



# Technology's Impact on Vocabulary Skills in Infants and Toddlers

Alexa Hernandez & Sarah C. Kucker

Department of Psychology, Oklahoma State University



## INTRODUCTION

Technology is becoming increasingly prominent in today's society, and children are being exposed to screens at younger ages than in previous years. This exposure has led to teachers and parents questioning how technology use may be affecting children's vocabulary skills. Previous research has primarily focused on technology's effect on reading skills in school age children and thus leaves gaps in knowledge regarding technology's effect on younger children (Yienger, 2016). In addition, other studies have shown that an increase in screen time is associated with a decrease in learning (Neophytou et al., 2019). However, these types of studies focus on learning as a whole, and do not provide data on vocabulary use exclusively.

## OBJECTIVES

The current study examines the correlations between technology use and vocabulary development in infants and toddlers.

## HYPOTHESIS

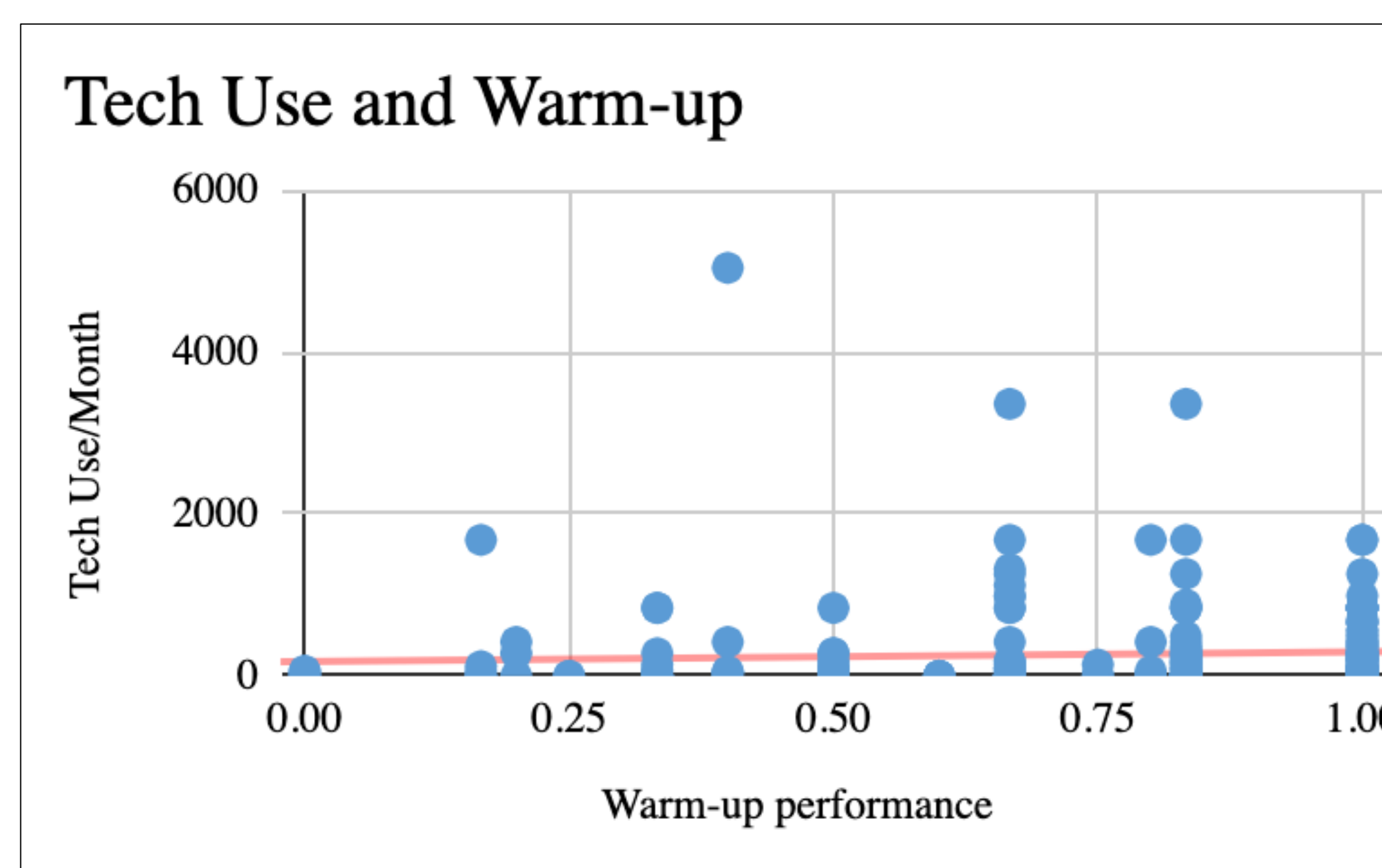
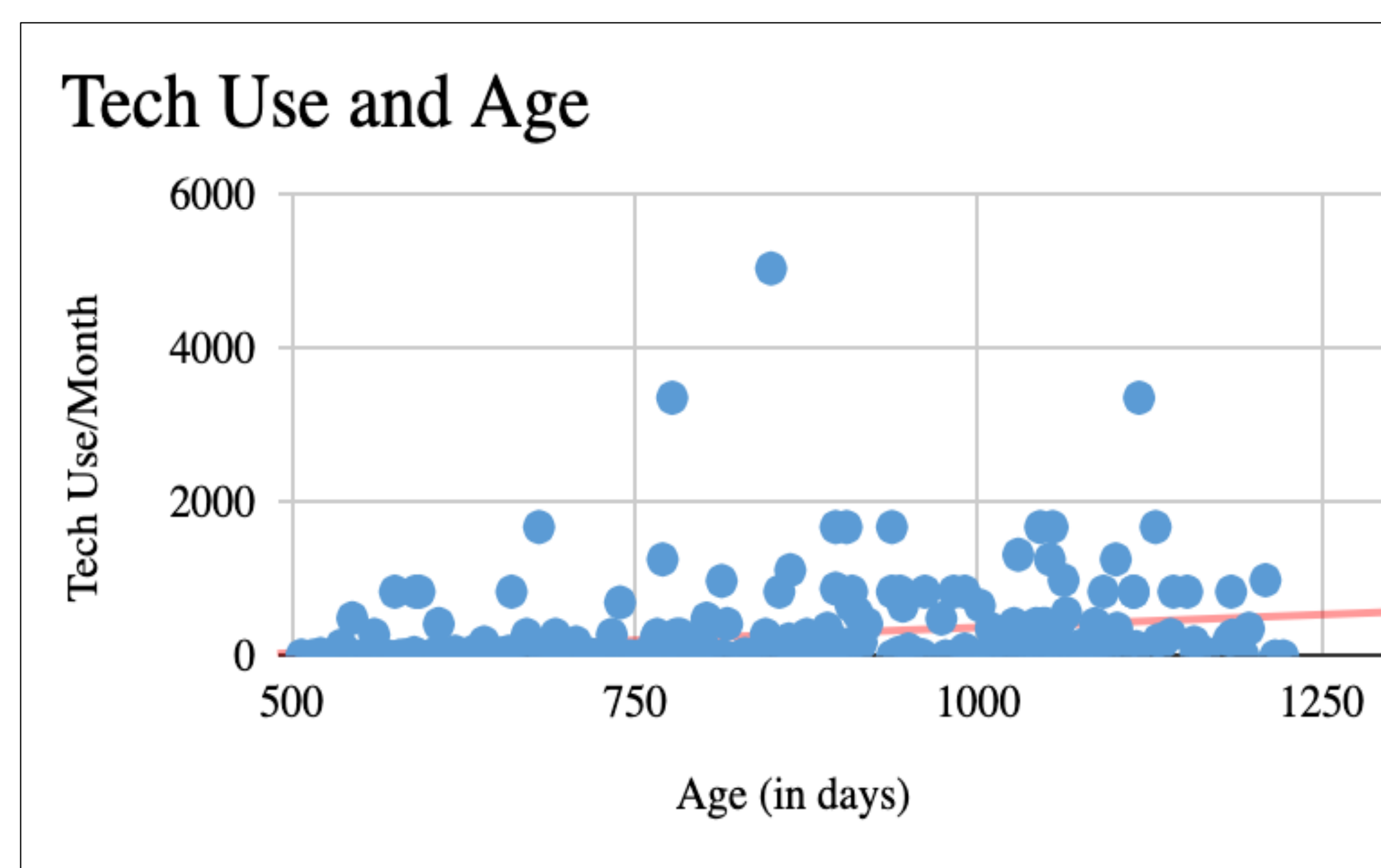
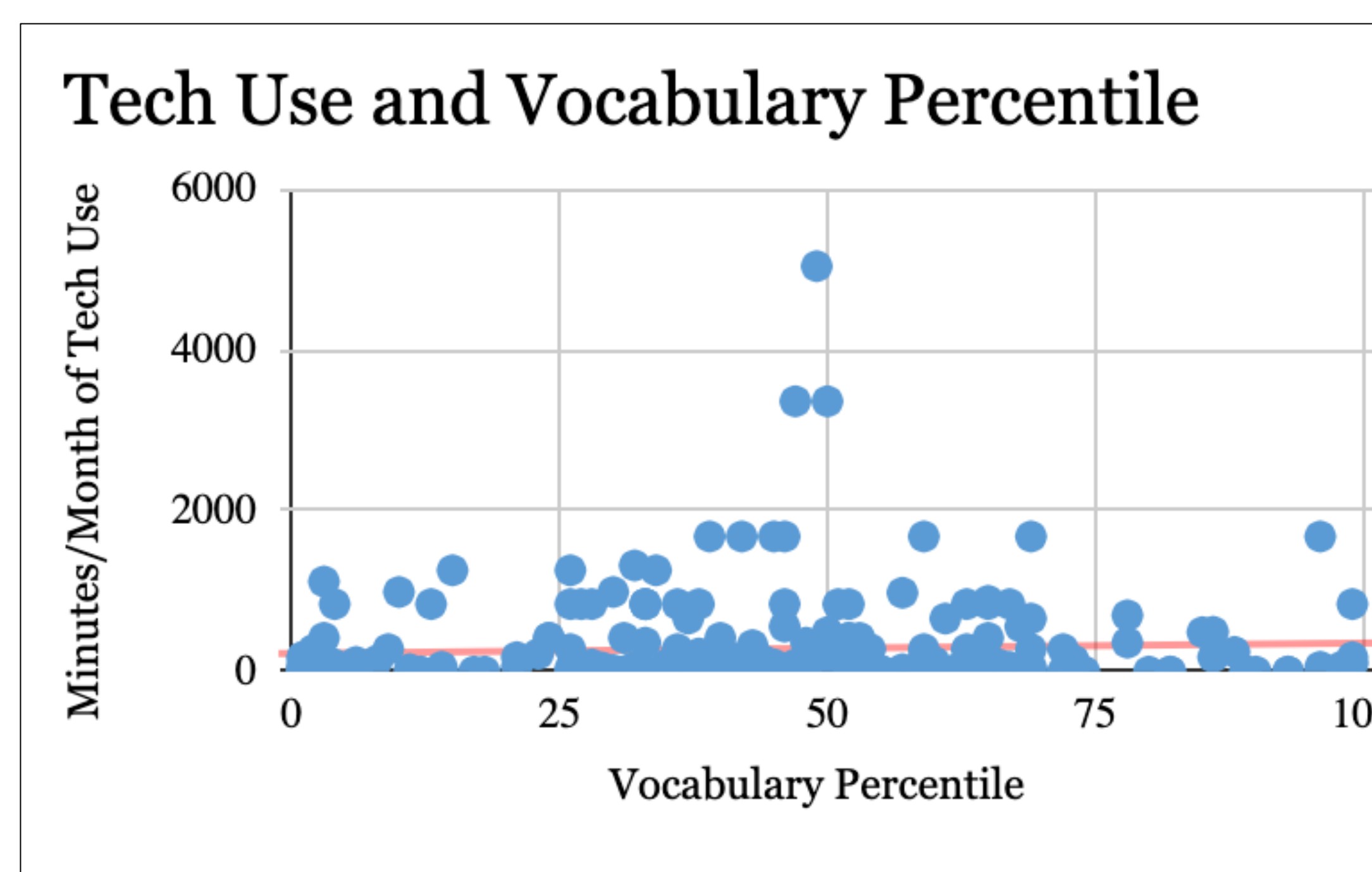
It was hypothesized that an increase in technology use would be associated with lowered vocabulary skills in children.

## METHODS

In this study, 308 participants between the ages of 16 and 42 months (avg. 27 mo.) were recruited from Oshkosh, WI and Stillwater, OK. Parents were asked to report how much, how often, and for how long their kids use tablets and handheld devices and also reported their children's vocabulary through the Mac-Arthur Bates Communicative Development Inventory checklist (Fenson et al., 1994). In addition, a warm-up task was administered to the participants, where they were given three familiar items and asked to select one by name.

## RESULTS

There was not a significant correlation between amount of technology use and vocabulary percentile,  $r(249)=.055$ ,  $p=.388$ . There was, however, a correlation between technology use and age,  $r(265)=.230$ ,  $p<.001$ . Technology use was also not correlated to performance on the warm-up task,  $r(256)=0.065$ ,  $p=0.299$ .



## CONCLUSIONS

The results suggest that an increased amount of screen time does not lead to lower levels of vocabulary in children. Results also showed that as children age, they are utilizing more technology than younger children, yet their vocabulary skills do not appear to be affected by this increase. In addition, the results of the warm-up task demonstrated that technology does not impact children's existing knowledge. These results can have certain implications, such as parents and teachers having peace of mind knowing that some technology use will not affect their toddlers' vocabulary, and that they can continue to use technology to further their kids' learning.

## FUTURE DIRECTIONS

Future studies could include examining if older children and teens experience any impact on their vocabulary due to technology use. In addition, studies can be done on determining if type of technology use plays a role in regard to vocabulary percentile. Another avenue for future study would be to examine vocabulary percentile in adulthood when excessive technology use occurred during childhood.

## REFERENCES

- Neophytou, E., Manwell, L.A. & Eikelboom, R. (2021). Effects of excessive screen time on neurodevelopment, learning, memory, mental health, and neurodegeneration: A scoping review. *International Journal of Mental Health Addiction*, 19, 724–744  
<https://doi.org/10.1007/s11469-019-00182-2>
- Yienger, M. E. (2016). Too much tech harms reading retention in young children. *Inquiries Journal/Student Pulse*, 8(03), 1