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Should I stay or should I go? Motivational profiles of Danish seafaring officers and non-officers

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ABSTRACT

Background. Other studies have shed light on specific types of seafarers' job stressors and job satisfaction. However, so far there have not been any systematic attempts to capture the motivational profile of seafarers when it comes to both work demands and work resources. The purpose of this study is to explore the motivational profiles of seafarers in the Danish merchant fleet by identifying factors which motivate or demotivate seafarers to stay in their specific profession. Furthermore, we examine if there is a difference in work motivators and demotivators between Danish seafaring officers and non-officers.

Material and methods. A questionnaire was sent out to 560 Danish-speaking seafarers with a Danish postal address; 346 seafarers returned the questionnaire, equalling a 61% response rate.

Results. The work motivators which were identified were: duration of home leave, level of responsibility, and level of challenge. The main demotivating factors that were identified were: being away from home, shipping company´s HRM, and regulatory requirements.

Conclusions. The results contribute to a deeper understanding of how seafarers perceive their occupation, and help to identify areas and aspects which might need change if employers want to retain their workforce in the long run. Overall, the results show that most of the job demands and job resources that seafarers perceive are psychosocial. When it comes to the best aspects of seafaring, over 70% of the answers were related to psychosocial factors rather than organizational or structural factors. In relation to the perceived worst aspects in seafaring, about 85% of the responses fell into psychosocial categories. The differences in the motivational profiles of officers and non-officers showed the importance of not only looking at the seafaring profession as a whole but also considering the different characteristics of various jobs onboard.

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Key words: Work stressors, motivation and demotivation to run the seafaring, psychological profile of seafarers

INTRODUCTION

The maritime industry is an important sector in the Danish economy as well as worldwide. Danish shipping companies earn approximately 140 billion DKK yearly and employ around 25,000 persons [1], approximately 12,000 of whom are seafarers [2]. When suppliers and other indirectly dependent organizations are taken into account, the maritime sector creates jobs for about 100,000 persons [3]. A recent study revealed that by 2020 the global mari-

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time industry will need to recruit an additional 32,153 officers and 46,881 ratings above the 2010 figures [4]. To keep up with the growing need for seafarers and to retain those currently employed, it is essential to identify the forces that either motivate people to work at sea or de-motivate employees and drive them to leave seafaring.

Seafaring is recognized as being a very "special" profession, with lots of unique demands such as long time periods away from home, shifting work hours and exposure to hazards [5–7], but also particular compensations like the opportunity to travel and to spend extended periods of time at home. According to the job demands and resources (JD-R) model by Demerouti et al. [8], it is these negative and positive processes that jointly influence the level of the employee's engagement versus withdrawal and burnout in any given occupation. Both, perceived job demands and resources, need to be identified in order to detect potential imbalances and ensuing job dissatisfaction, job disengagement, diminished performance, and, eventually, intention to leave. A few studies have shed light on specific types of seafarers' job stressors [9––11] and job satisfaction [12, 13]. However, so far there have not been any systematic attempts to capture the motivational profile of seafarers when it comes to **both** work demands and work resources. Furthermore, existing research has almost exclusively focused on officers, leaving other crew members out of focus. Early identification of general as well as group-specific perceptions of job-related problems as well as job benefits, however, is essential in that it can help to inform about interventions to increase work motivation and decrease work strain [14] and thereby keep employees engaged in active seafaring. The first aim of this study is therefore to explore and describe the motivational profiles of seafarers in the Danish merchant fleet by identifying the aspects of the seafaring profession which generally motivate employees to stay on in their jobs as well as those aspects which might cause them to leave active seafaring, i.e. to differentiate perceived benefits and rewards of seafaring from perceived disadvantages and disincentives of the profession. Secondly, as officers and non-officers represent distinct professional groups and have different occupational tasks on board, focusing solely on the overall motivational profile of all employees would not be fruitful. Therefore, the study will also test for differences between these main two occupational groups, i.e. we will investigate whether the factors that motivate and de-motivate people working in seafaring differ in Danish merchant fleet officers and non-officers.

MATERIAL AND METHODS

DESIGN AND PROCEDURE

The study is based on a cross-sectional survey conducted in 2007. A standardized questionnaire was sent out to 560 Danish-speaking seafarers with a Danish postal address. Addresses were randomly selected from the 2004 Danish Maritime Authority's Sign-on Register. Participation was voluntary, and confidentiality in accordance with Danish regulations was guaranteed in the briefing letter. Prior approval for the study had been obtained from the Danish Data Protection Agency.

PARTICIPANTS

Altogether, 346 seafarers returned the questionnaire equalling a 61% response rate. The sample consisted of 254 (73%) officers and 92 (27%) non--officers, i.e. ratings or other crewmembers. The proportion of male respondents was 95% (n = 325) against only 5% (n = 16) females. The mean age of study participants was 44.5 years (SD 12.2) and, on average, the seafarers had 22.9 years (SD = 13.6) of experience working at sea (see Table 1 for more detailed information).

QUESTIONNAIRE

The questionnaire gathered information on socio-demographic background, mental and physical health, and various work-related issues. Among those was a list of 16 aspects characterizing workplaces in general and seafaring in particular (Table 2). The overall question was how a given aspect had affected the choice to work in seafaring. The answering options were three-fold: "makes me want to work in seafaring", "makes me want to stop working in seafaring", and "irrelevant to my choice of working in seafaring". In addition, there was another list of 7 items guided by existing knowledge about specific concerns in the industry (Table 3). The overall question was whether a given concern had already made the respondent leave seafaring or was making the respondent contemplate doing so. The options were: "yes", "no", and "not relevant". In addition, there were two open-ended questions where respondents were asked to describe in their own words the three aspects they personally thought were best and worst about working in seafaring.

DATA ANALYSES

Data were analysed with PASW Statistics (SPSS) for Windows (version 18.0) [15]. T-tests were used for all continuous dependent variables to investigate

Table 1. Socio-demographic and health related characteristics of the study population

	Officers	Non-officers	
	n	n	p
Sex	Male	Male	
	244 (96%)	81 (94%)	NS
Spouse	Yes	Yes	
	197 (77%)	50 (59%)	p = 0.001
Children at home	103 (40%)	25 (29%)	NS
	Mean (SD)	Mean (SD)	
Age	44.6 (12,0)	44.3 (13,0)	NS
Years of experience	23.6 (13.0)	21.1 (15.1)	NS
Ship type			
Cargo ship*	239	(69.1%)	
Passenger ship	23	(6.6%)	
Special ships†	66	(19.1%)	
Unidentified	18	(5.2%)	
Total	346	(100.0%)	

NS = non-significant; *incl. tanker, container, dry cargo; † incl. tug boats, dredger, inspection vessels, supply ships

if there were any statistically significant differences in the socio-demographic variables between the officers and other crewmembers. Chi-Square tests were used for all categorical dependent variables to examine whether the frequencies in socio-demographic and motivational characteristics differed between officers and other crewmembers in a systematic way. The open-ended answers were categorized with the help of content analysis. In the first phase, 25 categories were generated, which gave detailed and largely industry-specific information. In the second phase, broader categories were created to place the detailed categories into a larger conceptual context. As most of the answers revolved around the psychosocial working environment, it seemed appropriate to use the domains put forward by the second version of the Copenhagen Psychosocial Questionnaire (COPSOQ II) as the starting point for classifying the answers. COPSOQ is a soundly validated tool for measuring the psychosocial working environment [16–18]. The COPSOQ domains that covered the scope of the answers were demands at work, work organization and job contents, interpersonal relations and leadership, work-individual interface, and health and well-being. Additional categories were created for answers that were more organizational or structural in nature than psychosocial. A full list of broad and detailed categories for each qualitative question is presented in Tables 4 and 5.

RESULTS

As can be seen in Table 2, the three issues rated as work motivators or job benefits by the largest proportion of respondents were duration of home leave, level of responsibility, and level of challenge. Approximately 75% chose the response option "a good reason to work in seafaring" for these factors. High positive ratings with over 60% perceiving the respective factor as a job benefit were also noted for the aspects of payment and colleagues. The picture emerging for the potential reasons to leave seafaring was less clear-cut as none of the potential reasons offered generated acceptance by more than about half of the respondents. Relatively the highest proportions of employees endorsing a factor as a potential reason to leave were shipping company's HRM (52%), regulatory requirements (47%), and family-related conditions (42%).

DIFFERENCES BETWEEN OFFICERS AND NON-OFFICERS

First, officers and non-officers were compared with regard to socio-demographic characteristics. The groups did not differ significantly when it came to age, sex, and length of experience at sea or having

Table 2. Motivators for officers and non-officers

Item	Overall			Officers			Non-officers			
	Good reasons to work in seafaring n	Reason to leave seafaring seafaring n	Irrelevant n	Good reasons to work in seafaring n	Reason to leave seafaring seafaring n	Irrelevant n	Good reasons to work in seafaring n	Reason to leave seafaring seafaring n	Irrelevant n	p
Duration of home leave	266 (77.6%)	40 (11.7%)	37 (10.8%)	206 (79.8%)	29 (11.2%)	23 (8.9%)	60 (70.6%)	11 (12.9%)	14 (16.5%)	NS
Family-related conditions	77 (23%)	141 (42.1%)	117 (34.9%)	60 (23.4%)	117 (45.7%)	79 (30.9%)	17 (21.5%)	24 (30.4%)	38 (48.1%)	p < 0.05
Colleagues	210 (62.1%)	40 (11.8%)	88 (26%)	146 (57.5%)	37 (14.6%)	71 (28%)	64 (76.2%)	3 (3.6%)	17 (20.2%)	p < 0.005
Foreign colleagues	58 (17.1%)	82 (24.2%)	199 (58.7%)	36 (14.1%)	71 (27.7%)	149 (58.2%)	22 (26.5%)	11 (13.3%)	50 (60.2%)	p < 0.005
Meeting new colleagues	126 (37.2%)	9 (2.7%)	204 (60.2%)	80 (31.1%)	9 (3.5%)	168 (65.4%)	46 (56.1%)	0 (0%)	36 (43.9%)	p < 0.001
Leadership onboard	149 (44.2%)	60 (17.8%)	128 (38%)	124 (48.6%)	32 (12.5%)	99 (38.8%)	25 (30.5%)	28 (34.1%)	29 (35.4%)	p < 0.001
Shipping company´s HRM	75 (22.7%)	171 (51.8%)	84 (25.5%)	57 (22.8%)	139 (55.6%)	54 (21.6%)	18 (22.5%)	32 (40%)	30 (37.5%)	p < 0.05
Career opportunities in seafaring	124 (37.1%)	42 (12.6%)	168 (50.3%)	106 (41.7%)	34 (13.4%)	114 (44.9%)	18 (22.5%)	8 (10%)	54 (67.5%)	p < 0.005
Opportunities for further training	87 (26%)	57 (17.1%)	190 (56.9%)	76 (29.9%)	41 (16.1%)	137 (53.9%)	11 (13.8%)	16 (20%)	53 (66.3%)	p < 0.05
Pay	218 (64.5%)	52 (15.4%)	68 (20.1%)	178 (69.5%)	33 (12.9%)	45 (17.6%)	40 (48.8%)	19 (23.2%)	23 (28%)	p < 0.005
Level of responsibility	253 (74.4%)	19 (5.6%)	68 (20%)	203 (78.7%)	16 (6.2%)	39 (15.1%)	50 (61%)	3 (3.7%)	29 (35.4%)	p < 0.001
Level of challenge	260 (76.2%)	23 (6.7%)	58 (17%)	203 (78.7%)	20 (7.8%)	35 (13.6%)	57 (68.7%)	3 (3.6%)	23 (27.7%)	p < 0.01
Regulatory requirements	32 (9.5%)	160 (47.3%)	146 (43.2%)	21 (8.2%)	139 (54.1%)	97 (37.7%)	11 (13.6%)	21 (25.9%)	49 (60.5%)	p < 0.001
Working environment	153 (46.1%)	99 (29.8%)	80 (24.1%)	109 (43.5%)	79 (31.7%)	61 (24.5%)	44 (53%)	20 (24.1%)	19 (22.9%)	NS
Travelling	107 (31.7%)	25 (7.4%)	206 (60.9%)	69 (26.8%)	22 (8.6%)	166 (64.6%)	38 (46.9%)	3 (3.7%)	40 (49.4%)	p < 0.005

NS = non-significant

Table 3. Demotivators for officers and non-officers

Do any of these conditions make you want to stop work in seafaring (or made you stop work in seafaring)?				
	Overall	Officers	Non-officers	
	Yes	Yes	Yes	
Item	n	n	n	p
Night or shift work	55 (18.6%)	43 (18.5%)	12 (19.0%)	NS
Long working hours	68 (22.1%)	49 (20.7%)	19 (27.1%)	NS
Time away from home	159 (51.5%)	135 (57.0%)	24 (33.3%)	p < 0.001
Isolation/loneliness	92 (30%)	76 (31.9%)	16 (23.2%)	NS
Stress	86 (28.3%)	70 (30.0%)	16 (22.5%)	NS
Unsecure employment	41 (13.7%)	27 (11.8%)	14 (19.7%)	NS
Pain in back, shoulders or neck	58 (19.7%)	34 (15.1%)	24 (34.3%)	p = 0.001

NS = non-significant; Percentages are excluding the irrelevant category. The n (% of total) for the irrelevant answers: Night or shift work: Officer (Of) 26 (10%), Non-officers (No) 17 (21%); Long working hours: Of 21 (8%), No 11 (14%); Time away from home: Of 20 (8%), No 11 (14%); Isolation/loneliness: Of 20 (8%), No 11 (14%); Stress: Of 25 (10%), No 10 (12%); Unsecure employment: Of 27 (11%), No 8(10%); Pain in back, shoulders or neck: Of 33 (13%), No 10 (13%)

children at home. However, more officers than non-officers had a spouse = 13.6; df = 1; p = 0.001) (Table 1). From the list of factors that respondents were to rate as motivating, demotivating, or irrelevant, only two came up as statistically similar for officers and non-officers. There were no statistical differences between the two groups in terms of how they perceived duration of home periods and work environment (Table 2). As described above, the largest group of respondents each saw these aspects as motivating. As shown in Table 2, officers rated level of pay (70% *vs.* 49%) = 11.8; df = 2; p < 0.005), level of responsibility (79% *vs.* 61%) (= 16.1; df = 2; p < 0.001), and level of challenge (79% *vs.* 69%) (= 9.8; df = 2; p < 0.01) more often as work motivators than did other crewmembers. In the case of level of responsibility and level of challenge there was, however, also a majority among the non-officers who perceived these as benefits of the job. Compared to these issues, career opportunities (= 12.8; df = 2; p < 0.005) and opportunities for further training were less often rated as benefits, but more officers found them motivating than did non-officers (= 8.3; df = 2; p < 0.05). Non-officers, on the other hand, more often perceived colleagues in general as a benefit (76% *vs.* 57%) = 11.4; df = 2; p < 0.005), as well as meeting new colleagues (56% *vs.* 31%) = 18.1; df = 2; p < 0.001), foreign colleagues (27% *vs.* 14%) (= 11.2; df = 2; p < 0.005), and opportunities for travelling (47% *vs.* 27%) (= 12.1; df = 2; p < 0.005). For foreign colleagues, it turned out that while for non-officers these were more of a reason to stay than a reason to leave

seafaring, for officers the picture was reversed, i.e. foreign colleagues were more often named as a reason to leave seafaring than a reason to stay (28% *vs.* 14%). However, it should be noted that large percentages in both groups (58% and 60%, respectively) perceived this issue as not personally relevant. As for potential reasons to leave seafaring, officers more often than non-officers named regulatory requirements (= 19.6; df = 2; p < 0.001). In fact, the percentage of respondents who had this negative view was more than twice as high for the officers than for the non-officers (54% *vs.* 26%). In a similar vein, there was a higher percentage among the officers seeing the shipping company's HRM as a demotivating factor than among the non-officers (56% *vs.* 40%). And while leadership on board was a reason to leave seafaring for about one third of the non-officers, only 13% of the officers made a similar claim (= 21.1; df = 2; p < 0.001), and they perceived leadership onboard more in terms of a motivator than a reason to leave seafaring, while the opposite pattern emerged for non-officers (Table 2).

Table 3 shows the results for the more specific sub-list on the conditions which could make employees want to stop work in seafaring or actually had already made them stop working in that occupation. According to the findings, the most important factors seemed to be time away from home (52%), followed by isolation/loneliness (30%) and stress (28%). However, officers named time away from home more often as a reason to leave seafaring than non-officers (57% *vs.* 33%) = 12.3; df = 1; p < 0.001). The only other difference between the

Table 4. Best aspects in seafaring

	Officers (n = 242)		Non-officers (n = 75)	
	Answers (n)	%	Answers (n)	%
PSYCHOSOCIAL ASPECTS	**481**		**134**	
Work organization and job contents				
High degree of influence	8	3.3%	0	0.0%
Challenging work/changing work	86	35.5%	16	21.3%
Responsibility	37	15.3%	1	1.3%
Career Possibilities (Career Progress)	9	3.7%	1	1.3%
Good place to gain experience	2	0.8%	0	0.0%
Independence in the job	62	25.6%	12	16.0%
Get to use own skills	11	4.5%	4	5.3%
Pride	1	0.4%	1	1.3%
Interpersonal relationships and leadership				
Colleagues (crew)	32	13.2%	30	40.0%
People from different cultures	13	5.4%	7	9.3%
Danish colleagues	1	0.4%	1	1.3%
Work-individual interface				
Work/home duration balance	175	72.3%	39	52.0%
Work environment	7	2.9%	4	5.3%
International environment	1	0.4%	1	1.3%
Freedom at home	28	11.6%	15	20.0%
Possibility to take family members sailing	0	0.0%	1	1.3%
Job security	1	0.4%	1	1.3%
Safety	1	0.4%	0	0.0%
ORGANIZATIONAL/STRUCTURAL ASPECTS	**176**		**64**	
Organization				
Sailing under Danish flag	0	0.0%	2	2.7%
Shipping company	2	0.8%	2	2.7%
Extrinsic benefits				
Freedom and unique experiences at sea	60	24.8%	30	40.0%
Salary	104	43.0%	25	33.3%
Good food	4	1.7%	4	5.3%
Short distance to work	6	2.5%	1	1.3%
TOTAL	**651**		**198**	

Answers (n) refers to the number of answers to a given category; % refers to the percentage of the respondents answering to a given category

two occupational groups became apparent with regard to experience of pain in the back, shoulders, and neck, which 34% of the non-officers but only 15% of the officers rated to be a reason to leave seafaring = 12.4; df = 1; p = 0.001).

BEST AND WORST ASPECTS OF SEAFARING

The distribution of the answers to the open-ended questions about "the 3 best aspects in seafaring" and "the 3 worst aspects in seafaring" can be seen in Tables 4 and 5, respectively. As the findings

Table 5. Worst aspects in seafaring

	Officers (n = 237)		Non-officers (n = 72)	
	Answers (n)	%	Answers (n)	%
PSYCHOSOCIAL ASPECTS	**499**		**121**	
Demands at work				
Quantitative work demands	54	22.8%	25	34.7%
Unfamiliarity with job tasks	1	0.4%	0	0.0%
Poorly educated crew members	10	4.2%	1	1.4%
Work organization and job contents				
Monotonous work tasks	8	3.4%	1	1.4%
Bureaucracy	87	36.7%	2	2.8%
Lack of meaning of work at sea/demotivation	1	0.4%	0	0.0%
Bad professional reputation	10	4.2%	0	0.0%
Problematic education/dual officers	0	0.0%	1	1.4%
Career progression possibilities	4	1.7%	4	5.6%
Interpersonal relationships and leadership				
Changing colleagues	1	0.4%	0	0.0%
Foreign colleagues	43	18.1%	6	8.3%
Lack of cultural understanding	2	0.8%	0	0.0%
Coworkers/boss with bad attitude/bad social life	22	9.3%	3	4.2%
Loneliness	10	4.2%	2	2.8%
Shipping company management	58	24.5%	14	19.4%
Work-individual interface				
Work/home balance	136	57.4%	39	54.2%
Physical working conditions onboard	32	13.5%	18	25.0%
Long time at the harbor	1	0.4%	0	0.0%
Uncertainty about staff replacement	5	2.1%	0	0.0%
Job insecurity	4	1.7%	0	0.0%
Pirates	3	1.3%	1	1.4%
Health & well-being				
Stress	7	3.0%	4	5.6%
ORGANIZATIONAL/STRUCTURAL ASPECTS	**74**	**31.2%**	**31**	**43.1%**
Organization				
Conservative business	7	3.0%	3	4.2%
Lack of coordination in rules and regulations	1	0.4%	0	0.0%
Extrinsic benefits				
Bad cooks/food	12	5.1%	1	1.4%
Salary	15	6.3%	15	20.8%
Leisure time onboard	29	12.2%	7	9.7%
Problematic sick leaves	1	0.4%	0	0.0%
Long distance between land and ship	9	3.8%	5	6.9%
TOTAL	**573**		**152**	

Answers (n) refers to the number of answers to a given category; % refers to the percentage of the respondents answering to a given category

are based on the open-ended statements of the participants, differences between the groups will be described but not tested for significance in differences.

Similar to the answers on the standardized questionnaire, the officers' responses reflected that work//home duration balance was one of the best aspects of seafaring (72%), followed by salary (43%) and challenging or changing work (36%). While non-officers largely shared the view of the officers in that the "work/home duration balance" was among the best aspects in seafaring (52%), 40% emphasized freedom, unique experience at sea, and colleagues/crew as most beneficial about seafaring (Table 4). When it came to the most negative aspects, work-home balance again emerged as the essential issue, mentioned by 57% of the officers and 54% of the non-officers. Within the subgroup of officers, bureaucracy and the shipping company's management were the next most often brought up aspects (37% and 25%). For non-officers, on the other hand, quantitative work demands (35%) and physical working conditions (25%) seemed more pressing negative job features (Table 5).

DISCUSSION

Both, the standardized answers of reasons to stay and reasons to leave as well as the open-ended questions about best and worst aspects in seafaring suggested that work-home balance was the most important aspect. More than half of both officers and non-officers named work-home balance as a potential reason to leave seafaring, and, more specifically, almost 60% of the officers and one third of the non-officers rated time away from home as a factor that might make them want to stop seafaring. Related to this, almost one third of the officers and one fourth of the non-officers reported feeling lonely as reason to leave seafaring. This is in line with an earlier study about stress profiles of seafarers in merchant and passenger ships, which showed that separation from family was the biggest source of stress [10]. The fact that officers seemed more affected by this problem than non-officers might have largely been due to the fact that in the current sample a considerably higher proportion of officers than of non-officers were married. However, it is important to note that work-home balance at the same time also figured prominently on the list of "best aspects about seafaring". Nearly three quarters of the officers and more than half of the non-officers included this factor on their personal list of most important job benefits. While at first

glance this might seem contradictory, the finding in fact seems to reflect the inherently ambivalent character of seafaring, with extended periods at sea being compensated by long periods at home. This compensatory flip-side of long sailing times was acknowledged by a large majority of nearly 80% who, in the questionnaire, rated long home leaves as a good reason to work in seafaring. Thus, while the current study confirmed prior findings about long home absences being problematic, its broader focus on positive as well as negative motivational factors revealed that work-home leave balance can also be a resource or major motivator in terms of the long home period which grants freedom and time with family.

Further important motivating factors for the majority of Danish seafarers were level of challenge and level of responsibility. For both these factors, however, significant differences between the two occupational groups, officers and non-officers, appeared, with officers generating higher rates of endorsements than non-officers. Yet, also among the non-officers, majorities of 60% to 70% saw these aspects as resource factors. This finding was backed up by results from the open questions. Thus, among the most often named "best aspects" in both groups were challenging work, independence in the job, freedom and unique experience at sea, and — in the officers' group — job responsibilities. Evidently, both occupational groups mostly appreciate the specific demands as well as opportunities a job in seafaring creates. This finding is in line with previous research on maritime pilots showing that Danish seafarers are familiar with the work conditions and its requirements, and accept them [13]. Also, Seahealth DK recently published the results of an industry survey that drew a picture of generally satisfied seafarers [19].

Another factor which was identified as a general motivator was payment — even though a higher percentage of officers than non-officers perceived payment as a good reason to stay. And while — vice versa — only a minority rated level of payment as a reason to leave, this minority was very small among the officers, while being more substantial among the non-officers (i.e. 23%). A similar picture emerged for the factors called career opportunities and opportunities for further training. These issues were overall rated less important than work-home balance or payment but in comparison were seen as motivators by more officers than non-officers. These differences between occupational groups do not necessarily indicate an inherently different motivational structure but are more likely to be a reaction to different structural

constraints and opportunities. What seems particularly important in view of the steadily increasing number of foreign seamen on Danish ships, is a finding related to the aspect of foreign colleagues on board. A quarter of the officers saw foreign colleagues as a reason to leave seafaring. Perhaps, officers who are responsible for managing and controlling work find it harder from their position to cope with the different working styles of people from different cultural backgrounds, possibly resulting problems with compliance. Further "de-motivators", particularly for officers, were identified within the area of work organization. The International Safety Code (ISM) has arguably caused excessive bureaucratization and increased paperwork, which has intensified the seafarers' workload and given rise to fear of criminalization if rules are violated [20, 21]. In accordance with this, regulatory requirements were conceived by nearly half the respondents as reason to leave seafaring, and 37% of the officers mentioned bureaucracy as one of the worst aspects in seafaring. In a similar vein, about 50% perceived shipping company human resource management (HRM) as a potential reason to leave seafaring rather than as a "resource", that would help them develop their career potential — a finding which definitely raises concern and suggests the need for improvement as HRM should not only be at the service of the companies but also at the service of the employees. Research on HR issues clearly shows that good management leads to a competitive advantage [22]. Predictably, again more officers than non-officers emphasized these problems — a difference which is likely to be due to differing roles.

In addition, the shipping company's management seems to have been experienced as a negative factor more often by officers than non-officers. Onshore management is probably more relevant to the officers as they need to directly cooperate with the shipping company while non-officers' contact with the company on shore might often be mediated through the officers. Thus, relations with officers on board might be relatively more important for this group. This is also reflected in the finding that non-officers viewed leadership onboard more often as a reason to leave seafaring than officers who much more often saw leadership as beneficial. The perspectives in this case are, of course, quite different. While non-officers think about how they are being led, officers might also think about the motivational power of working in a leading position. In any case, it raises concerns that a comparatively large proportion of non-

officers see leadership onboard as a reason to leave seafaring. Awareness of this situation and training in leadership skills for the officers could enable improvements in this area.

Only relatively few employees voiced concerns with regard to the physical working conditions. However, it might be argued that the assessment of environmental stressors might have profited from further differentiation as prior studies have shown that specific issues such as noise or heat, but also work organizational factors such as time pressure, can be of particular importance [23].

LIMITATIONS

One limitation of the study pertains to the sample composition. About 75% of respondents in the current sample were officers. In 2007 there were altogether 3462 Danish officers and 2297 Danish non-officers; thus, around 60% of the Danish seafaring population were officers [2]. This means that officers were somewhat over-represented in our study sample. This overrepresentation could be due to a number of reasons. Firstly, officers have generally longer contracts and thus the turnover is lower. Secondly, due to their education and work responsibilities, officers might be more used to reflecting on their work and be more willing and motivated to fill in questionnaires about the work situation. Also, the circumstance that the sample was based on Danish seafarers only might, to some extent, limit the generalizability of findings. However, the fact that the direction of many findings was in line with what prior studies in the area based on samples of different nationalities have come up with suggests that the results might claim some relevance beyond the specific population of seafarers the study sample was drawn from. Finally, the number of significance tests performed might be considered critical. While this might have produced results capitalizing on chance, the particular goal of the study, to differentiate aspects of motivation in the different employment groups as well as the predominantly explorative and descriptive character of the study justifies not performing Bonferroni-adjustments.

CONCLUSIONS FOR RESEARCH AND PRACTICE

Overall, the results show that most of the job demands and job resources that seafarers perceive are psychosocial. When it comes to the best aspects of seafaring, over 70% of the answers were related to psychosocial factors rather than organizational or

structural factors. In relation to the perceived worst aspects in seafaring, about 85% of the responses fell into psychosocial categories. As psychosocial aspects in seafaring are an understudied area, research on these issues should be much encouraged [5]. The current study contributes to a deeper understanding of how seafarers perceive their occupation and helps to identify areas and aspects which might need change if employers want to retain their workforce in the long run. The particular strength of the study lies in its detailed assessment of the different factors which potentially stabilize or erode work motivation as well as the use of different assessment approaches, i.e. standardized and open, which were used to validate each other.

The scarce research that exists on stress or satisfaction levels in seafaring has so far focused mainly on perceived problems. As a contrast, this study, in line with the JD-R model, emphasizes the importance of finding out both what the demands and what the resources are in seafaring. Previous JD-R research shows that resources can attenuate the negative effects of job demands by acting as buffers [24, 25]. Furthermore, studies with soldiers, who also face long periods of time away from home due to their profession, have found that having supportive leaders and high work engagement can reduce the negative effects of stressors like being away from family and friends [26, 27]. At the same time, job resources can also aid in goal-attainment and personal development [14]. In this light it is very important to understand the value of those occupational factors that motivate seafarers, such as time at home, challenge, responsibilities, independence, freedom, experiences, and pay in exchange for effort and sacrifice. This could be even more important information than the problematic areas when it comes to seafarers' level of work motivation. Applying this line of thought to the results of the current study, the demotivating issues that should receive special attention with regard to the officer group are being away from home and perceived isolation, dealing with regulatory requirements, and insufficient onshore human resource management as well as working with colleagues from different nationalities, while for non-officers quantitative work requirements and perceived quality of leadership are pressing concerns. Improvements could be made, for instance, by measures such as: shortening of extreme length stays onboard, improvements in to-shore telecommunications and promotion of social contact onboard and in ports [23], identification and alleviation of bureaucratic top-down

steering, policies that encourage stable crewing [23], training of crews in fluency with regard to the onboard operating language, cross-cultural training and improved leadership training of officers, ergonomic improvements, and organization of work processes, such as to minimize physical strain, or creating occupational and career development opportunities for non-officers.

The differences in the motivational profiles of officers and non-officers highlight the importance of not only looking at the seafaring profession as a whole but also considering the different characteristics of various jobs onboard. In research the seafarers have traditionally been divided into officers and non-officers, as in the current study. However, seafaring can mean many different things. Thus, there could be alternative comparisons, for instance between motivational profiles of people working on passenger ships versus cargo vessels or deck versus engine room staff and/or working on ships short-term versus long-term periods. Also, future research should delve deeper into finding explanations for the differences in motivational profiles.

The current study is descriptive in nature. There were no work-related outcome variables, so it cannot be inferred whether certain motivators actually lead to higher overall motivational levels, better job satisfaction, work engagement, and performance, less sickness days, or premature retirement. Future research should also address the question of whether reasons to leave can predict actual exits of the profession. While reasons to leave are conceptually close to withdrawal cognitions like intention to leave, which in turn is a strong determinant of actual turnover [28], it still needs to be determined how seafarers' motivational and decisional balance develops and what finally tips the scales in favour of or against seafaring.

REFERENCES

1. Danmarks rederi forening 2010. Danmarks rederi forening 2010. 2010 October 8. Available from: www.shipowners.dk/ /danskskibsfartogoffshore/noegletal/danskskibsfartsinternationaleplacering/
2. Søfartsstyrelsen. Mønstringsstatistik. søfartsstyrelsen. 2010 October 18. Available from: http://www.sofartsstyrelsen.dk/ /SiteCollectionDocuments/Publikationer/Sofarende/monstringsstatistik/udviklingen.xls
3. Kort og Blåt. 1.5.2010. 2010 October 15 Available from: http:// //www.worldcareers.dk/Det_Blaa_Danmark/Kort_og_blaat.aspx
4. The Nippon Foundation. Study reveals urgent need to boost seafaring profession. 2010.
5. Carter T. Working at sea and psychosocial health problems Report of an International Maritime Health Association Workshop. Travel Med Infect Dis 2005; 3 (2): 61–65.

6. Hansen HL, Nielsen D, Frydenberg M. Occupational accidents aboard merchant ships. Occup Environ Med 2002; 59 (2): 85–91.

7. Smith A, Allen P, Wadsworth E. Seafarer fatigues: the Cardiff research programme. 2006.

8. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands-resources model of burnout. J Appl Psychol 2001; 86 (3): 499–512.

9. Jezewska M, Leszczynska I, Jaremin B. Work-related stress at sea self estimation by maritime students and officers. Int Marit Health 2006; 57 (1–4): 66–75.

10. Oldenburg M, Jensen HJ, Latza U, Baur X. Seafaring stressors aboard merchant and passenger ships. Int J Public Health 2009; 54 (2): 96–105.

11. Salyga J, Juozulynas A. Association between environment and psycho-emotional stress experienced at sea by Lithuanian and Latvian seamen. Medicina (Kaunas) 2006; 42 (9): 759–769.

12. Forsyth CJ. Factors influencing job satisfaction among merchant seamen. Maritime Policy & Management 1990; 17: 141–146.

13. Andresen M, Domsch ME, Cascorbi AH. Working unusual hours and its relationship to job satisfaction: A study of European maritime pilots. Journal of Labor Research 2007; 28 (4): 714–734.

14. Bakker AB, Demerouti E. The job demands-resources model: State of the art. Journal of Managerial Psychology 2007; 22: 309–328.

15. PASW Statistics for Windows [computer program]. Version 18. Chicago: SPSS inc. 2009.

16. Pejtersen JH, Kristensen TS, Borg V, Bjorner JB. The second version of the Copenhagen Psychosocial Questionnaire. Scandinavian Journal of Public Health 2010; 38: 8–24.

17. Thorsen SV, Bjorner JB. Reliability of the Copenhagen Psychosocial Questionnaire. Scandinavian Journal of Public Health 2010; 38: 25–32.

18. Bjorner JB, Pejtersen JH. Evaluating construct validity of the second version of the Copenhagen Psychosocial Questionnaire through analysis of differential item functioning and differential item effect. Scandinavian Journal of Public Health 2010; 38: 90–105.

19. Seahealth Denmark. A good working life at sea. Seahealth Denmark 2009.

20. Knudsen F. Paperwork at the service of safety? Workers' reluctance against written procedures exemplified by the concept of «seamanship». Safety Science 2009; 47 (2): 295–303.

21. Battacharya S. The impact of the ISM Code on the management of occupational health and safety in the maritime industry. Cardiff Univ. 2009.

22. Progoulaki M, Theotokas I. Human resource management and competitive advantage: An application of resource-based view in the shipping industry. Marine Policy 2010; 34 (3): 575–582.

23. Oldenburg M, Baur X, Schlaich C. Occupational risks and challenges of seafaring. Journal Occup Health 2010; 52: 249–256.

24. Bakker AB, Demerouti E, Euwema MC. Job resources buffer the impact of job demands on burnout. J Occup Health Psychol 2005; 10 (2): 170–180.

25. Xanthopoulou D, Bakker AB, Demerouti E, Schaufeli WB. The role of personal resources in the job demands-resources model. International Journal of Stress Management 2007; 14: 121–141.

26. Britt TW, Davison J, Bliese PD, Castro CA. How leaders can influence the impact that stressors have on soldiers. Mil Med 2004; 169 (7): 541–545.

27. Britt TW, Bliese PD. Testing the stress-buffering effects of self engagement among soldiers on a military operation. J Pers 2003; 71 (2): 245–265.

28. Horn P, Caranikas-Walker F, Prussia GE, Griffeth RW. A meta-analytical structural equations analysis of a model of employee turnover. J Appl Psychol 1992; 78: 890–909.