

Is food intake associated with fragmentation, stability and/or sleep duration?

Nehme P^a, Martins AJ^a, Gonçalves BSB^b, Lowden A^c, Gonçalves L^a, Lemos LC^a, Moreno CRC^{ac}

^aDepartment of Environmental Health, School of Public Health, University of São Paulo, Brazil.

^bFederal Institute of Southeast Minas Gerais, Barbacena, Brazil.

^cStress Research Institute, Stockholm University, Sweden.

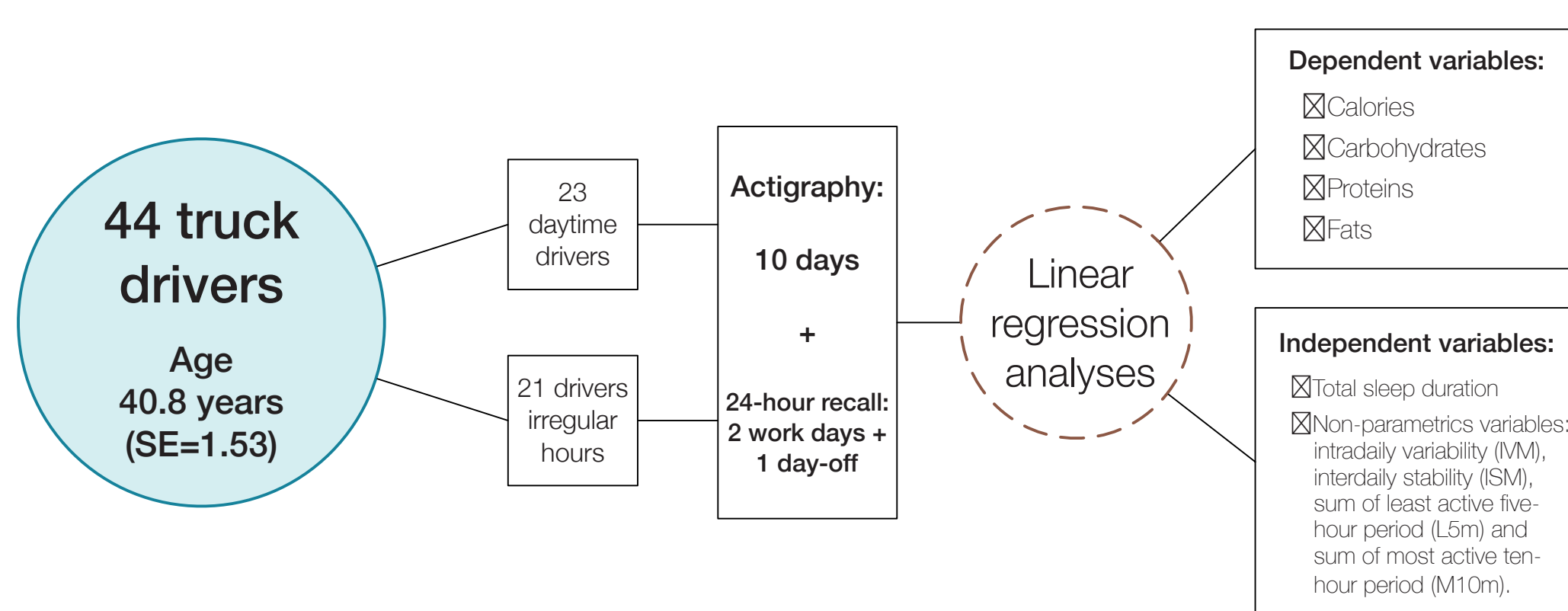
Background

Numerous studies point out changes in food composition and sleep disturbances for both night and shift workers. Understanding the relationship between food intake and sleep disturbances seems to be essential for achieving better health outcomes among workers.

Objectives

The aim of this study was to evaluate the differences between truck drivers working irregular hours (including night work) and daytime drivers with respect to sleep duration and nonparametric variables of rest-activity rhythm. A second objective was to investigate the association between the type of food ingested by these drivers and fragmentation, stability and duration of sleep.

Methods



Results

No differences were found between shifts in relation to intradaily variability. However, there was increased activity during sleep (irregular: mean=27778, SE=2058; day: mean=8735, SE=1580; $p<0.001$), lower activity during wakefulness (irregular: mean=111144, SE=3905; day: mean=132077, SE=3795; $p<0.001$) and lower interdaily stability (irregular: mean=0.26, SE=0.04; day: mean=0.62, SE=0.27; $p<0.001$) among drivers working irregular hours compared with daytime drivers.

Fat intake showed statistically significant correlation with the duration of sleep on work days ($p=0.05$) (Figure 1). When analyzing the groups separately, the correlation remained only for irregular shift workers ($p<0.01$) (Figure 2).

Conclusion

Irregular work hours appears to affect sleep fragmentation and stability, however these sleep variables were not correlated to food intake. Moreover, further studies are needed to investigate whether food content is associated with sleep duration.

Figure 1
Sleep duration and food intake during the week

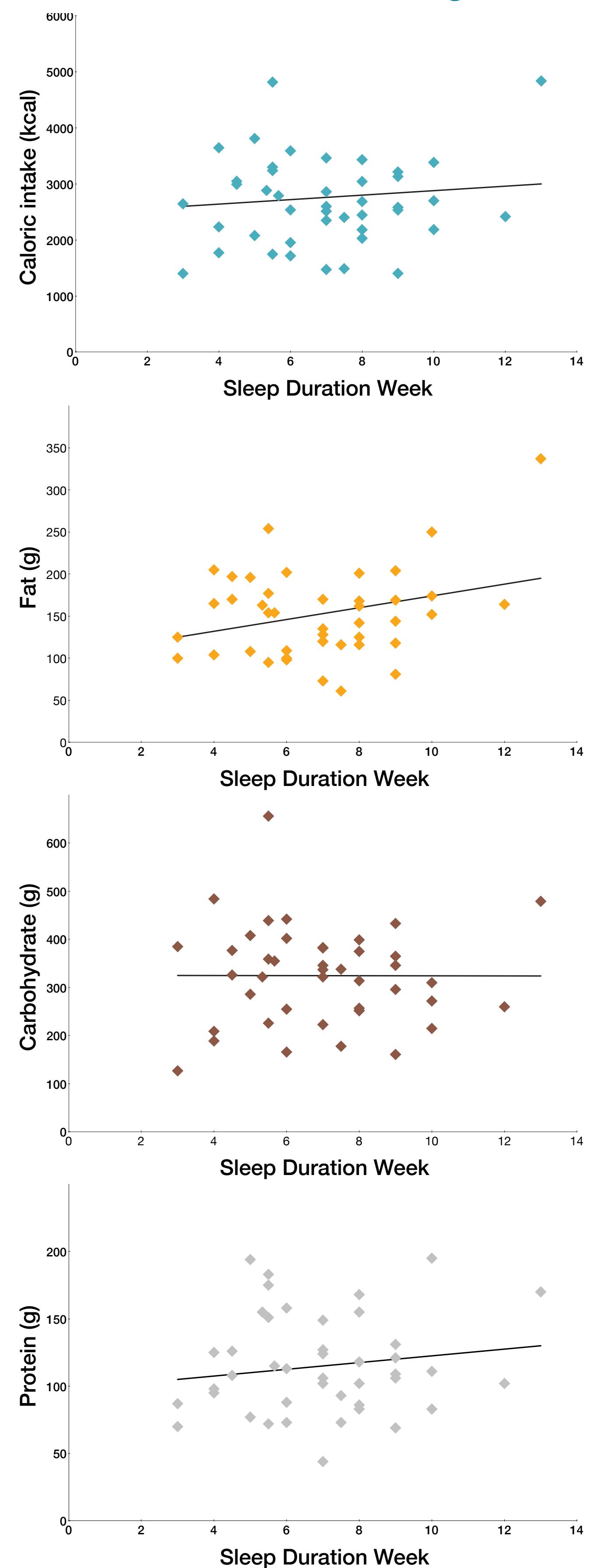


Figure 2
Sleep duration and food intake during the week according to work hours

