

Sleep deprivation in new mothers – how does it impact on self and infant care?

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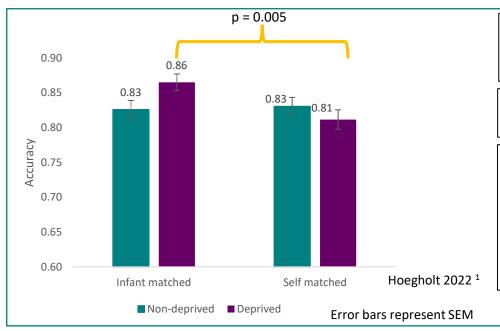
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Study method

A recent study aimed to examine the impact of sleep deprivation during the first year of motherhood.¹ The study recruited 48 first-time mothers and assessed their sleep duration. First, the subjects were presented with named social relations ("You", "Your infant", "Your mum", "Your friend", "A stranger"), each of which was paired with a shape (Circle, Triangle, Pentagon, Square, Diamond). The participants were then assessed for accuracy and speed when presented with trials of correct or incorrect pairings of relation and shape.

Results

Sleep-deprived subjects exhibited faster reaction times and higher accuracy when matching the "Your infant" cue compared to all other cues. Conversely, in non-sleep-deprived mothers, the accuracy and reaction times were not significantly different in the "Your infant" and the "You" trials. The "Your friend" and the "A stranger" groups clustered together at lower accuracy and higher reaction times.



Variables assessed:

- Accuracy
- Sleep deprivation

Groups cared for:

Infant, Self, Mom, Friend, Stranger

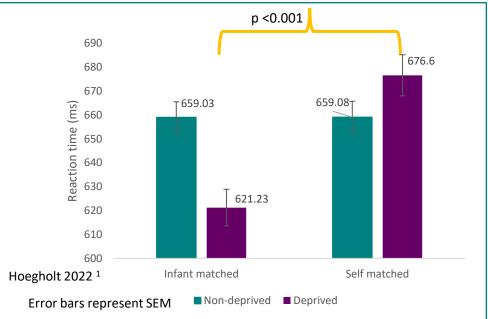
Sleep deprived: <7 hours of sleep Non-deprived: >7 hours of sleep

First-time mothers (n=48)

Non-deprived (n=25): equal self and infant prioritization

Deprived (n=23): infant prioritization effect

(faster reaction times and higher accuracy, p < 0.001 and p = 0.005 respectively)



Author interpretations

The authors of the paper suggest that sleep-deprived women had higher prioritisation of their infant, whereas non-sleep-deprived women prioritised their infant and themselves to a similar extent. However, this relies on the assumption that reaction time and accuracy on the matching task are a good proxy for prioritisation. In addition, sleep deprivation was defined based on a threshold average duration of seven hours per night, rather than a loss of sleep due to the infant.

Limitations

There are many limitations to the design of this study. Crucially, the experiment lacks a control group, therefore it is impossible to say whether the results are specific to first-time mothers or would apply generally to all parents, or even to all people. Additionally, the authors do not report whether the relation-shape pairings were randomised between subjects. If "Your infant" was always paired with a triangle, for instance, the results may be influenced by how sleep deprivation affects the ease of recognition of that shape.

References

1. Hoegholt NF, Buus S, Stevner ABA, Sui J, Vuust P, Kringelbach ML. Sleep-deprived new mothers gave their infants a higher priority than themselves. Acta Paediatr. 2022;00:1–7. https://doi.org/10.1111/apa.16560