

Social Co-Presence and Its Impact on Perceived Effort During Task Performance

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BACKGROUND

Social environments influence motivation and performance, and prior research shows that the presence of others, particularly observers, can change how people approach tasks. However, it remains unclear whether passive social presences, simply having another person nearby without interaction, also impacts how effortful cognitive tasks feel.

Does the mere presence of another person impact a person's perceived effort during task performance?

Hypothesis: Passive social presence would increase perceived effort during reading comprehension tasks, particularly for more complex passages.

METHODS

Participants

- 34 undergraduate participants (recruited from University of Alabama participant pool)

Design

- Within-subjects 2x2 design
- Social Presence: Alone vs Passive Co-Presence
- Task Difficulty: Simple vs Complex passages

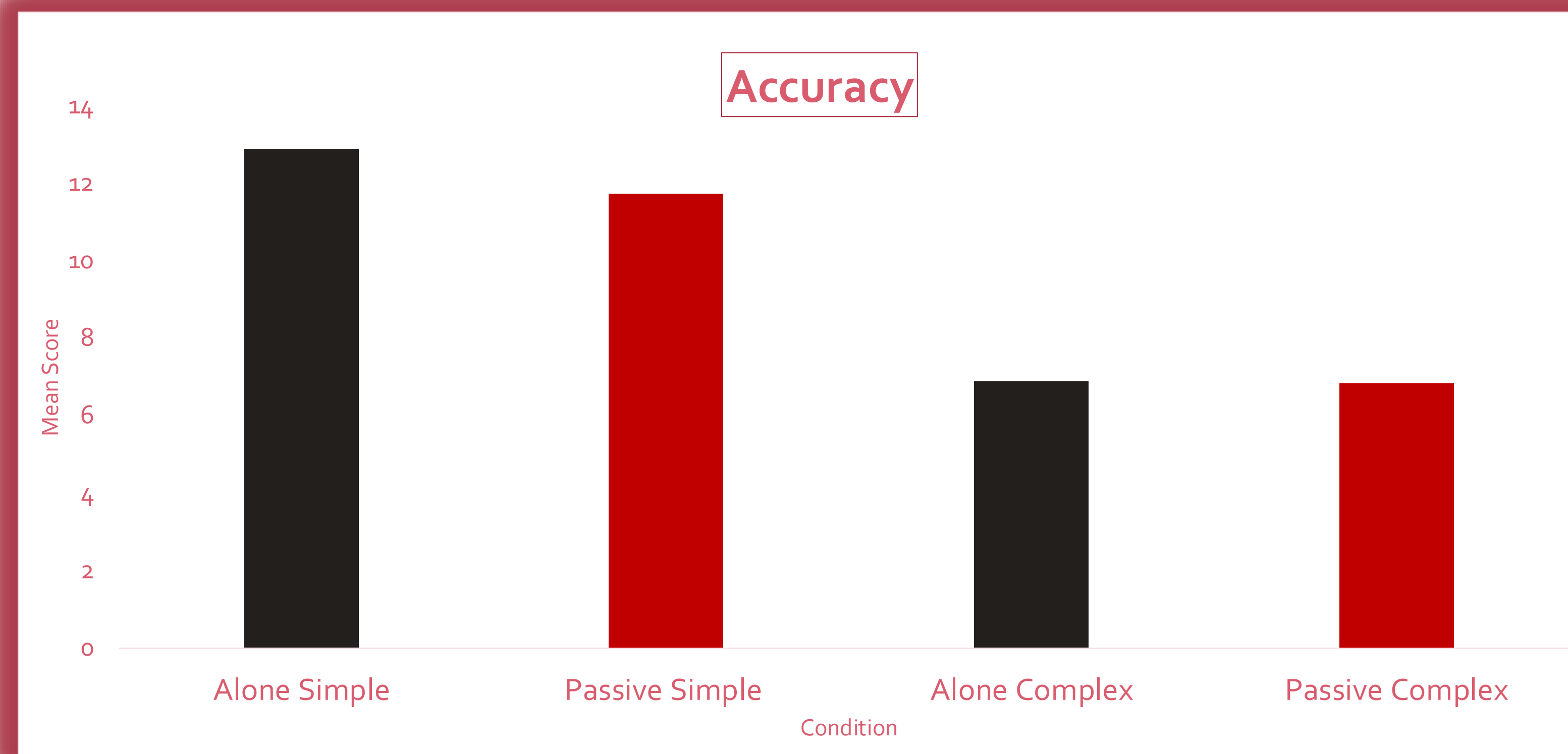
Procedure

- Participants completed timed reading comprehension tasks
- Tasks drawn from NAEP reading materials
- After each task, participants rated perceived effort using the Borg CR10 scale
- Accuracy on comprehension questions measured task performance

RESULTS

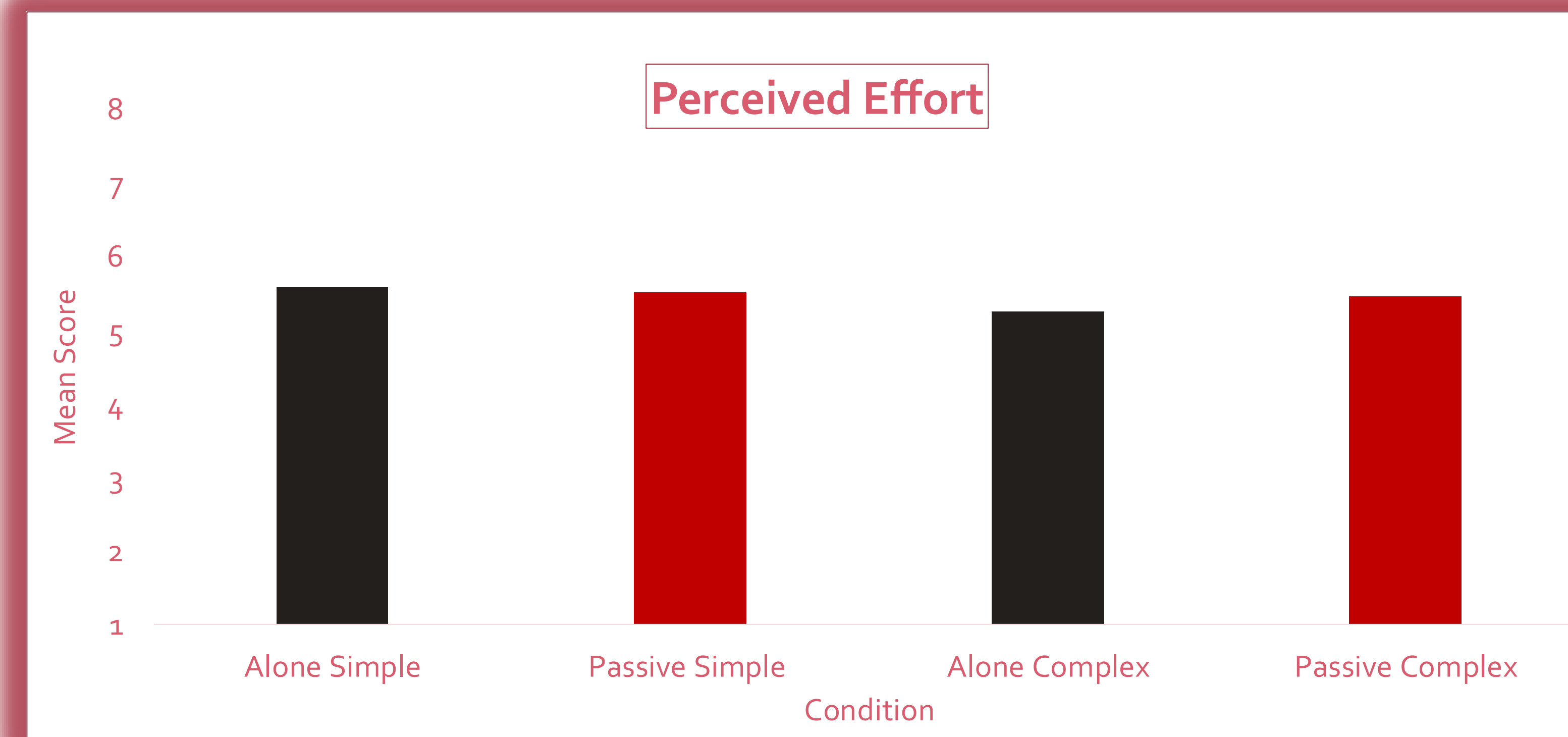
Passive social presence did not significantly affect perceived effort during task performance.

Figure 1. Mean accuracy across passage difficulty conditions



Participants were less accurate on complex passages than simple passages

Figure 2. Mean perceived effort ratings across social presence conditions

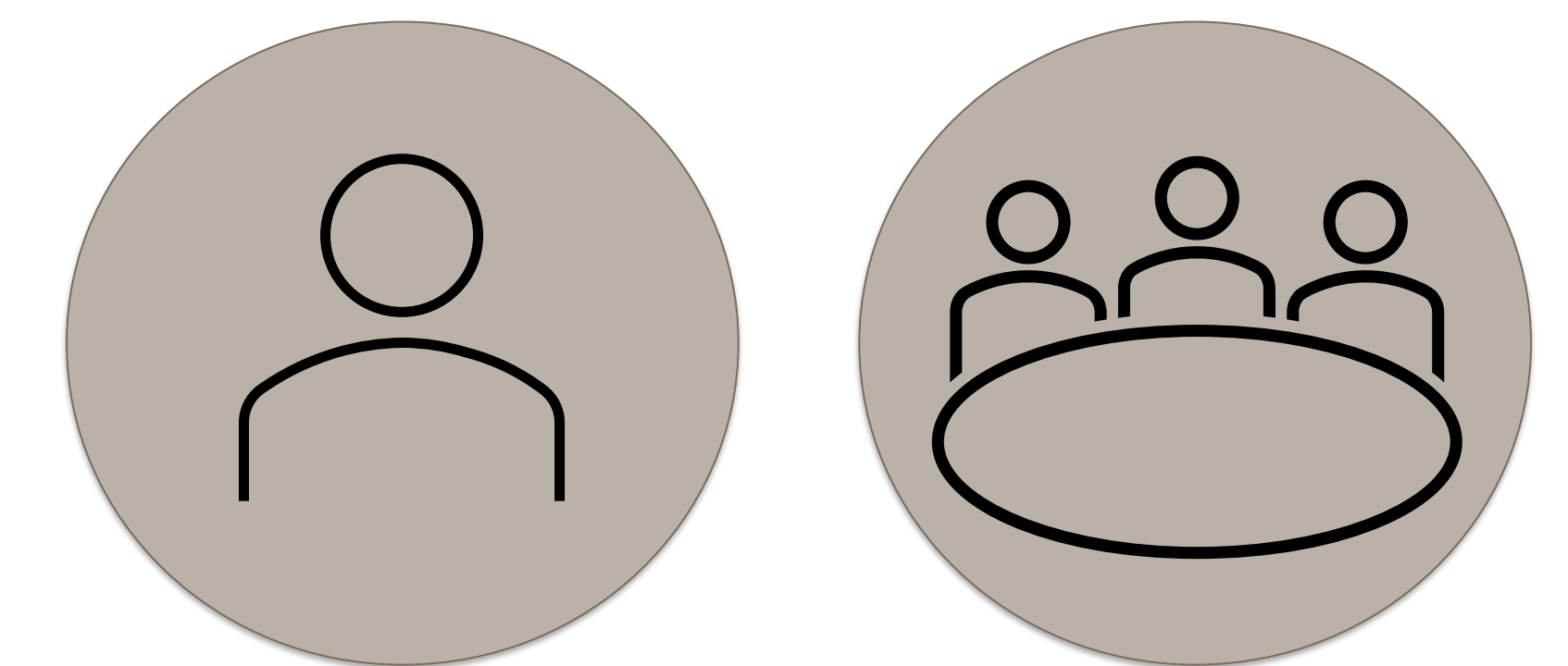


Task difficulty did not significantly affect effort ratings

CONCLUSIONS

Passive social presence produced similar perceived effort ratings to working alone, suggesting that the mere presence of another person may not substantially change how effortful a cognitive task feels. These findings help clarify when social presence influences performance.

Future research should examine how different types of social environments interact with task performance and perceived effort, and explore how environments such as coffee shops, libraries, and co-working spaces cognitively impact people during task performance.



REFERENCES

1. *The Decision Lab—Behavioral Science, Applied*. (n.d.). The Decision Lab. Retrieved February 19, 2025, from <https://thedecisionlab.com/reference-guide/psychology/social-facilitation>
2. Pageaux, B. (2016). Perception of effort in Exercise Science: Definition, measurement and perspectives. *European Journal of Sport Science*, 16(8), 885–894. <https://doi.org/10.1080/17461391.2016.1188992>
3. Zajonc, R. B., & Dorman, D. D. (1964). Perception, drive, and behavior theory. *Psychological Review*, 71(4), 273–290. <https://doi.org/10.1037/h0048872>
4. Sweller, J. (2011). CHAPTER TWO - Cognitive Load Theory. In J. P. Mestre & B. H. Ross (Eds.), *Psychology of Learning and Motivation* (Vol. 55, pp. 37–76). Academic Press. <https://doi.org/10.1016/B978-0-12-387691-1.00002-8>
5. Goodeve, A. (2020, March 30). *Why Perception of Effort is a Key Component of Performance*. Adelaide Goodeve. <https://www.adelaidegoodeve.com/blog-posts/why-perception-of-effort-is-a-key-component-of-performance>
6. Costley, J. (2019). The relationship between social presence and cognitive load. *Interactive Technology and Smart Education*, 16(2), 172–182. <https://doi.org/10.1108/ITSE-12-2018-0107>
7. Cottrell, N. B., Wack, D. L., Sekerak, G. J., & Rittle, R. H. (1968). Social facilitation of dominant responses by the presence of an audience and the mere presence of others. *Journal of Personality and Social Psychology*, 9(3), 245–250. <https://doi.org/10.1037/h0025902>