



Accumulation of fatigue and sleep problems among European seafarers during prolonged periods at sea

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Introduction

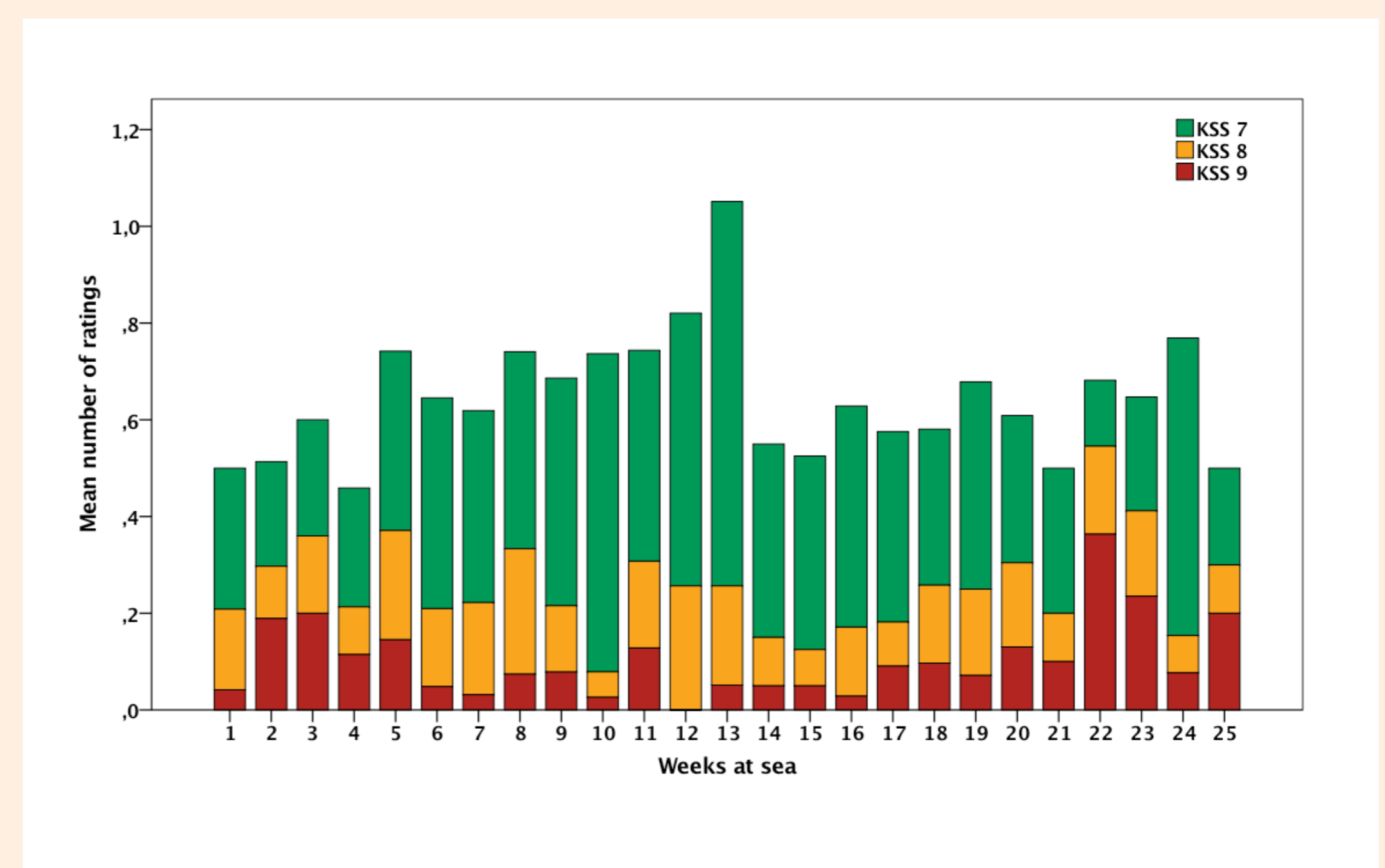
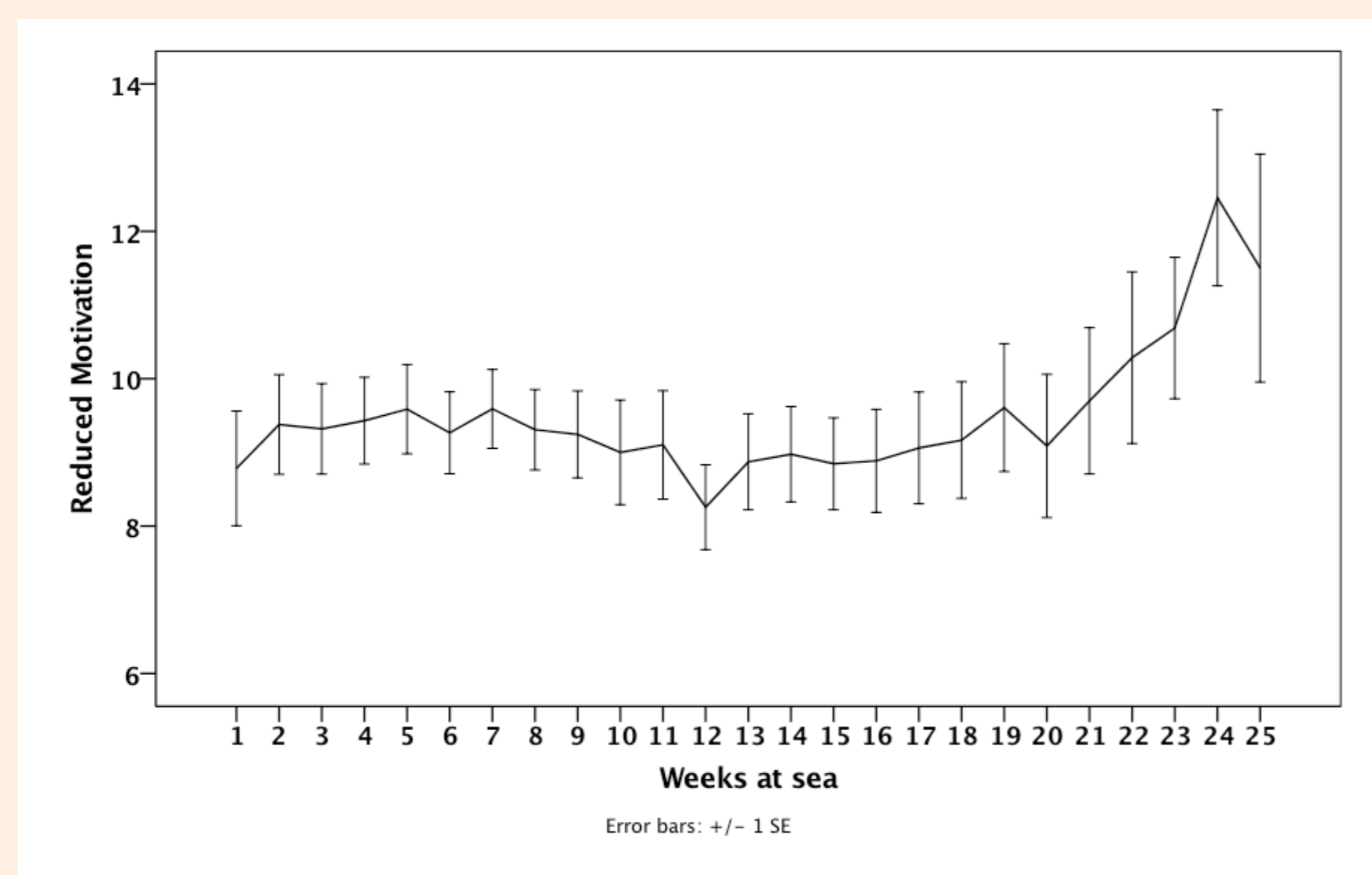
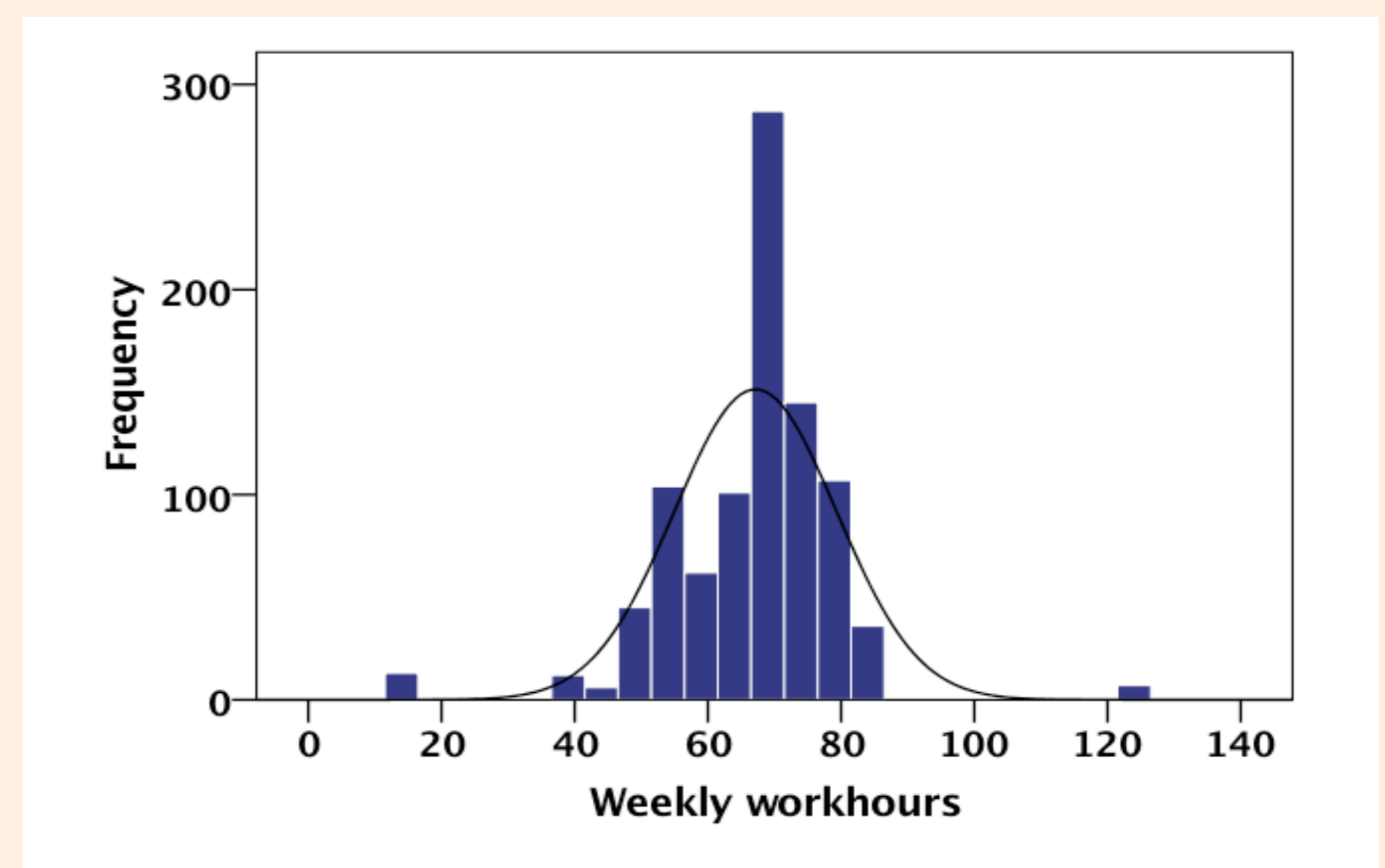
This is the first field study to investigate the effect of extended periods at sea on the development of fatigue and sleep (problems) among seafarers.

Conclusion

Despite pronounced individual differences, being at sea for extended periods of up to more than half a year does gradually impair motivation and reduces the amount of recuperation obtained.

Results

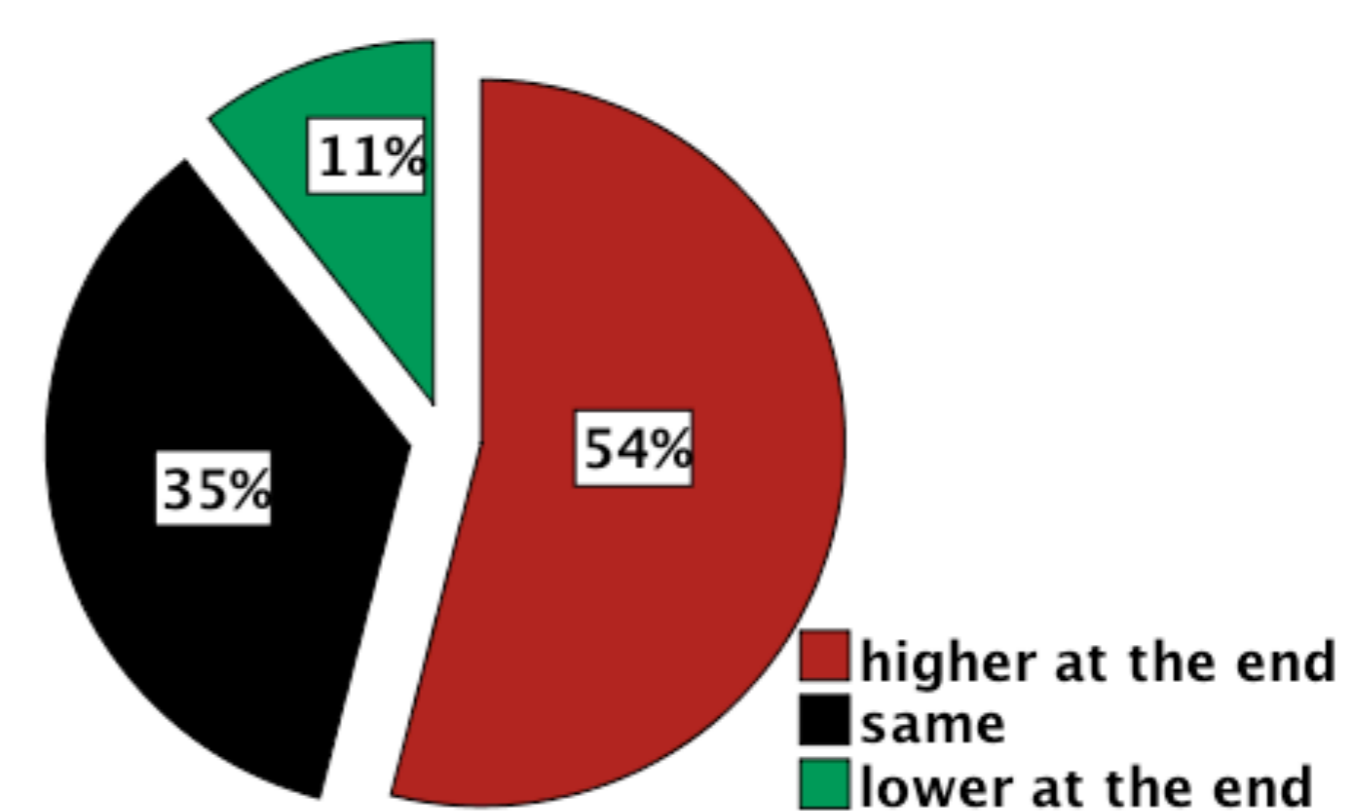
Weekly working hours (67 ± 12 h) were long with about 70% of crew doing overtime work at least once a week and >50% reporting split sleep on a daily basis. Of the MFI-20, motivation was significantly reduced with time at sea ($F=2,04$, $p<.005$). Concerning sleep, the number of early awakenings increased ($F=1,71$, $p<.05$) and the sufficiency of rest and recuperation decreased ($F=1,75$, $p<.05$). All other parameters were unaffected by time at sea. Severe sleepiness ($KSS \geq 7$) was observed during the entire time at sea



Method

The entire crew (n=111) of 8 ships from 2 European shipping companies participated during routine working periods at sea for up to 35 weeks. A background questionnaire at the start of the voyage contained questions about demographics (age, BMI, etc.), work and working hours, health and fatigue (sleep need, chronotype, stress, etc.). Weekly questionnaires were completed during the total voyage at sea and actigraphs were worn. The weekly questionnaire included items on sleep (Karolinska Sleep Diary, environmental factors disturbing sleep, etc.), on health and fatigue (Karolinska Sleepiness Scale, Multidimensional Fatigue Inventory, MFI-20, depressive symptoms, etc.) as well as on work (work difficulty, workload, social support at work, etc.)

The majority of seafarers has the feeling that their fatigue levels are in general higher at the end of a journey at sea than at the beginning:



CONTACT