



## A good night's sleep – its polysomographic characteristics in women and its relation to aging

Torbjörn Åkerstedt, Eva Lindberg, Johanna Schwarz, Georg Gruber, Jenny Theorell-Haglöw  
Stress Research Institute, Stockholm University; Department of Pulmonology, Uppsala University; Siesta Ltd Vienna

### Conclusion

Perceived morning sleep quality in a large group of women is related to PSG variables reflecting long sleep and sleep continuity, whereas sleep stages and other variables lack such a relation. Young and old individuals differed greatly in the reported sleep quality for the same values of PSG parameters. Sleep quality from a retrospective questionnaire lack relation to PSG parameters, in accordance with previous work. Possibly several PSG nights are required to reflect questionnaire sleep quality.

### Introduction

Sleep complaints are more common in women but polysomnographic (PSG) studies often fail to verify this. The present study used a large representative, non-clinical sample to study the relation between PSG and ratings of sleep quality with a special emphasis on the influence on aging on this relation.

### Method

Representative sample of 250 women. Polysomnographic (PSG) recordings in the home.

**Sleep diary approach:** Morning rating of sleep quality (0-100) as well as retrospective rating of sleep problems in questionnaire.

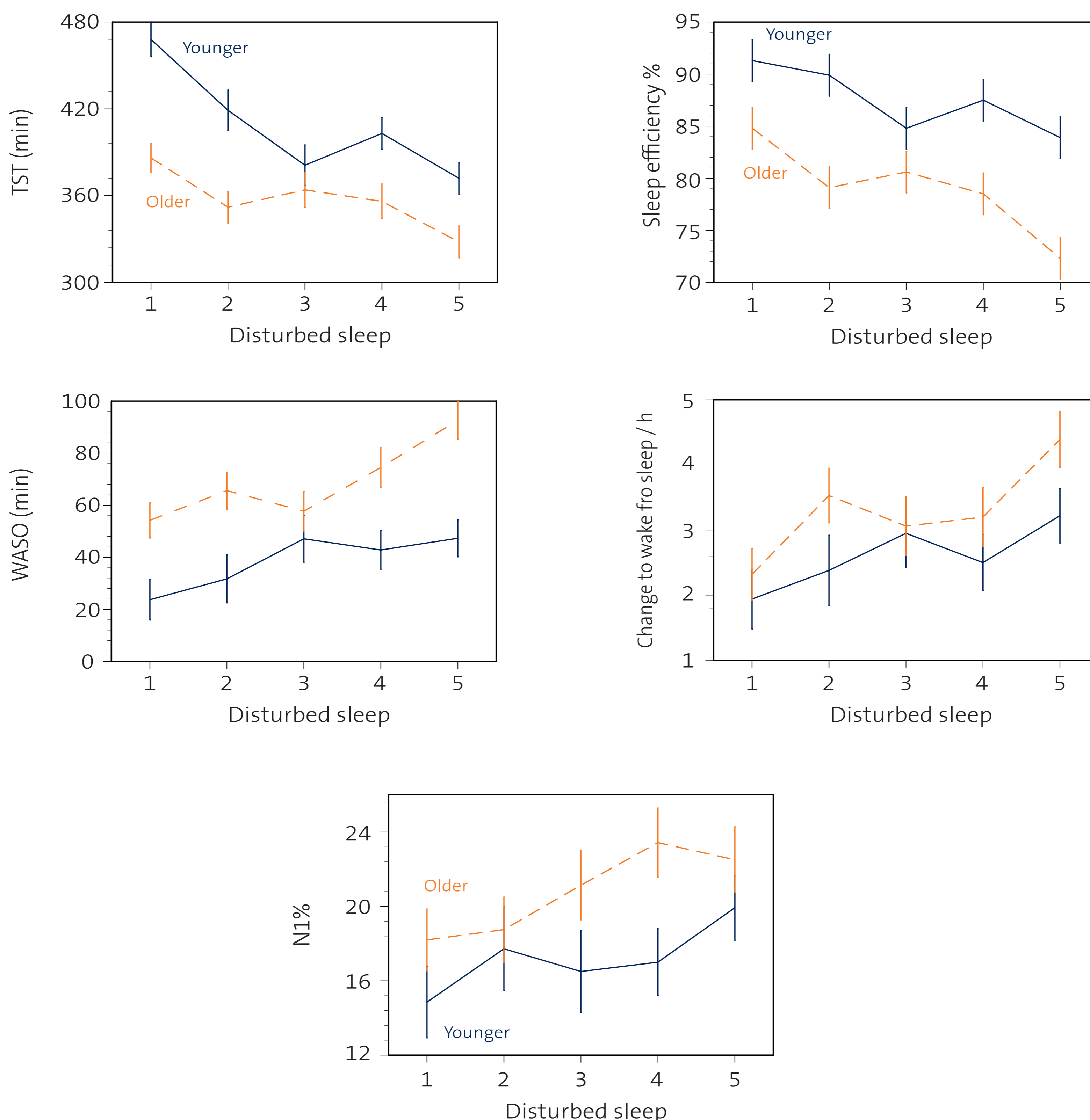
**Retrospective questionnaire approach:** Mean of problems falling asleep, problems remaining asleep and early awakening, scored 1-5. ANOVA was used to relate sleep quality (in 5 levels with ~40-50 individuals in each group) and age (<45 and >45 years) to a number of PSG parameters, with adjustment for snoring (oversampled).

### Results

**Sleep diary approach:** Significant relation between sleep quality and PSG parameters were found for TST(long), Sleep efficiency(high), WASO(low) (all  $p < .001$  for sleep and age) awakenings/h(low), stage shifts/h(low), sleep latency(short), REM latency (short), % Stage 1(low) (all  $p < .05$  for sleep and age). Note that TST for the young low quality group is equal to TST for the old high quality group (similar for sleep efficiency, and WASO). Percentages of delta or theta content of the EEG spectrum did not relate to reported sleep quality. Nor did number of sleep spindles or k-complexes.

**Sleep questionnaire approach:** None of the PSG variables showed a significant relation to sleep quality.

## Morning rating of disturbed sleep vs PSG variables



### CONTACT

Torbjörn Åkerstedt, Stress Research Institute, Stockholm, Sweden  
E-mail [torbjorn.akerstedt@su.se](mailto:torbjorn.akerstedt@su.se)