

The psychology of the professional activity of a sapper

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Abstract. The article defines the peculiarities of the professional activity of the servicemen-sappers. The professionally important qualities of sappers, who perform tasks under specific conditions, are investigated. They are based on the analytical mind, mental stability, courage, high motivation to avoid failures, excellent manual dexterity and some other factors. It has been discovered that in the professional area, the special training of the sapper and his individual-psychological characteristics are closely intertwined. The behaviour of a sapper in a minefield is characterised in accordance with ambivalence. On the one hand, the activity of the sapper is aimed at neutralizing the enemy's live force, and on the other - to save the lives of the servicemen and civilians.

Keywords: *sapper, professional activity, mine war, professionally important qualities of a sapper, stress.*

The statement of the problem on a general level.

Among the sappers there has long been a thought, that a sapper makes a mistake twice in his life - the first time - when chooses a profession, the second - when demines or deactivates ammunition. Without even trying to refute the above-mentioned statement, we would like to admit that not every person is capable of dealing professionally with such a difficult and dangerous task, for which the sapper is responsible. Let us just make our own assumption: "The sapper does not make a mistake, has no right to make it, otherwise he is not worth to be named a sapper" [1]. During anti-terrorist operations, the profession of a sapper became of a vital necessity. The sappers begin and end the war, and for decades they work to eliminate the consequences of that war (A. Babadzhanian, V. Kovalskiy, O. Matsko). Nowadays it is almost impossible to imagine a victory in a battle without the participation of sappers. In the future, the need for professionally trained sappers will only grow.

Over the past three years, about 900 soldiers and civilians have suffered from mine explosions on the territory of Donbas, 199 of them have died. According to the humanitarian coordinator of the United Nations, Neal Woker, Ukraine is ranked third in the world for having its territory contaminated with explosive objects, and is the first concerning the number of people killed by those objects. Our country "inherited" minefields and projectiles from two World wars, because of the activities of the USSR Army, and as a result of the hostilities on the Donbass territory. In addition, the Russian side mined the administrative boundary between the annexed Crimea and the territory of Ukraine. Experts say that after the end of hostilities in Donbass, it will take decades to clear the Ukrainian land from mines [2].

According to the estimation of experts of the Ministry of Defense of Ukraine, on territories, controlled by Ukraine, 7 thousand square kilometres of territory are contaminated with explosive objects. 1.5 million people live on this territory. Another 15 thousand square kilometres, that are mined, are non-controlled.

The analysis of the recent research and publications confirms that the main task of the sapper is the competent performance of the combat defensive or offensive operations (O. Hmilar). Historically, it has been commonly believed that servicemen-sappers are serving in engineering units. In the course of the military operations they are responsible for the digging of tunnels under the enemy's defensive structures, the excavation of trenches, the con-

struction of their own fortifications on the line of the collision, the realization of crossings of the rivers and swamps, the neutralization of mines, missiles and shells.

The problem of the psychological support provision of the professional activity of the servicemen-sappers in modern military-psychological science has not been viewed at a proper level. Currently, there are no significant scientific developments that would comprehensively reveal the problem of psychological support of the sapper and serve as a theoretical and methodological basis for its practical implementation. As a result, the specific recommendations offered by the military psychologists to solve the psychological problems of the servicemen-sappers do not always allow the military authorities to make decisions, that are scientifically grounded, from the psychological point of view.

The article is **aimed** at the professiographic analysis of the activity of the servicemen-sappers, who are performing task sunder specific conditions.

The presentation of the main material. In the historical sense, the concept of "sapper" is rooted in the 17th century. By that time, sappers were the people, who dug the tunnels under the walls of the enemies' fortresses in order to destroy them. At the end of the 17th - the first decade of the 18th centuries, in some countries (France, Russia) the sappers were grouped into separate units, and the number of tasks they had to perform significantly increased.

Nowadays, the profession of a sapper requires not only a thorough professional training of a serviceman, but also specific character features, and special internal self-control. The most talented, mentally stable and even "tender" servicemen should obtain a job of a sapper. Among the range of professionally important qualities of a serviceman, we would emphasize on the following: organizational skills, courage, strictness, sociability, friendliness, critical attitude to himself and his activity. For the servicemen of the explosives units, analytical mind, responsibility, excellent manual dexterity, perfect coordination of movements and actions in general, punctuality, accuracy, intuitionality, high endurance and stress tolerance, developed anticipation, ability to cleverly assess the situation on the minefield, the ability to predict the results of their actions are important. The sapper must be able to: make quick decisions, work alone for a long time, keep calm even in the tensest situations. It should also be noted that - after losing the sense of fear, the sapper must leave his professional activity.

According to the research of the World Health Organization, every 20 minutes on the Earth dies one person, as a result of the explosions of mines, tripwire mines, shells, bombs. Before the beginning of the neutralization of explosive objects, every sapper has to gain knowledge of the structure, principles of action, typical malfunctions of more than 700 types of mines, and also get to know the basic types of ammunition, used in armies all around the world. Thus, during the process of demining of the territory of Yugoslavia, servicemen-sappers had to deal with the so-called sub munitions of English Mk1 and American BLU 97B / B and A / B. These types of explosive objects, as opposed to standard mines, are considered to be quite dangerous because the detonator, that is used in their structure, has the ability to produce stream and function even after a long-term stay in the ground [1].

During the war in Afghanistan, servicemen-sappers had to neutralize anti-tank mines of the Soviet production (TM-46), Italian production (TS-2.5 and TS-6.1), American (M-19), English (Mark 7) and Belgian production (N55 and M3). Among the anti-personnel mines, the servicemen-sappers mainly disposed the Soviet mines (PMN, POMZ-2), as well as Italian (TS-50), American (M18A1) and English (P5 Mk1). Most of the above-mentioned mines were manufactured in Pakistan, Iran, Egypt and China.

The sophisticated virtuosity, "jewellery" of the serviceman's operations gives him an opportunity to successfully neutralize and dispose of the radio-controlled underground mines. In the process of this demining, servicemen-sappers use a special suitcase that suppresses radio waves in the demining zone. Then, a sapper with a protection of a shield, by means of a special "mechanical arm" moves the underground mine into an armoured tank. Even if the bomb explodes in an armoured tank, it will not hurt the sapper.

In the process of the tasks' performance, the sapper uses special equipment, which has to protect him from possible explosions. A special costume of a sapper, that weights around 16 kg, consists of a protective jacket and trousers, an armoured glass helmet, counter-mine boots, kevlar gloves, knee pads, and additional armoured panels designed to protect the most vulnerable parts of his body. An important feature of this costume is that it can be quickly taken off, if necessary. Two systems are built in the sapper's costume: 1) voice communication; 2) climate control. Autonomous power supplies, which are also integrated in to the costume, are able to continuously work for 8 hours. As far as the sapper might have to work in any weather and at any time of the day, a powerful lantern is built in the helmet together with the remote control module.

In addition to a costume, special "spider boots" also protect a sapper from any explosion. They are attached to the shoes and reduce the ability to touch the mine. They also form a certain gap between the explosive object and the boot, thus reducing the degree of damage. The studies have shown that even if a sapper accidentally steps on the detonator, it will not be severely damaged. In the process of the neutralization of mines, that are set in sand or soft ground, the sapper uses "special spouts" in addition to "spider boots". During the demining, the sapper must also

be able to use different other tools (a saw, a shovel, a plastic knife).

The sapper begins a hidden hunt for the enemy, when he sets a mine (tripwire mine). Mine is a canned death, which is delayed in time. Ernest Hemingway commented in this regard: "Nothing can be compared with the human hunt. The one, who discovered and fell in love with this activity, does not pay attention to anything else" [4]. First of all, the sapper is a hunter. But from the beast hunter, he differs considerably. The victim on such a hunt can be a threat to a sapper. The art of being a sappers not aimed at getting food, and is not a sport. It results in the physical destruction of the enemy.

According to L. Kitayev-Smyk, a mine war, that involves sappers, has two psychological peculiarities. The first one is a fact that the death is hidden and still. It seems to have been buried alive. Death is just sleeping in the ground. The second one is connected with the fact that "mine death" can and should be awakened by the person, who is destined to death. She has to step on, ride on an underground mine, that might be nearby. And then it will explode (or it will be undermined by a time mechanism, radio waves). The death will wake up. The man, who is destined to death, will die.

L. Kitayev-Smyk writes: "The serviceman's mobility and combat impatience on the minefield bring him closer to death. You cannot set a mine under a sitting or standing serviceman. In the war for an immovable soldier the death itself becomes movable: a bullet, a rocket, a fragment of a shell or a bomb" [4, p. 28].

Despite the fact that a sapper is required to be very courageous in order to fight on his own, to stay for a long time alone with his thoughts, fears and doubts, the very presence on a minefield can result in a mine syndrome. Among the three various types of it, only one can be considered to be positive - "the feeling of owning space", "victory over space." This feeling arises after a sapper demines a dangerous area and to some extent can even be beneficial to a sapper, because this feeling invigorates, wings, makes the sapper more "mature", frees from fear, that at first limited his actions. Two other complexes - "speed of movement" on the APC along the mined roadside, and the "feeling of elevation above the ground" - have a destructive effect on the behaviour of a sapper.

After making a decision to become a sapper, the soldier must clearly understand that he is an unusual soldier. By diagnosing more than 75 servicemen-sappers according to the method of T. Ehlers "Motivation to Avoid Failures", we have continuously made sure that everyone of them has a "high" and "very high" motivation to avoid failures. It cannot be otherwise. First of all, the sapper has to minimize the risk of his actions. The courage of the sapper, his behaviour as a whole, are always ambivalent. In the process of demining the area, the sapper has to minimize the risk of his actions, detect and neutralize the most insidious shell installed by the enemy. At the same time, when setting a tripwire mine, the sapper is simply obliged to outwit the enemy. The mine must be installed in the place where the opponent does not expect it to be. Thus, the sapper would save his life and the lives of his comrades.

It should also be taken into account that the tripwire mines set by the opponent have also become quite insidi-

ous. The sappers usually looked for them under their feet, but now in Donbass the guerrillas began to install them over their heads. Such a mine may, for example, consist of a grenade RGD-5 with fishing hooks. If one of those hooks is touched, the grenade will explode on the face level, leaving no chance for a person to survive. According to the servicemen-sappers, they should be especially attentive in the city, where such "inventions" have been repeatedly revealed by the Ukrainian sappers. In urban buildings, one should also be afraid of mine traps, which can work, if you step by chance on a board or throw away a piece of something lying on the floor. Sappers are also not advised to touch plastic bottles, books, toys, cigarette packs and other items, that lie on the ground.

The sapper should not hate the enemy. He should refer to him as to "a prey that fell into his net" [5]. In this regard, the words of the military analyst David Reed are

prophetic, who said referring to the serviceman: "When deciding to become a sapper, you have to ask yourself, is my temperament not fiery? How often do I get nervous (angry, mad)? Because when you are angry, the frequency of the heart contractions increases, which often causes irrational behaviour. That is the worst thing that can happen to a sapper."

Thus, the activity of a sapper requires from a serviceman to have well-developed professionally important qualities that would be a guarantee of his professional suitability. Despite the attempts of the world community to ban the usage of mines, they still continue to be a dangerous armour. The mines' production is cheap, they are easy to beset, they significantly reduce the speed of movement of the modern mechanized armies. That is why, the armed forces must constantly teach sappers the techniques and methods of the mines' neutralization.

REFERENCES

1. Stasyuk V. V. The psychological support provision of the professional activity of peacekeepers: a handbook for listeners and adjuncts HMEE / Stasyuk V. V., Primak P. T., Hmilar O. F. – Nizhyn : Ltd. «Aspect-poligraph», 2009. – 160 p.
2. The mine war in the ATO zone / Oleksiy Kulakov. – Electronic access mode: https://www.youtube.com/watch?v=W2EuYL_Jong.
3. Hemingway E.A Farewell to Arms / Ernest Hemingway // Translation from English V. Mitrofanov. – Edition. : «Dnipro». – Series: The Top Works Of The World Literature, V. 17. – 1974. – 576 p.
4. Kitayek-Smyk L. A. Mine terror. The psychology of horror and triumph / L. A. Kitayev-Smyk // Armor: magazine. – 2002. – № 11. – P.28-33.
5. Sloan C. E. Mine war fare on land /C. E. Sloan – Brassey's Defence Publishers, 1986. – 153 p.

Психология профессиональной деятельности сапёра

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Аннотация. В статье раскрыты особенности профессиональной деятельности военнослужащих-сапёров. Исследованы профессионально важные качества сапёров, которые выполняют задания в особенных условиях. Их основу составляют аналитический ум, психическая стойкость, смелость, высокая мотивация к избеганию неудач, отличная моторика рук и ряд других. Установлено, что в профессиональной плоскости специальная подготовка сапёра и его индивидуально-психологические свойства тесно переплетены. Поведение сапёра на минном поле характеризуется в амбивалентной плоскости. С одной стороны деятельность сапёра направлена на уничтожение живой силы противника, а с другой – на сохранение жизни военнослужащих и мирных граждан.

Ключевые слова: сапёр, профессиональная деятельность, минная война, профессионально важные качества сапёра, стресс.