



## ON PSYCHOLOGICAL AND PSYCHIATRIC IMPACT OF PIRACY ON SEAFARERS

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### SUMMARY

**Background:** It has been discussed that being held hostage can have harmful short and often long-term physical, psychological, familial and social effects on the victims. This is a complex area of research and the data is sparse yet.

**The aim** of our study is to present our experience concerning some psychological and psychiatric consequences on Bulgarian seamen victims of pirate's attack long captivity and to suggest a suitable methodology of a psychological investigation in such cases.

**Methods:** Seven Bulgarian hostage survivors underwent comprehensive psychological and psychiatric assessments twenty days after pirate's captivity release.

**Results and discussion:** In general terms, the psychological and psychiatric impact on the victims is similar to that of being exposed to other serious life-threatening events, including terrorist incidents and natural disasters.

All the subjects, who have been examined in our study, reported feelings of detachment and alienation from close others and startle by noises, nightmares and sleep disturbances. Anxiety symptoms, characterized by apprehension, tension and fear in particular situations, and some depressive features (depressive mood, lack of interest and activities, lassitude) on a sub-clinical level were registered.

**Conclusion:** Despite some limitations our report discusses important issues, concerning psychological and psychiatric consequences on Bulgarian seamen victims of pirate's attack long captivity and present a suitable model of a psychological investigation in such cases and states the need of supportive care of the victims.

**Key words:** maritime piracy, seafarers, psychopathology, psychological/mental consequences

It has been discussed that being held hostage could have harmful short- and often long-term physical, psychological, familial and social effects on the victims. In general terms, the psychological and psychiatric impact is similar to that of being exposed to other serious life-threatening events, including terrorist incidents and natural disasters [1]. The war sailor syndrome was first described in the mid 1970s. One-third of Norwegian sailors who survived World War II became disabled and received disability pension [2, 3]. Today, seafarers may be subjected to critical incidents such pirate's attacks and hostage-taking [3]. Acts of

piracy are expected mostly in insecure areas [4].

Nikoliae et al. (2012) point out that being held hostage involves long periods of boredom, interrupted by periods of threats and feeling frightened. The effects on individuals and their families include different mental/psychological disorders. Issues related to maritime piracy, including health and potential psychological problems affecting victims, were nearly recently reviewed [5].

There is sparse research concerning different health problems and psychological/mental consequences of piracy [6, 7]. In a study Garfinkle et al. (2012) discuss some difficulties in conducting such studies due to very little scientific literature, lack of reasonable baseline for normal stress among seafarers, stigma in maritime professional culture on mental illness (Lauber et Rössler, 2007), economic factors such as potential threats to reemployment, etc. [8, 9]. The Seamen's Church Institute of New York and New Jersey (SCI) initiated a clinical study of the effects of piracy on seafarers. This initiative was a response to the increasing number of piracy incidents off the coast of Somalia. The SCI encouraged the maritime industry to pay attention to the psychological impact of piracy on seafarers and underlined the lack of an organized, macro-level approach to mental health in marine employees.

We don't have much experience with seafarers, victims of piracy, and the published research data on this issue is insufficient, too. For such a reason, in our work we rely on the experience and data from other researchers. Weisaeth (1989) studied the immediate and long-term consequences of kidnapping on Norwegian ship's crew. The immediate reactions to the extreme stress were fear, depression and rage. The next six months after their release 54% of the crew suffered from post-traumatic stress disorder (PTSD) [10].

Lately Ziello et al. (2013) examined four Italian seafarers at the 5th month of their release from pirate's kidnapping. They concluded that psychopathological effects that develop as a consequence from the experienced trauma are relevant and could provoke severe disorders in individuals [7].

**The aim** of our study is to present our experience concerning psychological and psychiatric consequences on Bulgarian seamen victims of pirate's attack long captivity and to suggest a suitable methodology of a psychological investigation in such cases.

## METHODS:

The subjects investigated were seven Bulgarian hostage survivors, who remained captured for six months. They underwent comprehensive psychiatric and psychological assessments twenty days after pirate's captivity release. The psychological and psychiatric symptoms and their peculiar aspects were assessed through an accurate and multidimensional psychological and psychiatric evaluation. Structured psychological interview and a set of tests, exploring for Post Traumatic Stress Disorder (PTSD) symptoms (Bulgarian validated version), State-Trait Anxiety Inventory (STAI-Y; Bulgarian validated version), Zung Depression Status Inventory (DSI) and a Locus of Control Scale (Bulgarian validated version) were applied.

**Description of Measure:** Through a semi-structured interview the history and the description of the traumatic event and the psychological experiences during capture were investigated.

**The State-Trait Anxiety Inventory (STAI-Y)** is a commonly used measure of trait and state anxiety. STAI-Y can be used in clinical settings to diagnose anxiety and to distinguish it from depressive syndromes. Higher scores indicate greater anxiety. The STAI is appropriate for those who have at least a sixth-grade reading level. We used the Bulgarian validated version of D. Stetinski and I. Paspalanov.

*State anxiety* describes the experience of unpleasant feelings when confronted with specific situations, demands or a particular object or event. State anxiety refers to a temporary condition in response to some perceived threat. When the object or situation that is perceived as threatening goes away, the person no longer experiences anxiety. *Trait anxiety*

describes a personality characteristic rather than a temporary feeling. Arises in response to a perceived threat, but it differs from state anxiety in its intensity, duration and the range of situations in which it occurs. Individuals with a high level of trait anxiety experience more intense degrees of state anxiety to specific situations and toward a broader range of situations or objects than most people.

**The Locus of Control Scale** measures generalized expectancies for internal versus external control of reinforcement. People with an internal locus of control believe that their own actions determine the rewards that they obtain, while those with an external locus of control believe that rewards in life are generally outside of their control.

A low score indicates an internal control while a high score indicates external control.

**Zung Depression Status Scale (SDS)**, is a 20-item self-administered test that assesses the level of depression in adults. There are 20 items on the scale that rate the affective, psychological and somatic symptoms associated with depression. Half of the 20 items are positively worded and half are negatively worded. The SDS has a key for scoring, with scores ranging from 1 to 4. Scores greater than 50 indicate mild depression, greater than 60 indicate moderate depression, and greater than 70 indicate severe depression.

**Psychological assessment/evaluation of post-traumatic stress symptoms** is a questionnaire, based on the clinical descriptions of the symptoms of PTSD in ICD-10, developed by A. Velichkov and validated for Bulgaria.

## RESULTS AND DISCUSSION:

The socio-demographic characteristics of the seven Bulgarian hostage survivors are summarized in Table 1.

**Tabl. 1.** Socio-demographic characteristics

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Subject 7
<b>Sex/age</b>	male/43	male/37	male/30	male/40	male/27	male/38	male/61
<b>Education</b>	higher	secondary	secondary	secondary	secondary	higher	Secondary
<b>Marital status</b>	married	married	married	married	single	single	married

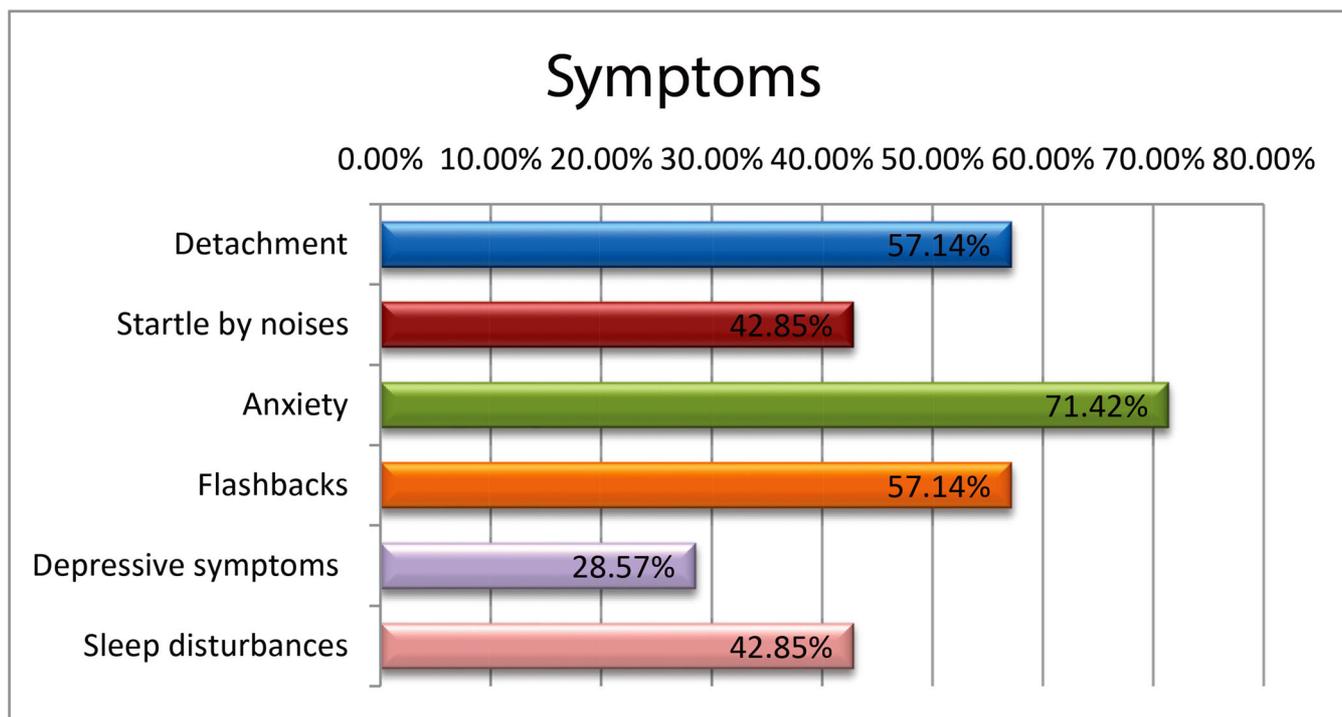
The conditions during the period of captivity were described by the sailors as follows: difficulties and impossibility for implementation of daily human needs, lack of food or no food (the loss of weight at respondents is 6 to 12 kg for the of 4 months), lack of opportunities to maintain a daily personal hygiene, high humidity, 24 hours presence of guards, high risk for life, especially when the guards become inadequate due to the effect of the drugs and alcohol, indiscriminate shooting, constant non-verbal and verbal threats from the pirates.

Case 6 was the most heavily exposed to traumatic conditions. He was chained in a separate cabin for 40 days. During the interview he shared feelings of exhaustion, alienation, more frequent displays of temper and irritability, startle, boredom. He has retained his sense of responsibility to the crew during the entire period. In the interview he

said that he felt better when the whole crew had left the danger area. Regardless the fatigue was ready to board after some rest.

Generally, the subjects were cooperative during the interview and the subsequent assessment. In the course of the psychological exploration, feelings of detachment and alienation from close others, startle by noises, nightmares and sleep disturbances (troubles falling asleep or staying asleep) were reported. Anxiety symptoms, characterized by apprehension, tension and fear in particular situations, or activities involving an extreme arousal were reported by more than a half of the subjects. Some depressive features (depressive mood, lack of interest and activities, lassitude) on a subclinical level were registered. Four of the subjects suffered flashbacks about the traumatic event. Prevalence of most prominent symptoms is presented in Fig. 1.

Fig. 1. Symptoms, experienced by the subjects



The data from the psychological interview and from the Locus of Control Scale show that six of the subjects are with an internal locus of control. They tend to take more responsibility and endeavor to deal with the traumatic situation, while the seventh prefers the passive strategy of drug therapy.

The results, obtained in our study, include a variety of symptoms that could not be classified in any distinct psychiatric disorder. Nevertheless the difficulties to make some profound conclusions, we could comment some important issues.

The main limitation of our study is the small group of the subjects investigated. The next limitation is that we met the patients after 20 days after release and it was somehow difficult to get their availability for a follow-up. It could be discussed as their preference to avoid situations that could re-voke traumatic event. This is a complex area of research. The marine profession has some specifics. A great challenge is that one should get along with people never met before and entrust his life to them. The physical and mental health is an important condition to get job. Secondly, seafarers, through the nature of their work, are exposed to potentially traumatic events, such as long-time freedom deprivation, isolation, uncertainty, uncertain conditions, hos-

tage-taking, and development of significant psychological or psychiatric consequences could be largely predictable. On the other hand, they are somehow trained in disaster situations. Liwãnga et al. (2014) outline the basic steps that should be undertaken in order to make ship security manageable in terms of focusing on methodological understanding, well defined risk criteria and a continuous monitoring [11].

To our knowledge, in Bulgaria there are no specialized services to deal with the multidimensional issues of sailors and their families. Stigma discourages many seafarers from seeking consultation or effective therapy that can be critical to reduce symptoms and improve function, because they fear losing their jobs or not being rehired.

Thirdly, Bulgarian society is not mature enough to look for a comprehensive specialized care even in serious life events.

#### CONCLUSION:

Despite some limitations our report puts an accent on some psychological consequences of maritime piracy, presents a suitable model of psychological/psychopathological assessment and states the need of supportive care of the victims.

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