

Relationship Between Dog Ownership, Sleep Efficiency, and Physical Activity

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Introduction

Background

- Sedentary behavior and poor sleep are associated with increased risk for the development of health problems, such as cardiovascular disease (Cespedes Feliciano et al., 2018; Javaheri et al., 2008; Tremblay et al., 2011).
- Dog ownership has been theorized to increase youth physical activity (Chase et al., 2022). However, other researchers have found that dog ownership can adversely affect sleep (Smith et al., 2018).

Purpose

- This study aims to clarify the relationship between youth dog ownership, physical activity and sleep outcomes.

Method

Participants

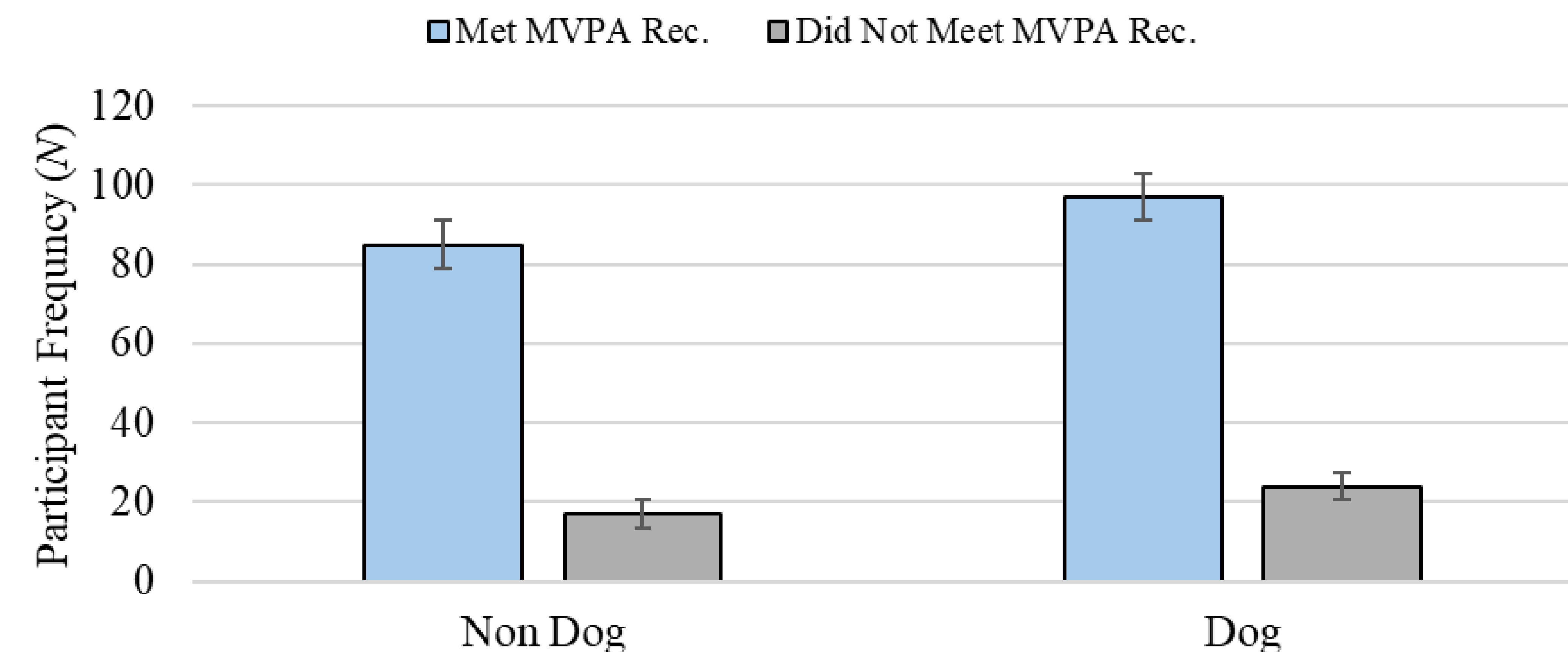
- Participants included 209 youths aged 8 - 12 recruited from a community in West Texas (42.4% white, 50.2% male, M age=9.59).

Procedure

- Participants and their caregivers completed a battery of assessments, including a demographic questionnaire. Youths wore an ActiGraph wGT3X+ to assess physical activity and sleep efficiency estimates.
- Physical activity recommendations were based on guidelines issued by the U.S. Department of Health and Human Services. Children who engaged in at least 60 minutes of MVPA per day were coded as having met physical activity recommendations (Singh et al., 2020).
- Sleep efficiency was based on recommendations issued by the National Sleep Foundation (Ohayon et al., 2017). Therefore, individuals whose sleep efficiency was equal to or greater than 85% were classified as having above average sleep quality.

Figure 1.

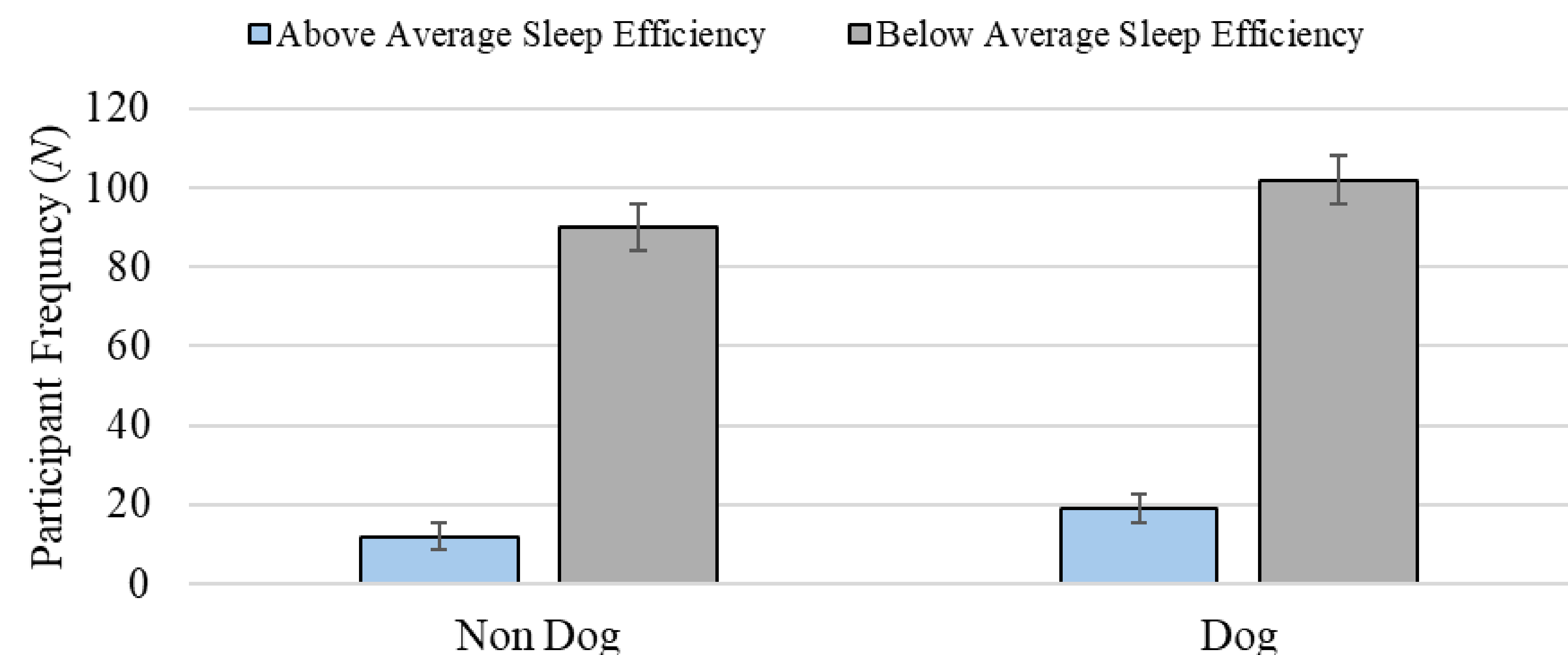
Frequency of Meeting MVPA Recommendations for Dog and Non Dog Owners



Note. Participants were coded to have met MVPA recommendations if they averaged 60 or more minutes of MVPA per day. Error bars show standard errors.

Figure 2.

Frequency of Sleep Efficiency Status for Dog and Non Dog Owners



Note. Participants were coded to have above average sleep if their sleep efficiency was 85% or higher. Error bars show standard errors.

Results

- Binary logistic regression was performed using SPSS.
- Regarding physical activity recommendations, there were no significant differences between dog owners and non dog owners ($\chi^2=.55[1]$, $p=.46$) holding age and gender constant.
- Both age ($\beta=-.31$, $\chi^2=8.71[1]$, $p<.01$) and gender ($\beta=-.107$, $\chi^2=6.50[1]$, $p=.01$) demonstrated a negative relationship with meeting MVPA recommendations.
- Dog ownership also did not significantly predict meeting MVPA recommendations ($\chi^2=.56[1]$, $p=.46$) holding age and gender constant.
- Neither age ($\chi^2=.01[1]$, $p=.94$) nor gender ($\chi^2=.02[1]$, $p=.89$) significantly predicted sleep efficiency.
- Taken together, these results suggest that dog ownership is not related to meeting MVPA recommendations or sleep efficiency. However, both older children and females were less likely to meet MVPA recommendations in the current study. Age and gender did not predict sleep efficiency.

Conclusions

- The current study builds on existing literature evaluating the relationship between pet ownership and child health behaviors.
- We found that pet ownership did not predict meeting MVPA recommendations or sleep efficiency.
- However, a limited number of covariates were examined. Further, it may be that pet specific factors (e.g., animal age) are associated with physical activity for pet owners.
- Future research should consider these factors along with potential longitudinal relationships between pet ownership and child health outcomes.