

Occupational Health on Merchant Ships during COVID-19 [†]

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Abstract: The COVID-19 pandemic burdened the working and living conditions of seafaring personnel with particular challenges. The present study investigated the health and occupational burden of 301 multinational seafarers from merchant ships using self-administered questionnaires. The survey was carried out between September and November 2021 on the occasion of SARS-CoV-2 vaccinations at the Port of Hamburg, Germany. Participants generally reported good physical and mental health status while general burden perception increased compared to pre-pandemic levels. Three-quarters of seafarers reported experiencing shore-leave denial at least once throughout the pandemic. In summary, the study reveals the substantial impact of the COVID-19 pandemic on the perceived occupational burden of seafaring personnel.

Keywords: occupational health; workload; shore leave; seafarer; cargo ships; maritime transport; COVID-19; SARS-CoV-2; burden perception



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1. Introduction

The seafaring profession is considered very demanding with a variety of occupational risk factors including high work demands and exposure to hazardous environments. Impacts of the COVID-19 pandemic further challenged working and living conditions of seafarers which belong to an occupational group with increased risk regarding COVID-19 infections, for example, due to limited access to preventive and curative medical care and greater exposure to containment measures such as travel restrictions.

The present survey aimed to reveal the health and occupational situation of seafarers during the pandemic and to show a comprehensive portrayal of the perceptions and impact of the (advanced) COVID-19 pandemic on seafarers. It was further intended to identify predictors that affect seafarers' sense of burden. Results in the context of occupational health and the work environment are presented and discussed in this abstract.

2. Material and Methods

The study population for this cross-sectional study was seafaring personnel from merchant vessels. Data collection was conducted on the occasion of SARS-CoV-2 vaccinations for seafarers in the Port of Hamburg between September and November 2021. A quantitative questionnaire with 48 established or survey-specific items on (I) COVID-19 infections and public health measures on board, (II) Information management in the working context, (III) Pandemic and risk perceptions (e.g., burden, workload, risk, fear), (IV) General (self-rated health) and mental health (PHQ-D2) and (V) Sociodemographic information and baseline characteristics of the ship was developed and shared among respondents in printed form for self-completion. Descriptive and multivariable data analysis was performed using IBM SPSS Statistics®, Version 26.

3. Results

Overall, 301 multinational seafarers (99.2% male, 65.8% ≤ 30 years) from 39 internationally sailing cargo ships representing all ranks (34.8% ship command and officers, 65.2% ratings) participated in the study.

General health status (mean 4.3 ± 0.8 , range 1–5) and mental health status (mean 4.1 ± 0.8 , range 1–5) was reported as very good or excellent by 74.8% and 68.1% of seafarers, respectively. A total of four participants (1.3%) reported experience with COVID-19 cases on board and 95.7% indicated that general infection prevention measures were implemented on board the ship they were currently working at. In total, 57.3% of seafarers were at least once quarantined in their working context and 58.6% had at least one extended work contract due to COVID-19. Shore leave denial was reported by 76.4% of respondents. Information management in the working context was rated very good (mean 4.5 ± 0.8 , range 1–5), and the majority (92.1%) felt sufficiently informed about COVID-19 issues. Workload (mean 6.36 ± 2.15 , range 1–10) was experienced as higher than the general burden (mean 4.63 ± 2.76 , range 1–10). Despite the perception that workload during the COVID-19 pandemic decreased or remained stable, 64.6% of respondents reported an increase in general burden perception. Seafarers with higher perceived workloads faced a lower chance of perceiving their personal situation as more burdensome since the start of the COVID-19 pandemic (AOR 0.05, CI 95% 0.02–0.16).

4. Discussion and Conclusions

Especially during the COVID-19 pandemic, maritime transport has been essential for the continuous maintenance of global supply chains of essential goods which has been enabled by the efforts of seafaring personnel. This study revealed high occupational impacts on seafarers in the course of the COVID-19 pandemic and emphasized complex burden among maritime workers at sea that increased during the pandemic. It is important that seafarers are globally considered as essential workers in order to facilitate their best possible support. Further, strengthening occupational health and well-being of seafarers is important to ensure sustainable realisation of maritime transport.

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