Subjective sleepiness, individual differences and daytime work

Göran Kecklund1, Michael Ingre1, Mats Lekander1,2, Torbjörn Åkerstedt 1,2
1) Stress Research Institute, Stockholm University, Sweden
2) Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden

Excessive daytime sleepiness was associated with low age, being female, having high education, and sleep complaints, which removed the effects of working times, health, and stress.

Introduction
The aim of the study was:
1) To describe the variation in sleepiness across a workweek in a large sample of daytime workers,
2) To evaluate individual differences of severe sleepiness and explore the determinants of sleepiness.

Method
The sample included 526 daytime workers (79% females, mean age=44 years, SD=10) that filled in a questionnaire and a sleep/wake diary during one week. The diary included questions on sleep, stress, health and sleepiness (Karolinska sleepiness Scale, KSS, 1 alert – 9 sleepy, rated at 6 times/day between 07h and 22h).

Results

Figure 1 shows that mean daily sleepiness was lowest on days off (weekend) and there was no accumulation across work days. Table 1 shows that the prevalence of severe sleepiness (defined as having at least 2 KSS ratings≥7 per day) was 13%. Table 2 shows some variables that differed significantly (p<0.05) between the KSS groups. Finally, the significant predictors were subjected to a multiple regression analysis and the results are presented in the box below.

A multiple regression analysis (with KSS group as the outcome variables) showed that the following determinants became significant:
- age (beta=-0.13)
- sex (beta=-0.14)
- high education (beta=0.10)
- awakening difficulties (beta=0.24)

Total amount of explained variance=16.5%