

# Quality of life at sea in Polish seafarer's evaluation

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## ABSTRACT

**Background:** Work at sea is highly burdening, hazardous and stressful. Environmental, physical, and psychosociological factors have a great impact on the seafarer's quality of life and work. The research is a part of a broader psychological project performed on people working at sea in Poland during a period of 2011–2014.

**Materials and methods:** This report presents the self-evaluation of life quality conducted by a total of 1,700 Polish seafarers who took part in the study. The average age of the group was 45. Following methods were used: WHOQOL-BREF and the "Survey for people working at sea".

**Results:** Polish seafarers gave the highest rates to their social relationships (16.27), then the psychological functioning (15.62), and environment (15.51). The physical domain gave the lowest rates (14.63).

**Conclusions:** The results have shown that quality of life of Polish seafarers is quite high.

(Int Marit Health 2015; 66, 4: 247–251)

**Key words:** quality of life, work at sea, psychosocial factors, work quality

## INTRODUCTION

According to the World Health Organisation (WHO) definition, quality of life (QoL) (1993) can be described as social, physiological, psychological, and intellectual well-being of an individual. This paper/report presents results of research on QoL conducted in Poland among people working at sea. Current data are the first part of a broader study performed during a period of 4 years (2011–2014).

The basic aim of the research is evaluation of QoL through the study of the seafarer's subjective ratings of their perceived stress burden at work and the impact of isolation on family and social life. In addition, our goal was to identify the mood surrounding the performance of such a difficult profession and a job that requires a lot of physical and mental effort.

Furthermore, our aim was to clarify the relationship between QoL and selected personality traits, temperamental characteristics, stress experienced by the seafarers, and their stress coping styles. We also took into account their life and work satisfaction and health opinion. Figure 1 presents all measured variables in our study of Polish seafarers.

Currently we are focused on the results of the seafarer's quality of life.

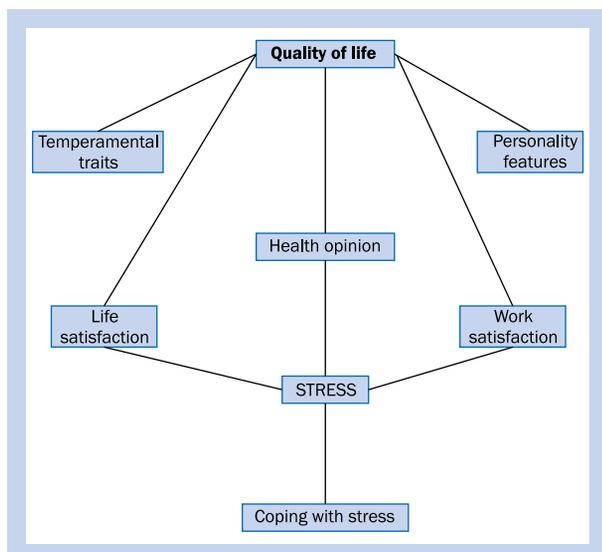
The results of pilot study on QoL conducted in 2011 and 2012 were presented in "International Maritime Health" journal in 2013 [1]. The discussed data allowed us to make an assumption, that QoL declared by the people working at sea is quite high. Polish seafarers rated their social relationships the highest. Then the environment, and psychological functioning. The physical domain received the lowest rates.

Taking into account very difficult and high demanding work conditions that seafarers face, it was anticipated that self-estimated QoL would be evaluated lower. The positive results obtained at the time were so surprising that they became a key to continue this study to either confirm or deny this status quo.

## RESEARCH ON QUALITY OF LIFE

Quality of life in psychology is a relatively young subject. Nowadays psychologists define the term ambiguously. Campbell [2], a pioneer of research on QoL believes that the





**Figure 1.** Measured variables model

QoL depends on the degree of satisfaction in specific areas of life – marriage, health, family, professional, social life, etc. Others argue that QoL is a result of the relationship between the implementation and degree of their own needs, resource requirements, and environment [3]. Researchers of the topic suggest that a person has 2 choices of experience in their own lives – exploration and feeling [4].

In Polish literature we find numerous original and review papers on QoL in medical science and methods of its measurement [5]. In contrast, our research model on QoL of people employed at sea uses definitions of quality of working life and work-related quality as introduced by Elizur and Shye [6].

Definitely an important element of QoL is quality of working life. Quality of work goes hand in hand with QoL, since the latter favours the improvement of quality of work. Quality of work life depends largely on quality of organisation and management. Factors affecting quality of work are: the attitudes and needs of a person on an individual basis; those relating to the nature of work – the prize, the level of autonomy, the degree of diversification of activities; the variables of the working environment and organisation [6].

As global research has shown, quality of working life has become a very important issue. Study conducted in 17 countries has confirmed that the nature of work, institutional changes and pressures of employers have a very significant impact on the health of workers [7]. The WHO has recognised work-related stressors as very important determinants of health and disease. The research conducted by Beach et al. [8] based on self-report scales, indicates the most stressful aspects of work. The subjects point out such

factors as: lack of impact, low value of work, lack of access to relevant information, lack of social support, poor wages, high expectations and role conflict, role ambiguity, and overload. These results are consistent with the Karasek's theory of stress at work [9].

In other studies on quality of work life Sirgy [10] and Cascio [11] underline that what depends on the quality of work life also meets the employer's needs for employee's feelings of good well-being (well-being need). Quality of work life depending on mood has been divided into 2 basic categories: high and low order. According to this division, low order quality of work life includes health, safety, family and economic needs, while the higher-order quality of work life consists of social needs, self-esteem, self-fulfilment, knowledge and aesthetics. Satisfaction and a positive sense of QoL in a workplace contribute to job satisfaction, commitment and dedication to the company and high integration team of employees.

Due to the fact that there is still little research regarding QoL of people employed at sea, and the subject seems to be very important, we decided to continue the research on Polish seafarers.

## MATERIALS AND METHODS

### METHODS

In the described study the following methods were applied:

- WHOQOL-BREF – a Polish version of the WHO questionnaire assessing QoL in 4 areas: physical, psychological, social, environmental;
- “Survey for people working at sea” – developed for the purposes of the research.

Due to the validity of the method evaluating the QoL – the WHOQOL-BREF – each subscale that falls within 4 main areas is described in more details below.

The physical scales (D1) components are: activities of daily living, dependence on drugs and treatment, energy and fatigue, mobility, pain and discomfort, rest and sleep and the ability to work. The D2 psychological scale components are: appearance, negative feelings, positive feelings, self-esteem, spirituality, religion, personal faith, thinking, learning, memory, and concentration. In components of scale responsible for social relations (D3) are: personal relationships, social support, sexual activity, and the environment. The scale of the environment (D4) includes: financial resources, freedom, physical and psychological safety, health and health care (availability and quality), home environment, learning new information and skills, participation in leisure and recreation, physical environment (pollution, noise, climate), transport [12, 13].

The WHOQOL questionnaire is a tool used since 1993 and it has been approved by the WHO in the official report: Study Protocol. WHO MNH7PSF/93.9. [14].

The WHOQOL-BREF (Polish version) has been applied for Polish seafarers. This method was used because of its universal character (it has been translated into many languages) which allows to compare the obtained data with results of seafarers from other countries.

### STUDY GROUP

The study involved 1,700 seafarers employed in the Polish fleet and foreign flag vessels, who have applied for a marine health certificate or were referred for psychological testing by insurance companies (American Club, Lloyd's and others). The study was conducted at the Laboratory of Occupational Psychology and Maritime Policlinic of the Institute of Maritime and Tropical Medicine in Gdynia – Medical University of Gdansk. Examinations were conducted from 2011 to 2014.

Statistical analysis incorporated data from 1,675 cases. SPSS and Statistica packages were applied. Analysis has been made for 781 seafarers during the non-anonymous examination in Psychological Laboratory and 894 in Maritime Policlinic – anonymous examination.

The research group consisted of men aged 19 to 69 years. Their average age was 44.82. The mean length of service at sea was 18.12 years.

The measured characteristics of the group were: the level of education (Table 1), position in the hierarchy of vessels (Table 2) and marital status (Table 3).

According to the data in the Table 1, comparatively the largest groups among the respondents were people with a secondary (41.5%) and higher education (40.1%). It means that Polish seafarers are well educated. Most seafarers were employed in the deck and engineering departments (39%). The largest group among them was married in their first marriage (70%). It is a high percentage of people who live in traditional relationships built for whole life. Based on this, we can conclude that Polish seafarers enhance their QoL on their personal existence and family.

### RESULTS

The statistical analysis contained the calculation of the mean results for the different variables. Results of the most significant variable – the QoL measured by the WHOQOL-BREF are presented in the Figure 2.

Results of this analysis show QoL declared by the people working at sea as high. Polish seafarers gave the highest rates to their social relationships (16.27), then the psychological functioning (15.62), and environment (15.51). The physical domain gave the lowest rates (14.63). The next step was to examine correlation analysis of the WHOQOL-BREF

**Table 1.** Characteristic of the examined group – education (n = 1,675)

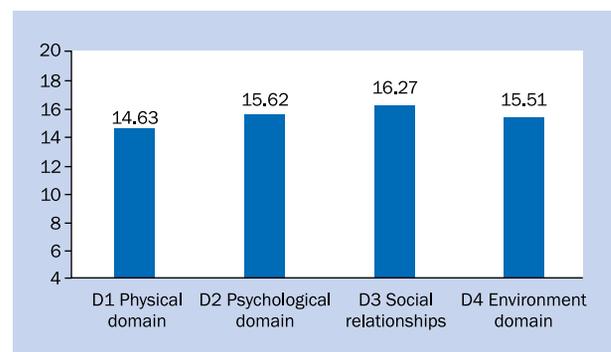
Education	% (n)
Elementary	1.2% (19 individuals)
Vocational	17.3% (285 individuals)
Secondary	41.5% (685 individuals)
Higher	40.1% (662 Individuals)

**Table2.** Characteristic of the examined group – work position (n = 1,675)

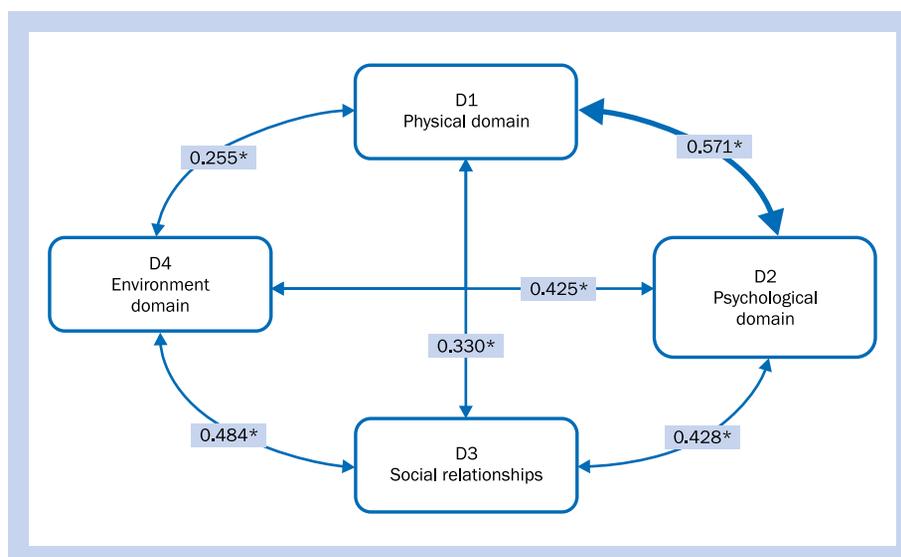
Position	% (n)
Captain	8.2% (134 individuals)
Chief engineer	6.7% (109 individuals)
Chief officer	18.5% (300 individuals)
Deck and engineering officers	39% (634 individuals)
Hotel	10.3% (167 individuals)
Deck	13.8% (224 individuals)
Other	3.5% (57 individuals)

**Table 3.** Characteristic of the examined group – marital status (n = 1,675)

Marital status	% (n)
Married/first marriage	70% (1158 individuals)
Divorced/married in second marriage	5.6% (92 individuals)
Divorced	4.1% (68 individuals)
Informal relationship	3.2% (53 individuals)
Single	5.5% (91 individuals)
Widower	0.5% (9 individuals)
Unmarried	11.1% (183 individuals)



**Figure 2.** The average results obtained in the questionnaire WHOQOL-BREF (measured item: n = 1,675); Vertical axis represents the intensity of the chosen scale: min value 4, max value 20



**Figure 3.** Polish seafarers quality of life internal correlations ( $n = 1,675$ ); \*Correlation significant on the level of 0.01 (two-way)

Questionnaire scales. The results are presented in the Figure 3.

Results of the conducted studies show that the strongest correlations within seafarers self-evaluated QoL are between the physical and psychological domains.

## DISCUSSION AND CONCLUSIONS

Results of the study clarified that the level of life quality of people working at sea is high. The research fully confirms the effect obtained in the pilot study. The examinations conducted on very large sample ( $n = 1,700$ ), show the tendency of seafarers to evaluate their QoL on the high level. First of all, they connect it with the social domain (personal relationships, social support). They notice also the significance of impact of the psychological and environmental domains. The physical domain has the least importance for their QoL.

How can we explain the tendency to consider the QoL so positively? Undoubtedly, such affirmative QoL evaluation could be connected with high level of education and their marital status. Majority of the Polish seafarers live in traditional marriages, contracted once in a lifetime.

In recapitulation we can say, that Polish seafarers are well prepared for their work. This assumption consists of a number of different factors, such as: psychological predispositions, proper education and further training systems, good health care – including the health certificates required for work issuing system, respect for laws concerning the employment of seafarers both in Polish as well as at the foreign fleet. Polish seafarers working on foreign flag ships try to choose those companies and

vessels which keep the adequate standards of labour and social conditions.

It should be mentioned that all of the results are based on subjective assessment of QoL made by Polish seafarers. In the presented study no objective measurements were applied. The analysis is based strictly on the subjective indicators of QoL. That was the aim of the research but at the same time it can be one of the reasons for criticism. Extending research on objective indicators is possible; however, it requires the cooperation of doctors, psychologists and sociologists.

The variety of obtained results would allow us to present the relation between the QoL and selected personality features, temperamental profile, stress at work, stress coping styles, life and work satisfaction, and work related moods. These data will be presented in next articles.

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