

HEALTH PROMOTION IN THE MARITIME WORK ENVIRONMENT – TRAINING OF LEADERS

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ABSTRACT

The essence of the project of pro-health attitudes promotion is the assumption that they contribute to a successful occupational career and reduce health and life hazards in the maritime work environment.

The method chosen was to train students of the Maritime Academy in Gdynia, the future officers and potential health leaders among maritime employees.

Keywords: health promotion, maritime academy students, training of leaders

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INTRODUCTION

Seafarers belong to an occupational group, exposed to high work-related risks to their health and life. They are also exposed to stress in maritime environment [1]. Therefore, it seems justified to “invest” in their health promotion already when they begin their work at sea. Acquiring knowledge from the field of medicine and psychology is helpful to develop health promoting habits, reactions and attitudes. It is indispensable to achieve successful career at the lowest cost for physical health and mental condition.

The general health promotion has been presented in numerous research programmes. The problem of seafarers’ fatigue [2-4] or stress at sea [5-9] was dealt with in quite detail.

So far there have been only few reports published on health promotion in maritime health environment, as for instance papers by H. Saarni [10], OC. Jensen [11], or T. Carter [12].

There are not many examples of projects, training, and workshops in this field. This applies in particular to those which combine medical and psychological issues into an integrated educational unity.

In the recent decades, there has been a steady progress in the technical operation of modern sea vessels. The quality of life on board generally improves in accordance with the ILO and IMO recommendations and conventions. Professional qualifications of seafarers are also constantly increasing. However, the likelihood of human errors, shortcomings in the organization of work on board, not caring for the healthy life style still continue to be important factors. And the risk of diseases, accidents and death at sea remains higher than in the majority of shore jobs.

The health and psychological problems of seafarers are closely related to specific physical and psychosocial conditions of work on ships. Neglecting risks are common among them. The consequences, i.e. high morbidity and mortality rates on board are extremely expensive for them, their families and for the shipping industry. The promotion of health at their workplace is therefore of a great importance.

Our aim in the presented project, addressed to a defined occupational group, is to apply the theoretical knowledge in practice.

THE IDEA OF THE PROJECT

The presentation and implementation of the project were inspired by the current data on morbidity and mortality of seafarers, and our knowledge of maritime work environment, as well as by our long-lasting experience in providing them psychological consultations.

The following factors were taken into account:

1. Conditions and circumstances of their work at sea limit their access to professional medical and psychological help.
2. The health protection system on ships at sea is in practice based on services provided by seafarers to seafarers, not by health workers.
3. The health services at sea are limited to radio or satellite communication with doctors on shore and the use of drugs from the ship's medical chest.

The proposed project of health promotion in maritime work environment aims at improving the effectiveness of such limited assistance, by training.

Students of the Maritime Academy, future officers, were chosen to take part in the training, to become leaders in health promotion at the workplace, and to participate in the creation conditions for:

- increasing the work and life safety on ships by the reduction of hazards,
- encouraging health promoting attitudes between crew members
- development of psychologically and socially beneficial interpersonal relations and attitudes.

The project is focused on:

- increasing pro-health awareness of participants and promoting healthy lifestyle
- acquiring psychological skills to function in a group
- enhancement of motivation, responsibility, medical and psychological knowledge for creating safer workplace at sea.

The project takes into account that the choice of the future profession and studying at the Maritime Academy should be supported by the development of personality traits facilitating the adaptation to work in a specific maritime environment.

Earlier psychological examinations have demonstrated that selected personality traits are useful for the adaptation to the seafarer profession [13]. The following areas of

psychological functioning, being the predictors of a successful career at sea, were indicated:

- intellectual and cognitive powers
- selected personality and temperamental traits
- social relations
- coping with difficult situations
- stress resistance capabilities

In the everyday psychological and medical practice we most often face the following problems of seafarers:

- ❖ neurotic disturbances
- ❖ psychosomatic problems
- ❖ psychotic tendencies
- ❖ alcoholism or other addictions
- ❖ personality disturbances
- ❖ disturbances of behaviour
- ❖ cardiovascular diseases
- ❖ obesity, diabetes
- ❖ food intoxications, diseases of the alimentary tract
- ❖ infectious diseases; sexually transmitted diseases
- ❖ accidents and injuries.

We asked ourselves how to improve the situation. The primary prevention in maritime work environment seems to be the right method to improve work safety and reduce work-related hazards on board. We propose to achieve it by training the maritime students and future officers as the leaders in their community.

METHODS AND PARTICIPANTS

For conducting the project in 2006, 80 four-year students were selected of the Mechanical Department of the Maritime Academy in Gdynia, future officers of the merchant navy and fishing fleet, male, aged 23-25 years.

The project had two stages. The first one comprised the evaluation of psychological state of the students with regard to:

- selected personality traits (neuroticism and anxiety level),
- selected temperamental traits (quality of nervous processes),
- style of social functioning, behaviour in stressful situations, resistance to stress.

In this stage, the following psychological methods were employed: NEO-FFI Questionnaire (P.T. Costa and R.R. McCrae), “Good and bad humours” Questionnaire (A.H. Buss and A. Durkee), PTS Temperament Questionnaire (J. Strelau, A. Angleitner and B. Zawadzki), Spielberger’s Self-Evaluation Questionnaire, Decision Making Questionnaire (M. A. Wallach and N. Kogan), MACH IV Test, CISS Questionnaire (N.S. Endler and J. D.A. Parkera, and other). They allowed determination of strong and weak points of personality and the choice of adequate measures and methods of their training.

The second stage focused on the training students in the field of health promotion at the maritime workplace, directly before their practical training voyage and graduation from the Academy.

Workshops and training sessions were aimed at improving:

their **medical** knowledge on the prevention of diabetes, hypertension, obesity, alcohol and nicotine addiction; on promoting physical activity and healthy diet; on avoiding infectious diseases and avoiding hazardous behaviour at sea.

Improving their **psychological** knowledge may be achieved by: the identification of stress sources, stress managing, resolving conflicts, conducting negotiations, management of the group, reacting in stressful situations (terrorist or pirate attack).

The following practical skills were trained:

- technique of medical examination
- pre-hospital first aid
- Radio Medical communication with doctors on shore
- making use of the International Medical Guide for Ships.

The knowledge gained during the training complied with the recommendations of STCW (International Convention on Standards of Training, Certification and Watchkeeping for Seafarers), ILO, IMO, WHO, IMHA and UE directives.

The project embraced 30 hours of demonstrations, workshops and training (during one semester), divided into psychological (20 hours) and medical (10 hours) parts.

Students worked in small 15–20 men groups, with 10–15-min. theoretical introduction and 30–40-min. workshops, practical exercises, discussions with students, with the use of audiovisual aids, presentations / simulations, and tests.

The evaluation of the effectiveness of the project was based on:

1. a questionnaire – verifying the absorption of knowledge and the correctness of practical skills learned
2. feedback by
 - individual conversations with students, indicating their strong and weak points
 - discussion on the methods and aim of the project
 - discussion on the usefulness of the project

3. Individual assessment of each participant and issuing a certificate.

The absorption level of knowledge on health promoting attitudes amounted to about 75% as compared to the starting level. The evaluation was based on results of test before the project and after its completion.

The authorities of the Maritime Academy were acquainted with the effects of the training. The project was accepted by participating students, the Academy's authorities and the Consultant in occupational medicine and medicine of transport.

The project was supported by a grant of the Polish Ministry of Health (48/MP/2006). Very good opinion for its accomplishment has resulted in its continuation in 2007 (73/MP/2007).

The success of the first part of the project encouraged us to apply for the grant "Intervention study to create health promoting attitude in maritime work environment for Maritime Academy students" within the framework of the European Seventh Research Programme FP-7 ICOMAR (International Collaboration On Maritime Health Research).

The results of the project were presented at the time of the International Symposium on Maritime Health in Esbjerg, Denmark, in June 2007, and brought to the knowledge of ILO, WHO, IMO, ITF.

The project was also presented during a 3-day seminar and workshops "Health, life and work safety hazards on board" organized for the participants of the 22nd World Congress on the Apostleship of the Sea, held in Gdynia on 24-29th June 2007.

The following issues were discussed:

1. Work and Stress At Sea.
2. Life loss due to hazards at the maritime work-site.
3. AIDS and tropical diseases among seafarers.

THE ANTICIPATED EFFECTS OF THE PROJECT

Providing that the project will be systematically and consequently continued in successive editions, its effects may be the following:

Shaping and consolidation of health promoting attitudes and their popularization among seafarers

Improving their psychological condition through:

- improvement in interpersonal communication
- ability to recognize risk
- acquiring skills of negotiations
- abilities to cope with difficult, conflict and stressful situations

The distant somatic effects of adopted active health promotion attitude could be:

- reduction of number of deaths at sea caused by cardiovascular diseases, cases of missing / suicides, and acute stress reactions.

The results and the anticipated effects of the project are the consequence of:

- enhancement of knowledge in the field of health and psychological problems among seafarers indispensable to take up and continue the work at sea,
- propagation of the health promotion attitudes among the future officers of the merchant navy,
- taking up own responsibility for protecting health at the workplace,
- motivation to reduce harmful biological and psychosocial effects related to unhealthy or hazardous lifestyle,
- recognition of personality traits predisposing to the role of the leader,
- enhancement of knowledge and skills of coping with difficult and conflict situations at sea.

The expected long-term cumulated effects of these activities should result in:

- improved safety of life and work in maritime environment
- achievement of measurable health effects among seafarers, i.e. reducing the morbidity among them
- reduction of the absence from work and giving up the occupation regarded as highly burdening both physically and psychologically
- prevention of occupational burnout in the work at sea.
- reduction of costs and economic losses due to social consequences of diseases

CONCLUSIONS

- The project of training health promotion leaders in maritime occupations is socially and economically justified, and it was accepted by students.
- Its long-term implementation may yield measurable health and social effects, reducing some of the work-related risk factors among seafarers.

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