

# READING LIST

## CYCLE 6: WEEKS 16 - 18

### 1. Seafarers' Physical Activity and Sleep Patterns: Results from Asia-Pacific Sea

Int. J. Environ. Res. Public Health 2020, 17(19), 7266;  
<https://doi.org/10.3390/ijerph17197266>  
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#### Abstract

Prolonged ocean voyages constrain the regular physical activity and sleep patterns of seafarers. However, there is a lack of information on seafarers' physical activity and sleep behavior. The purpose of this study was to systematically examine physical activity and sleep patterns among seafarers using a single wrist-worn accelerometer.

Fifty-one senior maritime students (mean age = 22.8 years; 80.0% male) in a university navigation department participated in the study. Data was collected from participants on three sea voyages in the Asia-Pacific region. Indicators of moderate to vigorous intensity physical activity (MVPA) and sleep patterns were compared between several conditions: (1) moored versus sailing, (2) on-navigation duty and off-navigation duty, and (3) day versus night navigation duty. Regardless of conditions, low levels of physical activity and short sleep durations were observed. Independent sample t-tests revealed that time spent doing MVPA was significantly higher when participants were off-duty than when they were on-duty ( $p < 0.001$ ).

Physical activity did not significantly differ between the other two conditions. While total sleep duration was not significantly different between mooring and sailing, the results showed that participants awakened more frequently ( $p = 0.007$ ) and their sleep was more restless ( $p < 0.001$ ) while sailing. The results demonstrated that developing effective programs to promote physical activity should be a public health priority for the seafaring population, and serious consideration is required to mitigate sleep disruption during sailing.

ACCESS ARTICLE HERE:

<https://www.mdpi.com/1660-4601/17/19/7266>

### 2. Identifying Predictors of Stress and Job Satisfaction in a Sample of Merchant Seafarers Using Structural Equation Modeling

McVeigh, J., MacLachlan, M., Vallières, F., Hyland, P., Stilz, R., Cox, H., & Fraser, A. (2019).

#### Abstract

**Background:** Seafarers are amongst occupational groups with the highest risk for stress, a factor known to impact on mental health. Psychological issues such as depression, anxiety, suicide, and alcohol or drug dependence are recognised health problems within the maritime sector. The

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primary aim of this study was to identify which individual and occupational factors, known to impact on psychological functioning across the maritime industry and other sectors, best predict perceived stress and job satisfaction among a sample of merchant seafarers.

**Methods:** Secondary data analysis was conducted using a work experiences and attitudes questionnaire administered by a large shipping company to seafarers within their organisation. Structural equation modeling was conducted using a proposed theoretical model of perceived stress and job satisfaction in a sample of merchant seafarers.

**Results:** While the structural equation model produced acceptable fit to the sample data according to numerous goodness-of-fit statistics, the comparative fit index and Tucker-Lewis index results indicated less than satisfactory model fit. The model explained 23.8% of variance in the criterion variable of perceived stress, and the strongest predictive effect was for dispositional resilience. The model explained 70.6% of variance in the criterion variable of job satisfaction, and the strongest predictive effect was for instrumental work support.

**Conclusion:** When addressing the psychosocial well-being of merchant seafarers, findings of this study suggest that dispositional resilience may be a particularly important factor with regards to perceived stress, while instrumental work support appears to be a critical factor in relation to job satisfaction. Importantly, however, an overall work environment that is perceived by employees as supportive, equal and just is a cornerstone for the psychosocial well-being of seafarers.

Access the article here:

<https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00070/full>