Karolinska sleepiness scores predict microsleep events in an overnight driving simulation task

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ABSTRACT

The aim of the present study was to evaluate if the occurrence of microsleep events in an overnight driving simulation task can be predicted by the score on the Karolinska sleepiness scale assessed before or after the drive. Twelve healthy volunteers performed the driving simulation task in five test runs separated by breaks of approximately 10 minutes. Occurrences of microsleep events and their strength were scored primarily on the basis of eye closures significantly prolonged across test runs. Binary logistic regression analyses revealed that the occurrence of microsleep is significantly related to higher scores on the Karolinska sleepiness scale. Calculations of specificities and sensitivities suggested that a KSS score of 7 prior to and of 8 after the drive properly differentiates between ~~the~~ occurrence and non-occurrence of microsleep. The results suggest that the score on the Karolinska sleepiness scale is a valid measure to predict microsleep.

Keywords: Prediction, Microsleep, Karolinska, Sleepiness