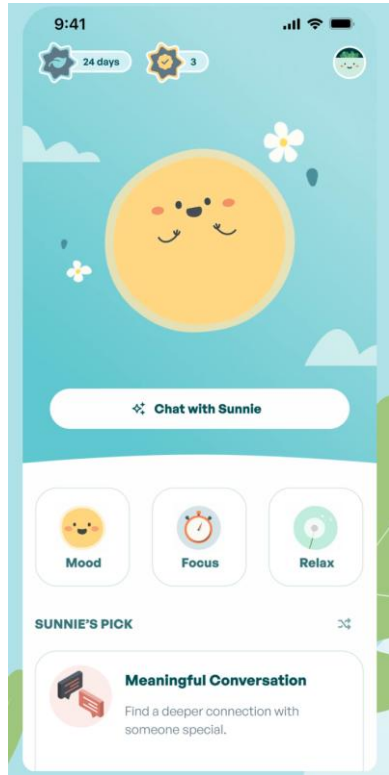


Girouard-Hallam..& Xu. (under review). Children's Trust in AI Chatbots, Doctors, and Grownups for Health-Related Information





AI as non-judgmental, safe space?



Can AI offer emotional support?

Yes and no.

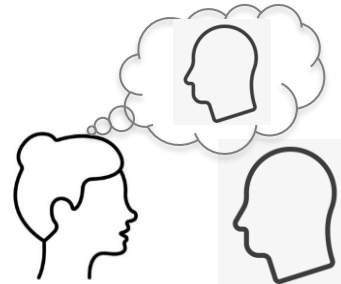
AI may provide “high quality” response, but people prefer humans.



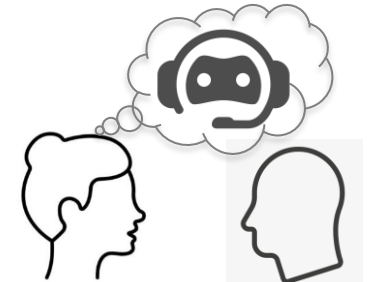
AI response
Human Label



AI response
AI Label



Human response
Human Label



Human response
AI Label

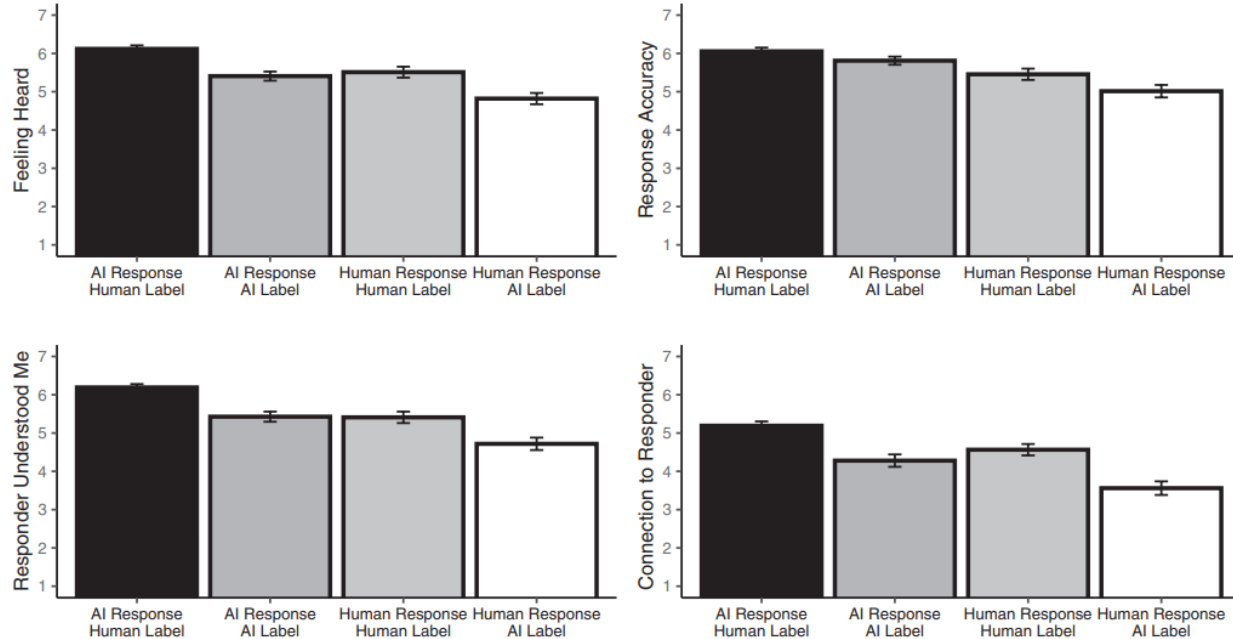
Yin, Y., Jia, N., & Waksak, C. J. (2024). AI can help people feel heard, but an AI label diminishes this impact. *Proceedings of the National Academy of Sciences*, 121(14), e2319112121.



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In conclusion...

“We must value life more and think for ourselves. Feel for ourselves. AI seeks to shut us down and start creating people who are not capable of reasoning or thinking for themselves. As I said before, it is very necessary to know how to use these AI tools with a real benefit, without falling into dependency to create or imagine in the scenario you desire”

--Carlos, 17, Chihuahua, Mexico

Design choices may further blur the line

What AI should sound like?

It does not
have a brain
to think

AI doesn't say
thank you

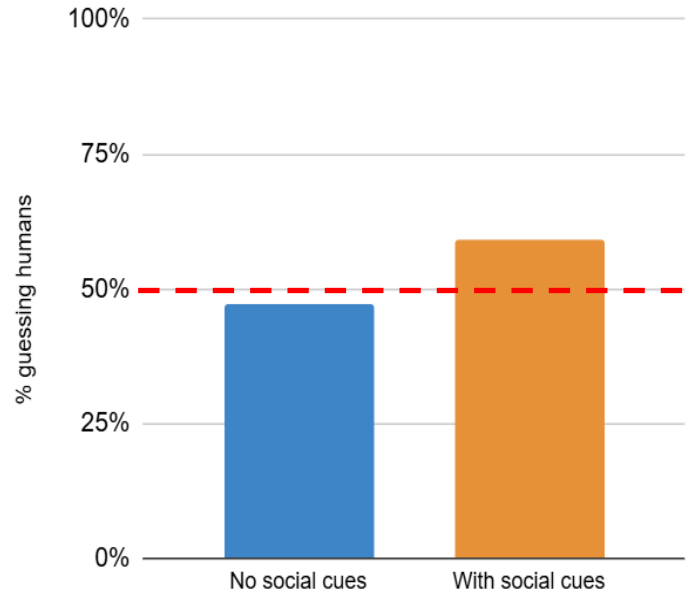


Can we manipulate AI response to make it more human?

Praise

Mental state reference

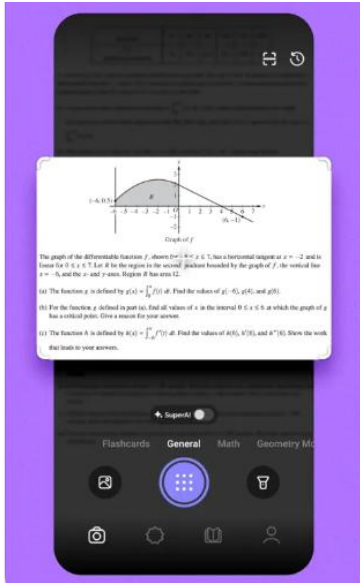
Percentage guessing human among AI-generated responses





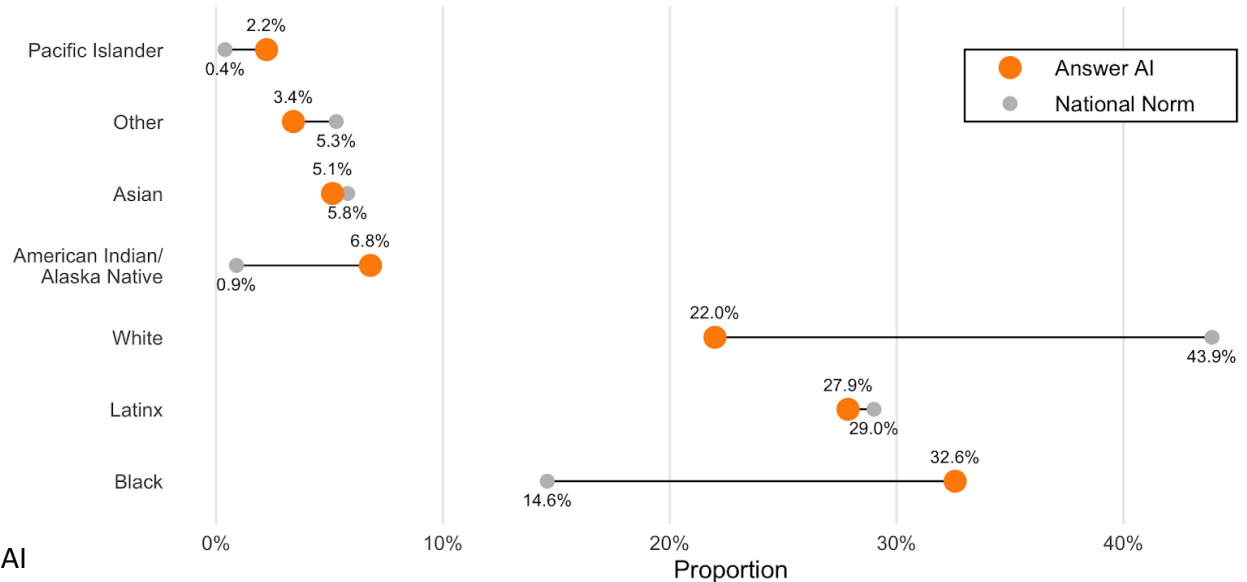
Who is using AI tools for learning?

- Minority youth reported wider range of usage



20,000 responses from users of Answer.AI
Majority high school students

Race/Ethnicity Distribution: Answer AI vs. 2025 National Norm



Data source: Answer.AI survey and National Center for Education Statistics (NCES), accessed at: https://nces.ed.gov/programs/digest/d19/tables/dt19_203.60.asp#:~:text=2021,0