

## ORIGINAL ARTICLE

# THE RATE OF MENTAL STRESS OF FIELD HOSPITAL NURSES IN FOREIGN MILITARY MISSIONS

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### Summary

The main goal of this research is an evaluation of mental stress. The level of stress was studied in a group of nurses that spent some time on the military missions, especially in Afghanistan.

We used Meister questionnaire for evaluation of a stress level at work, in a civilian hospital in the Czech Republic and a military work place, during the mission.

In conclusion, the goal of our research is classification of a stress level during the nurses' deployment in foreign mission. Based on these results, some methods convenient for managing a higher level of stress were described and mechanisms of stress adaptation are discussed.

*Key words: Nurse; mental stress; foreign missions; field hospitals*

## INTRODUCTION

Modern nursing has been progressively changing over the last few decades. More competencies are inserted in the hands of nurses, together with increasing responsibilities. Trend of modern nursing penetrated into the military environment, where qualified nursing staff has become an integral part of the troops in the 21<sup>st</sup> century.

The threat of global terrorism and the deployment of NATO troops in the fight against this risk shows that health security forces, including nurses, are very important, and that the actions of the troops are greatly affected by the quality of medical support.

Historical deployment of members of the military medical services to foreign missions began in the early 60s of the last century by the action of the Czech field hospital in Korea. Today its impact is much higher; in the present days serve doctors and nurses in Afghanistan ISAF mission and others. Military medics worked in many countries such as Kosovo, Turkey, Iraq, Kuwait and others, and their work has always been rated very high and professional. [1]

To ensure the quality of professional activities of nurses in the Czech armed forces, we tried to map the degree of mental stress that nurses are exposed to in field hospitals in foreign missions and to compare it to the work they have to do in their civilian workplaces. Determining the level of mental stress and factors that it causes is necessary in order to create optimal working conditions for nurses working in the Czech Army and in foreign missions.

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## METHODOLOGY

The goal of this work was to determine the degree of psychological stress, the effects of stress and influence on the activity of nurses working in the 6<sup>th</sup> and 7<sup>th</sup> Army Field Hospital., Army nurses performing professional experiences in civilian medical facilities and have been also deployed at least in one foreign mission.

For the purpose of our own research, we drew on several assumptions. Each mission is unique, with its own rules, other staffing, the demands on soldiers, climate, security and logistical factors that are never the same. The set of feelings and experiences that are similar in nature and therefore can be evaluated.

A degree of mental stress is measured according to a particular factor which may also cause or indicate perceived psychological stress. As basal psychological stress is considered standard stress related to work which served as a general determinant of the overall experience stress on a foreign mission. The questionnaire was modified according to this and was used to interview nurses of the 6<sup>th</sup> and 7<sup>th</sup> Army Field Hospital. Meister questionnaire was used as a basis for the design of the questionnaire and the validity of information was created based on five hypotheses. In addition, questionnaires were completed with the necessary socio-demographic data.

Investigation methodology was as follows. The questionnaire was designed for dual use, first for nurses participating in foreign missions, second (identical) for respondents at civilian workplaces. The original intention to include the complete number of people - nurses serving in the Czech Army proved to be unrealistic, because of the inconsistent work contained within the entire Czech Army. A better way was to use nurses in field hospitals, where there was at least one deployment in a foreign mission. The sample consisted of 106 nurses in both field hospitals. However, the yield was relatively low. Due to the low motivation of respondents there was only 50 returned questionnaires, ie 47%. However, the data were identified as very interesting.

## RESULTS

First we met the respondents. It turned out that the majority of respondents in the Czech Army serves for long time, 60% of nurses reported serving for

more than six years. It is assumed that the length of service affects the number of completed missions, and that if a nurse is capable of long service in the army, she/he is also capable of being deployed in a foreign mission. This was further confirmed by an overwhelming majority of respondents, which were on a mission repeatedly, 14% of nurses attended more than 6 missions. According to research, 66% of nurses are in marital status or have a steady partner and 58% of nurses have children.

Became clear that in both Field Hospitals there is a universal trend of substitution of nurses. The majority of respondents, 62 %, is trained and specialized and also works in the field of anesthesiology and intensive care medicine.

On the evaluation scale from one to ten, civilian workplace was evaluated by a median of 8, while working on the mission was viewed to be less burdensome, with a median of 5. The fact that 72 % nurses prefer working on their missions. For these nurses is missions more popular workplace.

The first, third and fifth claims of the Meister questionnaire deal with the overload factor. This may cause psychological stress.

The first claim was evaluated quite positive by nurses, with a median of 2 and 3 for the mission and 3 for civilian. Nurses either do not admit liability, or are aligned with it, but the medians of this statement are 1 and 2 for a field hospital and 2 for a civilian facility.

The fifth argument, which deals with conflicts and problems in the workplace was considered as potentially highly rated. Conflicts in the workplace are very common precipitating factors, psychological stress, especially when it comes to work with a strict regime and non-standard circumstances. Medians for both civilian and military workplaces are equal to one. Nurses absolutely deny that conflicts and problems in the workplace evoked such a burden that cannot be get rid of after the service.

The result is that the first factor in causing mental stress, overload is seen minimal by the nurses. According to their evaluation we can say that there is almost no risk of overload.

Another examined factor is monotonicity, which is evaluated by the claim number two, four and six. Nurses evaluated this very positively. For the first

claim, which actually covered job satisfaction, respondents were clear that they do not feel dissatisfaction with the work and median 1 proves it, both in relation to the civilian workplace and the mission.

There was exactly the same from the fourth claim Meister questionnaire aimed to certain attractive and interesting nursing - military practice of nurses. Also in this case, the median one is a clear evidence that nurses do not feel psychological stress in the fact that their work is not interesting enough, or that they are even bored at work. They do not feel any intellectual stupor.

The last statement of this factor, dealing with the possibility of formation of mental stress due to impoverished environment in which the problem is to keep the concentration. Median 1 here also showed that nurses do not feel totally mind-numbing work and the need to maintain concentration.

The last examined factor is the stress response. This is a summary of several other possible fields that may extend and contribute in some way to a formation of psychological stress. In Meister questionnaire they occupy the last four positions that are evaluated by respondents.

The seventh claim deals with feelings of nervousness and mental disbalance state on the basis of psychological demands of work. But even this was not staggering for nurses. Median 1 for foreign missions, and 1 and 2 for civilian equipment is conclusive enough.

Difficulty of employment and the ability of nurses to perform was put in the test in the eighth claim, which dealt with sustaining attention and favor actions that are performed by nurses in the workplace. The median value of 1 for both civilian and military part of a Meister test only confirms that military nurses are professionals in place and in their pursuit of professional practice do not dispel themselves with the demands placed on them by their profession every working day.

Immediately on the subject follows claim of Meister questionnaire, examining how tired the nurses feel at their work and how this influences their further work. There is no doubt that any employment in the health sector is highly demanding.

The last assertion of the questionnaire was to determine how nurses perceive their work in the long

term. This work can be managed as they grow older and can perform in the long term, which confirms the median value of 1. The highest score of the test in this statement was received with regard to the civilian workplace. The median value of 4 went through the critical limit load, which was set at a 2.5 point scale.

## DISCUSSION

The origin of word „stress“ is possible to find in French language – ESTRECIER, it means TO FORCE. This word is derived from the Latin – STRICTUS. We can interpret this as a negative or positive dependence on the impact of external forces. [2]

The phenomenon of stress has been studied in detail during the World War II, when mistakes and failures of US soldiers in combat action were analyzed together with subsequent neurotics symptoms of these soldiers. After the World War II, the concept of stress penetrated into the civilian life. [3]

Stress can be defined as the sum of adaptive biopsychological reactions of organism; as the ratio between real and supposed circumstances. In fact, the stress reaction is only a primitive physiological reaction of the human body. [4]

The concept of stress management was created by R.S. Lazarus. He described two types of coping with stress. First type is oriented to intra-psychical, second type is oriented on external problems. [5]

According to the obtained results, it is clear that foreign missions required nurses who already have experience, both working in the civilian and military environment. It is confirmed that the period of military service affects the option to be deployed on a military mission. The truth is that many of the missions also place high demands on family members of the respondents. Good family background is a prerequisite for the exercise of services in both civilian and military sectors and research has confirmed that the position of military nurses is not an obstacle to experiencing the quality of family life. Good family background was confirmed by the results.

As very important was to explain the system of nurses work scheme in military hospital. It is

evident that the educational level of nurses is very high. Most nurses have a minimum of specialized study Intensive Nurse Care and became a universal worker. These nurses can be classified in terms of mission at various positions, from intensive care to standard nurse care. The result is that is not a problem on the mission to occupy positions nurses of intensive care unit, Emergency or standard care, while scheduling assignment requires specialized positions such as scrub nurses. There was also a question how the nurses perceived their department in which they work, both in civilian workplaces and on a mission. It is surprising that nurses perceive work in a civilian facility as more difficult. Nurses showed that the military workplace is more popular. It is a surprising result. We assumed that a civilian workplace will be more popular. On the mission are so many factors, coming from a military background and from character of the military mission.

Comparison of civilian and military workplace was crucial for evaluating the Meister questionnaire, both in relation to the mission and to the civilian workplace. Meister questionnaire is focused on three main factors, which may cause psychological stress. The first, third and fifth claims of the questionnaire deal with the overload factor.

According to the results of the first claim, the nurses are getting relatively rarely in time pressure, unlike in the department of regular civilian hospitals. A similar result applies to the third claim, which deals with psychological stress, depending on the degree of responsibility. It is evident that nurses perceive the civilian workplace as more stressful.

It showed that nurses perceive both civilian and military workplaces in relation to conflicts and problems. It is surprising that the military hospital is seen both as a civilian hospital in the Czech Republic. We assumed that the workplace, which is influenced by factors of war mission, will be perceived as more stressful. This assumption was not confirmed. Both workplaces are on the same level.

The result is that the first factor Meister questionnaire, overload, is perceived by nurses as a minimal.

Another factor dealt with by monotonicity. It has been documented through claim one, four and six. The first claim pointed to job satisfaction. Satisfaction of nurses is at the same level on the both types workplaces. Does not matter where the nurse

does its work. The civilian hospital is the same like the military hospital.

The same result has a claim number four. There is no perceived difference between the practice of military and civilian nurses. They do not feel any intellectual stupor.

The last statement of this factor, dealing with possibility of formation of mental stress of impoverishing environment in which the problem is to keep the concentration fell from respondents in the same way. Median 1 here also showed that nurses do not feel totally mind-numbing work and the need to maintain concentration.

The last factor is examined the stress response. This is a summary of several other possible fields that may extent and contribute in some way to a formation of psychological stress. They occupy in Meister questionnaire the last four positions that are evaluated by respondents.

The seventh claim speak about feelings of nervousness and mental disbalance. Nurses perceive more burdensome work in a civilian facility. However, the distinction between civilian and military equipment is small. It is clear that the same nature of nurses work leads to a similar assessment of both departments.

Professionalism of nurses confirms the claim number seven. He dealt with sustaining attention and favor actions. Rating of the nurses is constant in this case. Although it may seem that nurses may be affected by the performance of their jobs by a particular state of apathy and disgust with the need to change their activities, the opposite is true.

Fatigue and its impact on job performance further dealt eight claim. Nurses work position is very demanding, both physically and mentally. However, the question is how to deal with this negative influence that individual deal and what individual does to lower the impact of this effect on his body.

According to the respondents is the fatigue felt by nurses, but not to the degree that from this feeling could be drawn any deeper conclusions. Even here, the median value of 2 for both civilian and military area does not exceed the critical threshold, which is set at level three. Nurses are therefore not so much influenced by the demands of their work and fatigue, so there could be the quality of their work lowered.

The last assertion of the questionnaire was to determine how nurses perceive their work in the long term. As mentioned above, nurses work is highly demanding. What is the future of nurses in this job and what are the options of managing this job stress in further life? According to respondents, is surprisingly less labor-intensive military health care. This work can be managed as they grow older and can perform in the long term, which confirms the median values of 1.

The highest score of the test received this statement with regard to the civilian workplace. The median value of 4 went through the critical limit load, which was set at 2.5 point scale. It ensues a highly negative assessment of physical intensity civil department, in relation to long-term professional nurses.

It is interesting that although the sisters in civilian and military sector engage the same professional activity, the assessment at this point is so different. The differences, which are given in activities that are necessary for the work of nurses, but are specific to each sector separately, are probably so different that lead to negative long-term view of the work of nurses at one site in the civilian sector.

It is clear that the risk of burnout, which are helping professions at high risk stems from the same source, which leads sisters to this evaluation. A deeper analysis of this phenomenon is needed specifically in connection with the Burn - out syndrome.

## CONCLUSION

We do not have to fall to mistaken belief that military nurses are absolutely inviolable by stress and consequently increasing burden on a foreign mission.

The specific selection of nurses in the military, their mental and physical quality and professionalism lead to the fact that they are relatively high resistant to stress and long-term mental stress. However, these attributes are not always guaranteed. It may happen that due to lack of staff will be less resilient individual who may be more influenced by the work of the detected factors leaving on a mission. Psychological examination and preparation are therefore certainly on site. Current state is quite satisfactory since the implementation of the pre-

ventive psychological examination before every mission. But the truth is that after completing several examination of a similar character, the majority of nurses is able to pass as satisfactory just on the principle of their experience with this examination.

It is also necessary to prevent the development of mental stress on the work site, where people rely mainly on themselves. Targeted search of possible trigger factors and their neutralization is the job description of a psychologist or psychiatrist, who also travels with the Field Hospital. However, the basics of psychotherapy should handle each of the nurses.

It would also be preferable to plan the rotations of contingents to shorter but more frequent periods of time because a shorter time exposure will lower the risk for nurses and would have a positive impact on work performance and mental condition. Current state where the average length of one rotation is four to five months, with a view to extend to six months, is in relation to the psychological state of the nurses on a mission is insufficient.

I believe that the results of the survey in its present form will radically change when the departure on the mission will be strictly on an order, not on a voluntary basis, as it is now. The results would also certainly change after the intervention of the salary requirements relating to soldiers deployed in the mission.

In summary it can be stated that military nurses can be regarded as professionals and people in place. Their approach and their qualities are preventing the development of mental stress. Although they are not a typical representatives of a modern soldier, their work is very important and military nurses also perform with maximum responsibility.

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