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# Accommodation and Welfare on Contemporary Cargo Ships

*Neil Ellis & Helen Sampson*

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## **Abstract**

The standard of the facilities and furnishing of accommodation spaces is not only important because seafarers spend much of their lives at sea, but also because land-based research has demonstrated an impact of the built environment on well-being. This paper therefore examines seafarers' current experiences of accommodation and recreational facilities. It reports on a large-scale international questionnaire study conducted in the period 2010-2012. In highlighting the significant variations in accommodation design and standards across the sector the paper highlights the considerable need for this area to be given far greater priority in the commissioning and design of modern vessels.

## **Introduction**

In the present day shipping industry the romantic image of lengthy shore-leave for seafarers in far flung ports is long gone. The demands of modern shipping mean that vessels are often only in port for a few hours at a time, during which seafarers are generally busy supervising the loading and unloading of cargo, or dealing with the numerous officials who are part of a vessel's visit to port. The modern seafarer has to work long hours and on tours lasting many months, with little chance of getting ashore. In this context standards of on-board accommodation are of particular importance as evidence indicates that the built environment has the potential to cushion the impact of fatigue as well as stress (Maas, *et al.*, 2009; Van de Glind, *et al.*, 2007; Caspari, *et al.*, 2006; Kaplan, 1995). In times of economic turmoil and increasing competition within the industry there are inevitably pressures to cut back on investment in the accommodation areas<sup>1</sup> of ships, and to prioritise cargo carrying capacity and working areas of a vessel. However, such prioritisation is likely to come at a cost in

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<sup>1</sup>This is not always the case, and some owners have gone to great lengths to provide good standards of accommodation. Over the last 15 years researchers at SIRC have identified considerable variation in the standards of accommodation and recreational facilities (Ellis, *et al.*, 2012). For example, some vessels are known to be clean and well maintained with good facilities while at the other end of the spectrum some ships have cramped and uncared for cabins, with meagre recreational facilities.

relation to the effective performance of seafarers and while it is currently largely overlooked this paper will argue that there is an established body of evidence which suggests that accommodation design should be seen as key to the performance and retention of seafarers in the industry.

Land-based studies highlight the impact of the built environment both at home and in work. Factors such as quality of housing (Evans, 2003), noise levels (Salyga and Juozulynas, 2006; Riediker and Koren, 2004), light levels (Kuller, *et al.*, 2006), and colour schemes (Caspari, *et al.*, 2006; Baglioni and Capolongo, 2002) have all been shown to have effects on health and well-being. For example, good quality interior furnishings and decor have been positively linked to wellbeing, mood and behaviour (Kuller, *et al.*, 2006; Caspari, *et al.*, 2006; Baglioni and Capolongo, 2002). In a vocational setting Caspari also suggests that ‘high quality working conditions reduce stress factors, strengthen immunity, and heighten the contentment factor’ (Caspari, *et al.*, 2006). Other research shows that aesthetically pleasing surroundings may increase recovery rates from mental fatigue (Evans, 2003).

It is reasonable to extrapolate from these land-based findings that accommodation design, noise levels, light levels and other aspects of the built environment equally impact on seafarers and their health and wellbeing. Poor quality accommodation and recreational facilities are also likely to influence seafarer retention rates. Thus the study of seafarer experiences of vessel accommodation may be seen as timely<sup>2</sup> in the current climate where some owners/managers are struggling to find good quality well-trained crew for their ships (Tingyao Lin, 2013; Lowery 2012; Matthews, 2010).

This paper therefore presents some of the findings from a study of vessel accommodation undertaken by The Lloyd’s Register Educational Trust Research Unit (The LRETRU)<sup>3</sup>, at the Seafarers International Research Centre (SIRC), which looks at the standards of current accommodation and recreational facilities in the merchant fleet. For the full report see Ellis, *et al.* 2012.

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<sup>2</sup> While Tomaszunas, et al. (1997) in a survey of Polish seafarers looked at satisfaction with accommodation, the main focus of their research was to look at working conditions, morbidity and injury at sea, with standards of accommodation being examined in little depth. A more recent survey of accommodation and recreational facilities on-board commercial yachts has been conducted at SIRC (see see Bailey, et al., 2010). However, due to the specialised nature of commercial yachts it is inappropriate to make comparisons.

<sup>3</sup> On 1 March 2013 The Lloyd’s Register Educational Trust was assimilated into the Lloyd’s Register Foundation. For further information please visit their website [www.lrfoundation.org.uk](http://www.lrfoundation.org.uk).

## Methods

A questionnaire survey was used to examine active seafarers' experiences of accommodation and recreational facilities on-board their current or most recent vessel. The questionnaire was adapted from one used in a study of accommodation and recreational facilities on-board commercial yachts (see Bailey, *et al.*, 2010). This was modified for use with the merchant fleet following pre-pilot interviews conducted at shipyards in China, and after discussion with industry experts. It was then piloted with a small group of seafarers, after which minor changes were made relating to their comments and feedback. The questionnaire included questions about a number of aspects of life and work at sea including: seafarers' demographics, information about the last/current vessel worked on, terms and conditions of employment, working patterns, shared accommodation, experience of cabins, messrooms/crew lounges, washing/drying facilities, shore-leave, recreation facilities on-board, food, concerns about working at sea, and the benefits of working at sea. The final version of the questionnaire was produced in three languages to facilitate accuracy and accessibility: English, Chinese (Mandarin), and Tagalog.

Questionnaires were distributed and collected by researchers at maritime colleges, training centres, and Seafarers' Missions in three countries: China, Philippines, and the UK. Anonymity and confidentiality were assured at all times.

1,533 questionnaires were completed and returned in total, and results from these were then entered into the computer based statistical analysis package SPSS18. Chi squared analysis was used to test for statistical differences in reported experiences of accommodation and recreation facilities on-board, using a significance level of 0.05. Within this paper only significant findings are discussed.

## The sample

Only two percent (n=30) of the sample were women, and the average age of respondents was 33 years old (ranging from 17 to 73 years old)<sup>4</sup>. The sample consisted of four main nationalities, mostly reflecting the countries in which the questionnaires were distributed. The largest nationality groups were Filipinos (39%) and Chinese seafarers (32%). Indian seafarers

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<sup>4</sup> Age is split up into five age groups: 25 year old or less, 25-29 years old, 30-34 years old, 35-39 years old, and 40 years old and over.

made up the next most frequently represented nationality group (15%) followed by British seafarers who represented 12% of the sample. All other nationalities (combined) represented just 3% of the sample overall<sup>5</sup>. In terms of rank senior officers accounted for 24% of the sample, junior officers 42%, and ratings 34%. The majority of seafarers had worked at sea for less than 11 years (67%), and only 6% had been at sea for over 20 years.

In terms of the vessel types the most frequently represented ship types were bulk carriers (31%) and tankers (27%), followed by slightly lower percentages (23%) of specialist cargo/general cargo/container vessels (see Figure 1). Passenger carrying vessels and ‘other’ vessel types<sup>6</sup> represented a smaller percentage of the overall sample (8% and 11% respectively). The mean gross tonnage of the vessels was just under 40,000gt (39,264.62gt)<sup>7</sup>, and the average age of vessels was 10 years old<sup>8</sup>. The majority of ships were built in Japan (33%), China (23%) and South Korea (17%), generally reflecting shipbuilding trends in the world over the last thirty years<sup>9</sup>. When the sample was compared to the world fleet as listed in *Lloyd’s Register Fairplay World Fleet Statistics (2011)* the current sample over-represented bulk carriers and to a lesser extent tankers, and under-represented ‘other’ ship types. Older ships were also seen to be under-represented (For full details of these comparisons see Ellis, *et al.*, 2012).

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<sup>5</sup> These other nationalities are grouped together and are referred to as ‘other’ in all subsequent analysis.

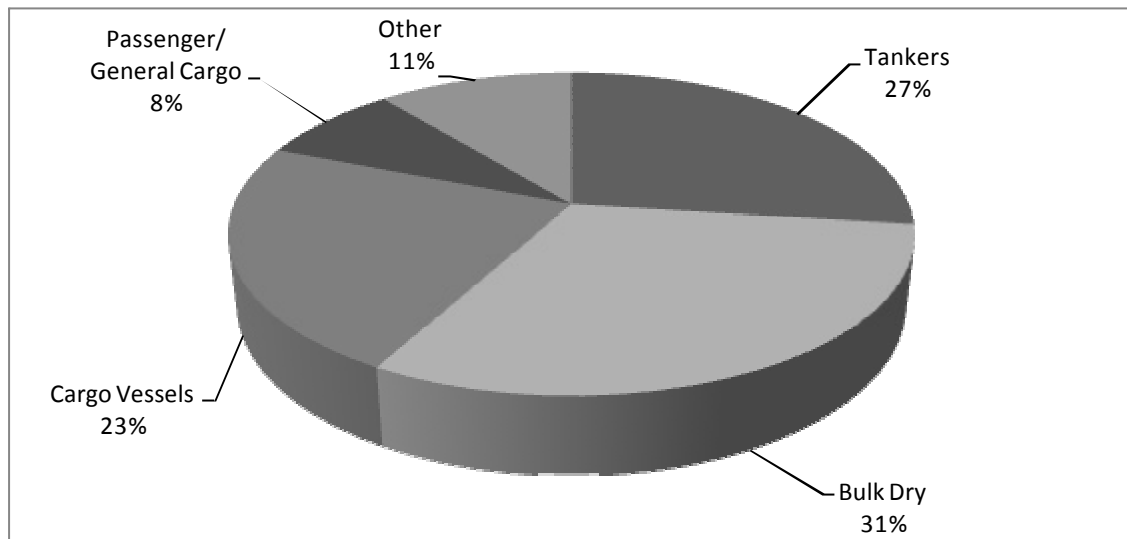
<sup>6</sup> ‘Other’ vessel types are those that did not fall into the four main ship type categories.

<sup>7</sup> Gross tonnage is used as an indication of size within this study, with vessels split into small, medium and large ship groupings, irrelevant of ship type.

<sup>8</sup> For all subsequent analysis ships are split into four age groups: less than 5 years old, 5-9 years old, 10-19 years old and over 20 years old.

<sup>9</sup> Ships not built in the three main countries (Japan, China, South Korea) are grouped together and referred to as ‘others’ in following analysis.

Figure 1: Ship Types



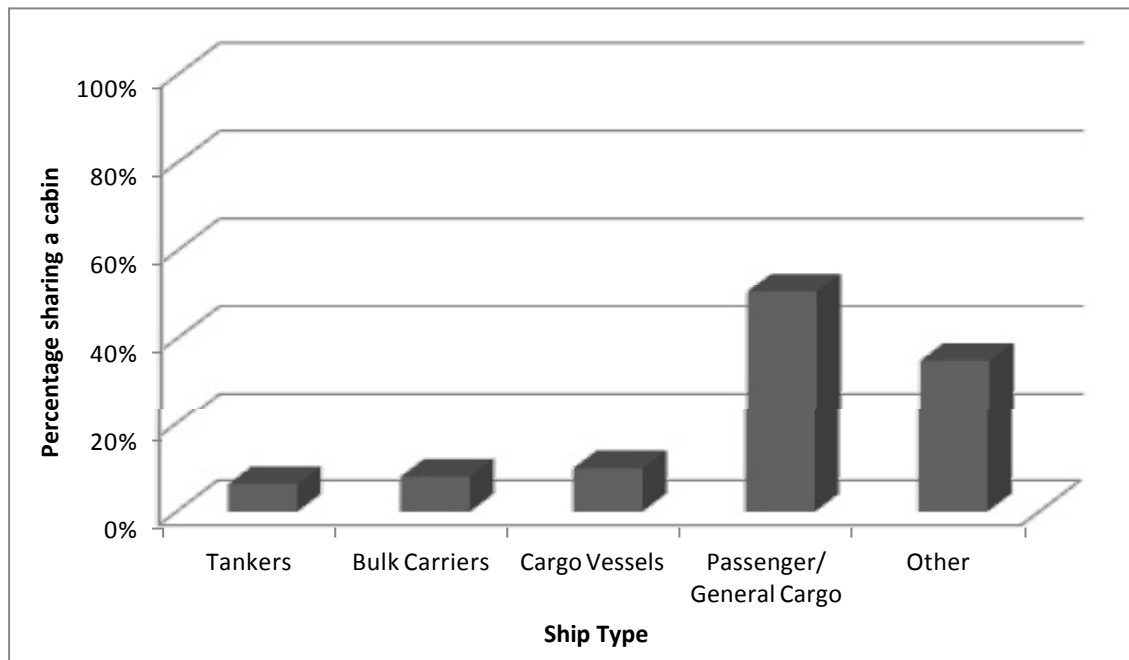
## Results

### *Sharing a cabin*

Although the majority (86%) of seafarers indicated that they did not share a cabin, of the 14% that did, 86% said they did not have a choice about sharing, and the majority of these indicated that they minded sharing a cabin. Twenty-one percent of those that shared a cabin reported that they minded sharing ‘a great deal’, and only 7% indicated that they ‘did not mind sharing’. Not surprisingly it was younger seafarers (those under 30) who were more likely to be sharing a cabin, and ratings were also more likely to be sharing than officers.

In terms of vessel characteristics, type of vessel was found to have a significant impact on whether seafarers shared a cabin or not. On passenger/general cargo ships a high proportion of seafarers (51%) were found to be sharing cabins, with only a small proportion of seafarers sharing a cabin on the other main vessel types (6% tankers, 8% bulkers, 10 % cargo vessels, see Figure 2). The percentage of seafarers sharing a cabin in the ‘other’ ship type group was higher at 35%, although it is difficult to draw any conclusions about this group as it consists of a varied range of vessels.

Figure 2: The Percentage of Seafarers Sharing a Cabin by Ship Type

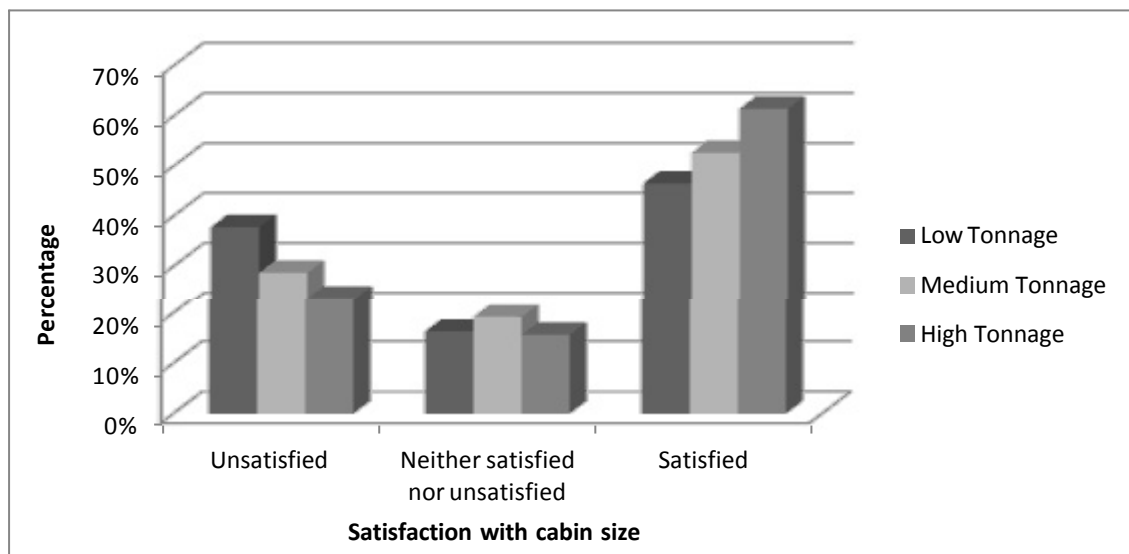


Those working on older and smaller ships, as well as those vessels built in China and ‘other’ countries were also more likely to be sharing a cabin.

#### *Cabin size*

When seafarers were asked about the size of their cabins, almost a third (30%) indicated that they were ‘unsatisfied’ or ‘very unsatisfied’ and just over half (54%) suggested that they were ‘satisfied’ or ‘very satisfied’. Surprisingly, although higher ranking seafarers (i.e. officers) would generally be expected to have larger cabins, they were generally more dissatisfied with the size of their cabins than ratings, and junior officers were more dissatisfied with the size of their cabins than senior officers. In terms of differences relating to ships, seafarers on tankers and passenger/general cargo vessels were more frequently satisfied with the size of their cabins than those on bulk carriers. Country of build was also an important factor and seafarers on vessels built in South Korea and ‘other’ countries were more satisfied with the size of cabins than those working on vessels built in Japan and China. Seafarers on larger vessels were also significantly more satisfied with the size of their cabins (see Figure 3).

Figure 3: Satisfaction with Cabin Size by Ship Size



### Storage space

In terms of storage space within cabins a similar picture was found. Thirty-four percent of seafarers indicated that they did not have sufficient storage space. Again it was junior officers who were least satisfied with storage space and 39% suggested that they did not have sufficient storage space compared with 36% of senior officers, and 27% of ratings.

Vessel size was important. Seafarers working on larger vessels were more satisfied with storage space than those on smaller vessels. Seafarers working on ships built in South Korea were also more satisfied with storage space than those working on ships built in China or Japan.

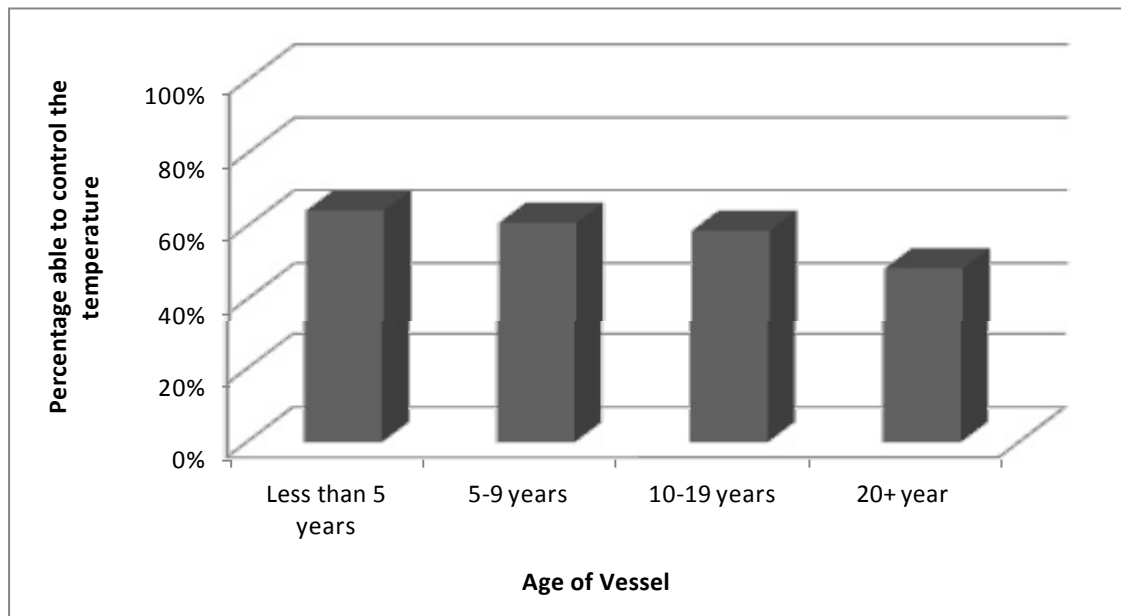
### Cabin temperature

Forty-one percent of seafarers indicated that they were unable to control the temperature in their cabins. Interestingly it was senior officers and ratings that were significantly more likely to suggest that they could control the temperature within their cabins. Although this finding may be unexpected, it could relate to the fact that senior officers have more general control over the shipboard environment (i.e. the setting of heating/air-conditioning systems on-board), whereas given the length of their contracts ratings may have a habit of bringing external electrical appliances (such as heaters/fans) on-board with them in order to regulate temperature. However this remains supposition as we have insufficient information to venture a more robust explanation.



Ship-type was also an important factor influencing whether seafarers could control the temperature in their cabins. Seafarers working on passenger/general cargo ships and those on newer vessels were more likely to be able to control the temperature in their cabin (see Figure 4).

*Figure 4: The Percentage of Seafarers Who Were Able to Control the Temperature in their Cabin by Age of Ship*



#### *Light in cabins*

Just over half (52%) of the seafarers in the survey were unable to control light levels in their cabins. Thirteen percent of these described light levels as too bright, and 14% described them as too dim. Filipino seafarers were most likely to say that they were able to adjust light levels. There was also an influence of rank, and senior officers and ratings more frequently stated that they could adjust light levels than junior officers. The ability to adjust lighting in cabins was not influenced by any vessel factors (i.e. vessel type, age, country of build or size).

In terms of natural light, 10% of seafarers indicated that they did not have a window/porthole in their cabin which allowed natural light in. Nationality and rank differences were found, and Filipino seafarers and ratings were less likely to have natural light in their cabins.

### *Noise in cabins*

Nearly two thirds of seafarers reported that they were disturbed by noise in their cabin at least some of the time, and 20% suggested that they were disturbed by noise 'all of the time'. Of those disturbed by noise in their cabin some of the time, 29% were disturbed both at sea and in port, 30% at sea only, and 33% in port only. Chinese seafarers were most likely to suggest they were disturbed by noise in their cabins, and Filipino seafarers were least likely to say they were disturbed by noise. In terms of rank, it was officers that were most likely to be disturbed by noise.

The type of ship seafarers were working on also had an impact on whether they were disturbed by noise: those on general cargo vessels were most frequently disturbed by noise (68%), compared to bulk carriers (62%), passenger/general cargo ships (53%), and tankers (51%). Seafarers on ships 20 years of age, or older, were also slightly more likely to report being disturbed by noise, as were those working on ships built in China.

### *Vibration*

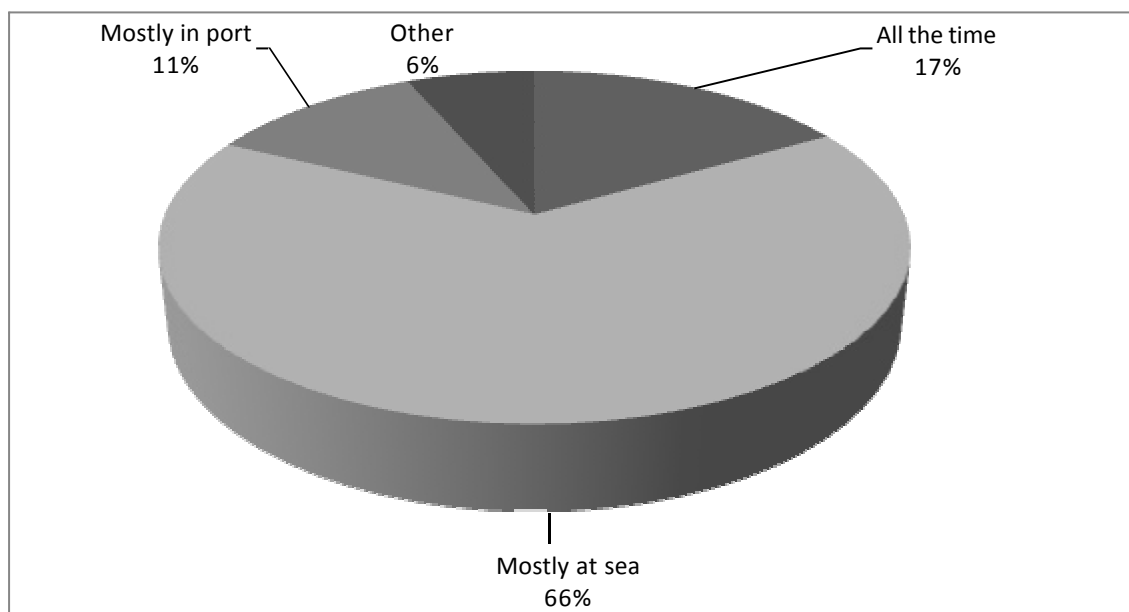
As with noise, a high percentage (63%) of seafarers indicated that they were disturbed by vibration in their cabins. This disturbance occurred mostly at sea (66%). Eleven percent of seafarers were disturbed in port and 17% were disturbed by vibration both in port<sup>10</sup> and at sea (see Figure 5). Chinese seafarers and officers (both senior and junior) were more likely to report being disturbed by vibration, and ratings and Filipino seafarers were least likely to report being disturbed by vibration.

As with noise, ship type again affected whether seafarers were affected by vibration. Seafarers working on cargo vessels (68%) and on bulk carriers (67%) were most likely to report being disturbed by vibration. Seafarers working on ships built in China were also more likely to report being disturbed by vibration (70%), and those working on ships built in Korea were least likely to report being disturbed (52%).

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<sup>10</sup> Probably as a consequence of cargo operations.

Figure 5: The Times When Seafarers Were Disturbed by Vibration



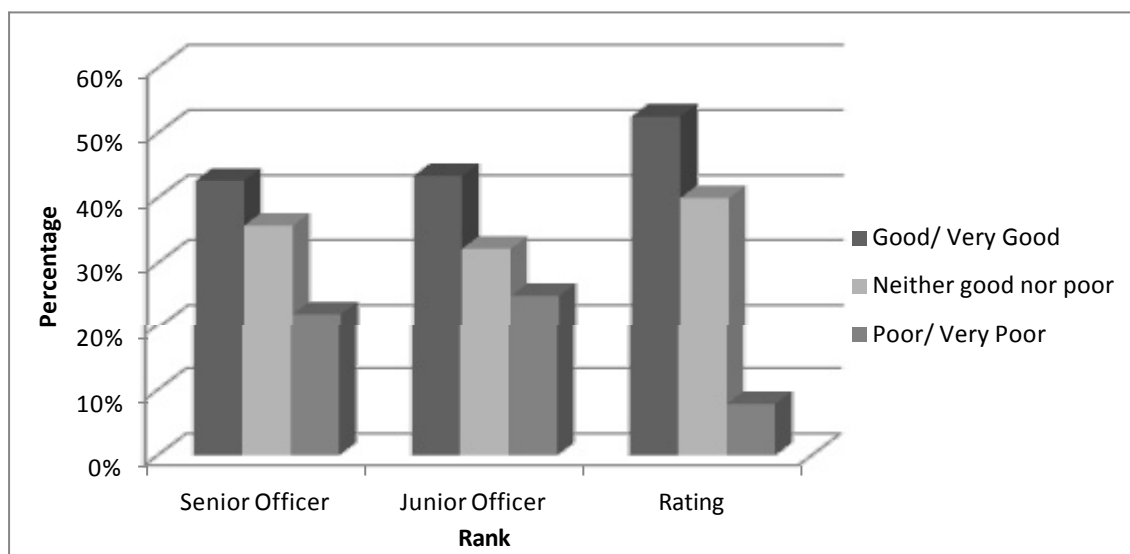
### *Quality of rest*

Fifty-nine percent of seafarers reported that they could only get adequate rest ‘some of the time’ and a further 19% stated that they could not get adequate rest ‘very often’ or ‘at all’. This leaves just under a quarter of the seafarers included in the study reporting adequate rest. Of those that did not get adequate rest ‘very often’ or ‘at all’, 21% said this was a problem at sea, 44% a problem in port, and 35% a problem both at sea and in port. The only vessel related factor that had an effect on rest was age of vessel. Seafarers on the youngest vessels (five years or less) reported getting adequate rest more frequently than those on older vessels.

### *Standard of furnishing*

When seafarers were asked about the standard of furnishings in their cabins, just under a half described them as ‘good’ (42%) or ‘very good’ (5%), with a significant number (36%) describing them as ‘neither good nor poor’, and nearly a fifth (18%) describing standards as ‘poor’ or ‘very poor’. Officers and Chinese seafarers were more likely to suggest the standard of the furnishings was poor/very poor (see Figure 6).

Figure 6: Rating of the Standards of Furnishings by Rank



In terms of ship-related factors, ratings of furnishing improved as ship size increased, but decreased as vessels got older. Standards of furnishing were rated more favourably on vessels built in South Korea and in 'other' countries, compared with those built in China or Japan. Furnishings were also seen as better on tankers and passenger/general cargo ships than on bulk carriers where satisfaction levels were low (only 37% rated furnishings as 'good' or 'very good' aboard bulk carriers).

In terms of the condition of the furnishings, the vast majority of seafarers indicated that the furnishings and facilities in their cabins were clean and in a reasonable condition (85%). Officers and Chinese seafarers were more likely than other groups to report that the furnishings were poor/dirty. Age, country of build, and ship type all influenced ratings of cleanliness. Seafarers working on tankers most frequently suggested their cabins were clean and well maintained (93%), and those working on cargo vessels and bulk carriers reported clean/well maintained cabins less frequently (81% in both cases). Those on older vessels more frequently suggested furnishings were poor/dirty, as did those on Chinese and Japanese built vessels.

### *Cabin facilities and provisions*

Seafarers were asked about a broad range of fittings and provisions in their cabin. Most seafarers reported being provided with at least basic facilities/amenities, such as bedding, drawers, wash basins, reading lights, toilet paper, towels and soap (see Figure 7). Some amenities were less frequently provided: 30% of seafarers reported having TV in their cabin, 17% reported the provision of a radio and 19% reported the provision of a music system. Only 15% indicated that internet access was provided in cabins.

*Figure 7: The Facilities Provided Within Cabins*

<b>Facility</b>	<b>Percentage of seafarers who had facility</b>
Bedding	98%
Drawers	96%
Table/desk	95%
Toilet paper	94%
Soap	94%
Towels	93%
Wash basin	90%
Reading light	85%
Wardrobe	80%
Comfortable chair	76%
TV	30%
Music system	19%
Radio	17%
Internet access	15%

The provision of cabin amenities was seen to be influenced by a number of ship-related factors. Those on larger vessels were more likely to be provided with reading lights, tables/desks, wash basins, towels, and comfortable chairs. Those working on older ships were more likely to have radios in their cabins, whereas those on newer ships were more likely to be provided with comfortable chairs, reading lights, internet access, wash basins, toilet paper, and drawers in their cabins. The type of vessel seafarers were working on also influenced the facilities provided. Those on passenger/cargo vessels and ‘other’ vessel types were more likely to have electronic appliances provided, such as TVs, radios, music systems, and internet access whereas those on bulk carriers were the least likely to have internet access in their cabins. Vessels built in countries other than the three main countries of build (i.e. South Korea, China, or Japan) were much more likely to have internet access, TVs, radios and music systems.

### *Messrooms/lounges*

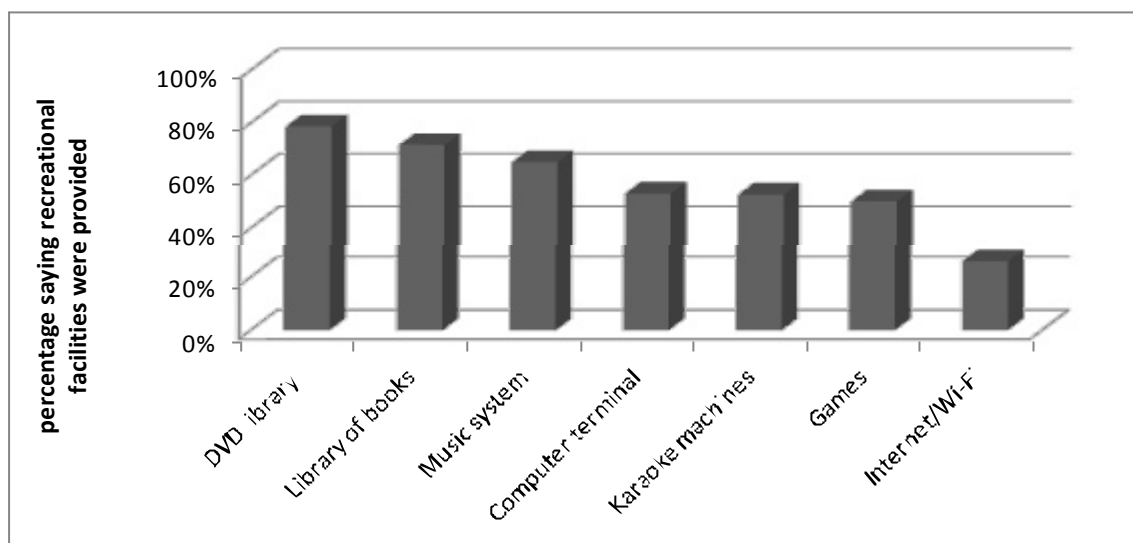
The vast majority of ships that seafarers were sailing upon had messrooms/lounges on-board (97%). Where common messrooms were provided these were significantly more likely to be on smaller ships. In terms of what was provided within messrooms/lounges most seafarers indicated that the following were provided: tables and chairs (98%), television (94%), films/DVDs (87%), and fridges (88%). Drinking water (83%), hot drinks facilities (76%), and radio/CD players (70%) were less frequently provided. However, by quite a considerable margin, the least frequently provided amenity was found to be comfortable chairs. These were reported to be provided by just 66% of seafarers.

Looking at vessel characteristics, comfortable chairs and radio/CD facilities were most likely to be provided on larger vessels. General cargo ships least frequently had comfortable chairs for relaxing, hot drinks facilities and drinking water provided in messrooms/lounges whereas tankers were more likely to have films and DVDs, and radio/CD facilities provided. 'Other' ship types and passenger/general cargo vessels were more likely to have comfortable chairs for relaxing, hot drinks facilities, and drinking water. Refrigerators were least likely to be found in the messrooms/lounges of passenger/general cargo vessels. Vessels aged between 5-9 years old seemed to have the best provision of messroom/lounge facilities.

### *Recreational facilities*

The most commonly provided recreational facilities on-board were DVD libraries which were provided in 78% of cases (see Figure 8), followed by books (71% of cases), and less frequently music systems (65%), computer terminals (53%), karaoke machines (52%), and games (50%). The least common recreational facility was internet access/Wi-Fi, provided in only 26% of cases (access to the internet is discussed in more detail later).

Figure 8: Recreational Facilities Provided On-board



Music systems, DVD libraries, and karaoke machines were more frequently found on tankers, and were least often found on passenger/general cargo vessels. On these ships the most frequent recreational facilities were internet/Wi-Fi and games. Larger vessels were more likely to have music systems, karaoke machines, games, DVD libraries and book libraries than smaller vessels. Ships built in South Korea were the best equipped in terms of recreational facilities with music systems, karaoke machines, games, DVD libraries and book libraries more frequently found on-board.

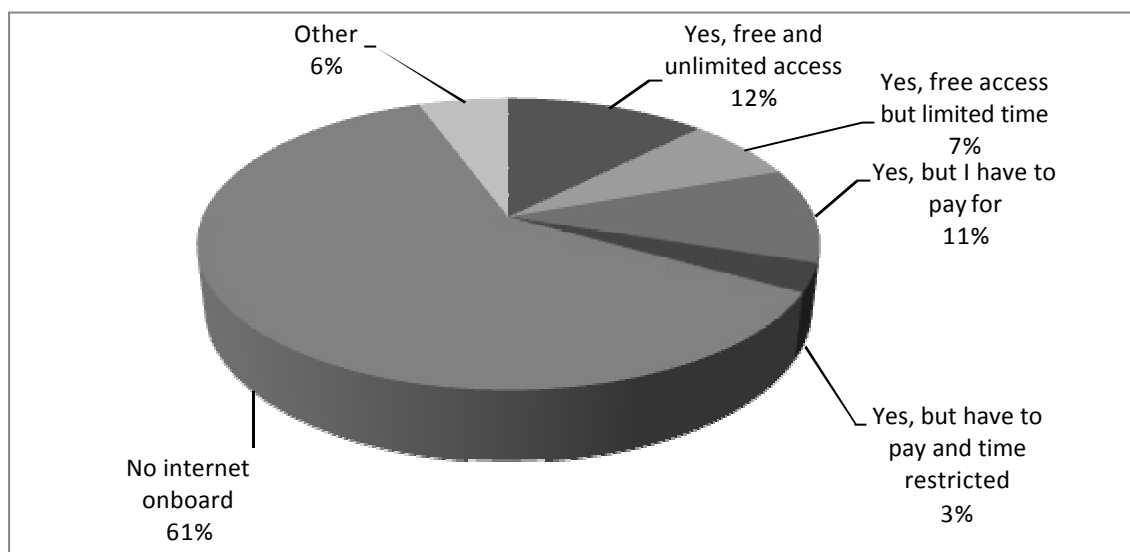
Seafarers were also asked if there were any facilities they would like on-board that were not currently available. By far the most frequent answer, suggested by 66% of seafarers, was that they would like access to the internet/Wi-Fi on-board. The next most frequent answer, suggested by 17% of seafarers was a gym, with the third most popular choice being telephone access (7%), or access to games 1 (7%). Also listed were: satellite TV (5%), computer terminals (3%), and a swimming pool (2%)<sup>11</sup>.

<sup>11</sup> Here it is likely that many seafarers are tailoring their responses according to their view of what they might expect companies to agree to provide. Thus it is likely that far more than 5% of seafarers would appreciate satellite TV on-board but that most seafarers think companies are unlikely to ever provide this. A similar interpretation is plausible with regard to computer terminal provision and provision of a swimming pool.

### Internet Access

When seafarers were asked if they had internet access on-board, nearly two thirds (61%) indicated that they had no internet access at all (see Figure 9). Twelve percent of seafarers had free and unlimited access to the internet, and the remaining seafarers reported access with some form of restriction, such as with the need for the Captain’s permission, time limitations, or having to pay (see Figure 9). Seafarers with free and unlimited access were more likely to be from the Philippines and the UK.

Figure 9: Internet Access



Those on ‘other’ vessel types most frequently had free and unrestricted internet access (34%), followed by those on tankers (20%). Only three percent of seafarers working on bulk carriers had free and unrestricted access to the internet. The ability to access the internet was more frequently found on modern vessels, with access declining as vessels got older. Access to the internet was also more likely on vessels built in ‘other’ countries where 22% of seafarers reported free and unlimited access to the internet. In contrast 79% of those on Japanese vessels reported no access at all to the internet, and only 5% reported free or unlimited access.



### *Email Access*

Access to email facilities was generally better than access to the internet. However, 41% percent of seafarers indicated that they were not able to send or receive emails on-board ship. Seafarers without access to email facilities were more likely to be Chinese.

Just over a quarter (27%) of those that could send/receive emails had free and unlimited access to email facilities. These seafarers were more likely to be from the Philippines and the UK. Twenty-eight percent of seafarers reported access to email facilities with some restrictions, such as the need for the Captain's permission, time limitations, or having to pay. For seafarers that had to pay for access the average cost was 11.89 US dollars per hour.

Seafarers on 'other' ship types most frequently reported unlimited access to internet facilities (51%). Those on cargo vessels and passenger/general cargo ships had much more restricted access with only 24% and 20% respectively having unlimited access. However, for those on bulk carriers the situation was even worse and only 12% reported free and unlimited access to email. Email access was more frequent on larger vessels (63%), and on those built in South Korea and 'other' countries. In terms of vessel age, those on 5-9 year old vessels more frequently had access to emails, compared to both older and younger vessels.

### *Telephone access*

Although 97% of seafarers reported that they took a mobile phone on-board with them, they were only able to get a signal on an average of 15.1 days per month. Seventy-four percent of seafarers had access to the on-board telephone, but with some limitations. Limitations included: requiring permission from the Captain (15%), having to pay (53%), or limited time allowed (6%). Only three percent of seafarers had free and unlimited access to the ship's telephone and one in five seafarers reported no access at all. Seafarers without any telephone access were more likely to be Chinese seafarers. For those seafarers that had to pay for access to the telephone, the average cost was 43.12 US dollars per hour.

The type of ship seafarers were working on influenced access to the telephone. Twenty-six percent of seafarers on cargo vessels had no access to a telephone at all, compared to 9% of those on tankers. Those on larger vessels were more likely to have some sort of access to a telephone, although those on smaller vessels were more likely than other groups to have free or unlimited access to the telephone. Access to the on-board telephone also reduced with

increases to the age of the ship. Those on ships built in South Korea more frequently had access to the telephone (95%), compared to those built in Japan (77%) and China (74%)

## **Conclusions**

This research indicates that while most seafarers had single occupancy cabins, these were frequently regarded as too small, lacking in storage space, and offering seafarers insufficient control over their environment (in terms of cabin temperature, light levels, noise and vibration). The standard of cabin furnishings was also unsatisfactory in a small but significant number of cases. Although, on the whole, a broad range of fittings and furnishings were provided in cabins, facilities, such as reading lights, wardrobes and comfortable chairs were less frequently supplied. Other more advanced electronic equipment such as the TVs, radios, or music systems that we take for granted in our homes were provided in only a very small percentage of cases.

Whilst it may be argued that there are a number of constraints relating to seafarer accommodation, the research suggests that there are considerable variations in provision across the fleet which illustrates that in many cases more could be done to provide a reasonable living environment. Shore-based studies have demonstrated that decent living conditions improve restoration from stress and fatigue and may also have positive effects on health and well-being (Maas, *et al.*, 2009; Van de Glind, *et al.*, 2007; Caspari, *et al.*, 2006; Küller, *et al.*, 2006; Riediker and Koren, 2004; Evans, 2003; Kaplan, 1995). Further to this it is worth emphasising the importance of communal facilities and the provision of recreational amenities for seafarers. The research indicated that more could be done on this front even in relation to basics such as the provision of comfortable seating to encourage seafarers to make use of communal messrooms and lounges. Shore-based research findings demonstrate that socialisation is likely to positively impact upon mental and physical health (see Maas, *et al.*, 2009; Leventhal & Brooks-Gunn, 2003; Kawachi, 1999) yet there seems to be very little consideration given (by ship operators) to means of encouraging such socialisation on-board.

Finally, we should emphasise the importance of access to affordable, regular, communication with families ashore. A wealth of research supports the notion that such access should be a priority for vessel operators. Like their shore-based colleagues, seafarers benefit from some kind of work life balance and this can only be achieved where they can maintain connections

ashore and quickly reintegrate into their communities during periods of leave. Regular communication with families has been shown to be key to such reintegration (see for example Sampson, 2013) and furthermore families and friends can offer seafarers important social support whilst they are at work (see Chan and Lee, 2006; Franzini, *et al.*, 2005; Cohen, 2004; Berkman and Syme, 1979).

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