

## PSYCHOLOGICAL SUPPORT PROGRAMMES FOR PILOTS OF CROATIAN AIR FORCE

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### PSYCHOLOGICAL SUPPORT PROGRAMME FOR CROATIAN AIR FORCE PILOTS

#### ABSTRACT

*The profession of pilot is undoubtedly among those most demanding, as it is exercised in the circumstances of time pressure, imposed working pace and, above all, continuous psychological, sensory and psychomotor tension.*

*Pilots work in the physiologically unnatural environment (air), and are exposed to a number of specific loads and extreme stress factors. Stress factors, inherent in other professions too, in pilot profession are far more pronounced, and are accompanied by a number of pilot-characteristic stress factors.*

*If a pilot for extended time fails to overcome and resolve acute stress, he will be at the risk of developing chronic stress symptoms resulting in a series of functional disorders and - eventually - illness.*

*Prevention and quality psychological preparing contribute significantly to optimization of psychological stability and enhanced resistance to stress. Therefore, psychologists in the Croatian Air Force conducted special programs in stress-coping strategies and techniques, incorporated in regular psychomotor training programs for pilots.*

*Psychological programs included lectures on stress, stress reactions, stress coping techniques, ventilation groups, autogenous training as well as demonstration of progressive muscle relaxation, creative visualization and isometric exercises. Upon completing the program, the pilots assessed their satisfaction with the program and the exercises demonstrated, where, as judging by their ratings, they were most of all impressed to find out about the relaxation and stress reduction.*

*88% of pilots welcomed the initiative of relaxation techniques as regular practice in their bases, which has therefore been organized, in the form of quarterly courses in autogenous training in air bases; in addition, other relaxation techniques have been planned too, in view of their proven beneficial effect on psychological operative readiness for flight.*

Performed in conditions of time constraint, forced working pace and continuous psychological, sensory and psychomotor strain, pilot profession undoubtedly is among the most complex.

Pilots work in physiologically unnatural environment (air), exposed to a number of specific loads and extreme stressors, requiring continuous adjustment.

Stress factors, common in other professions too, in pilot job are far more pronounced and accompanied by a series of pilot-specific factors.

Flying the aircraft pilots move extremely rapidly from one point to another, at a very fast working pace, unallowed to slow down or stop. Highly complex coordinated and fine motor movements cause immense psychological strain, accompanied by emotional tension too, especially in critical moments during the flight.

Should acute stress remain unresolved for extended time period, it may develop into chronic stress symptoms, resulting in a series of functional disorders and - eventually - illness.

Acute stress symptoms manifest in initial confusion, "tunnel vision", restricted attention, misapprehension of external stimuli and disorientation. Severe stress leads to disrupted functioning and concentration loss and consequently in premature action, reacting to minor signals, or in slowed functioning and failure to detect important signals - all undermining processes, especially in critical flight stages. They may be followed by symptoms of avoidance of stress situations, social isolation, exaggerated distress and tension, and often by panic anxiety symptoms (increased heart rate, sweating etc). In time acute stress symptoms can accumulate, and get replaced by chronic stress symptoms, manifesting in impaired working and social functioning (most common is decreased working motivation, frequent discipline violation, conflicts in the working environment and in family, looking toward retirement, unexplainable fatigue and psychosomatic disturbances threatening flight safety.

A number of researchers attributed over 80% of air accidents to human factor, as a final result of failure to resolve stress.

Prevention and quality psychological preparation of pilots contribute significantly to psychological stability and enhanced resistance to stress. In that view, psychologists of the Croatian Air Force devised special programmes in stress-coping strategies and techniques and relaxation exercises, integrated into regular psychomotor training programs for pilots.

Psychological support program for pilots has been conducted annually during the 3-day psychomotor preparing programs with 12 groups on 4 different locations. Eight psychologists have been engaged in the programme.

The goals set were the following: training on stress and burnout syndrome, providing occasion for relaxation, systematic psychological support, instruction on stress coping strategies and techniques, relaxation techniques and individual counselling, and the programme content helped attain them:

1. each group of pilots attended 45-min training on stress that included lectures on profession-related stress, Air Force-specific stress, stress reactions, burnout syndrome and stress coping strategies.

2. each group followed three 45-min ventilation sessions, where pilots were allowed to let out personal frustrations relating to their job and stressors. Ventilation sessions too included instruction on useful stress-coping strategies and techniques to prevent chronic stress symptoms

3. pilots were also instructed on different relaxation techniques (3X45-min sessions):

a) **isometric exercises**: each group followed two successive sessions. Pilots were instructed on isometric exercises serving to warm the body, to improve general psychological and physical condition and for relaxation, on their usefulness in situations where other relaxation exercises would even increase tension and anxiety, on their practical quality (all settings, no additional space needed, short duration)

**b) progressive muscle relaxation**

progressive muscle relaxation exercises were demonstrated to show attendees where they accumulate chronic tension and to teach them correct relaxation. Namely, most people believe resting or sitting idly is relaxing, but in that way no physiological changes and no true relaxation are attained. Progressive muscle relaxation initiates physiological changes and is very effective in eliminating effects of unavoidable chronic stressors. At these sessions pilots were recommended regular exercising and their attention drawn to body tension present while performing their usual tasks.

c) **autogenic training** - the first exercise - weight exercise was conducted with groups, as it quickly leads to relaxation. Attendees were instructed on the purpose of autogenic training -relaxation, regularly practiced, has psychological effect too, and helps cope with constant unavoidable stressors, and advised on the need of regular exercising (daily or at least twice a week) for lasting regulation of emotional states and relaxation.

d) **creative visualisation** - creative visualisation exercise was devised for this occasion specifically and tailored, based on extensive military psychological experience with pilot population, to its specific features

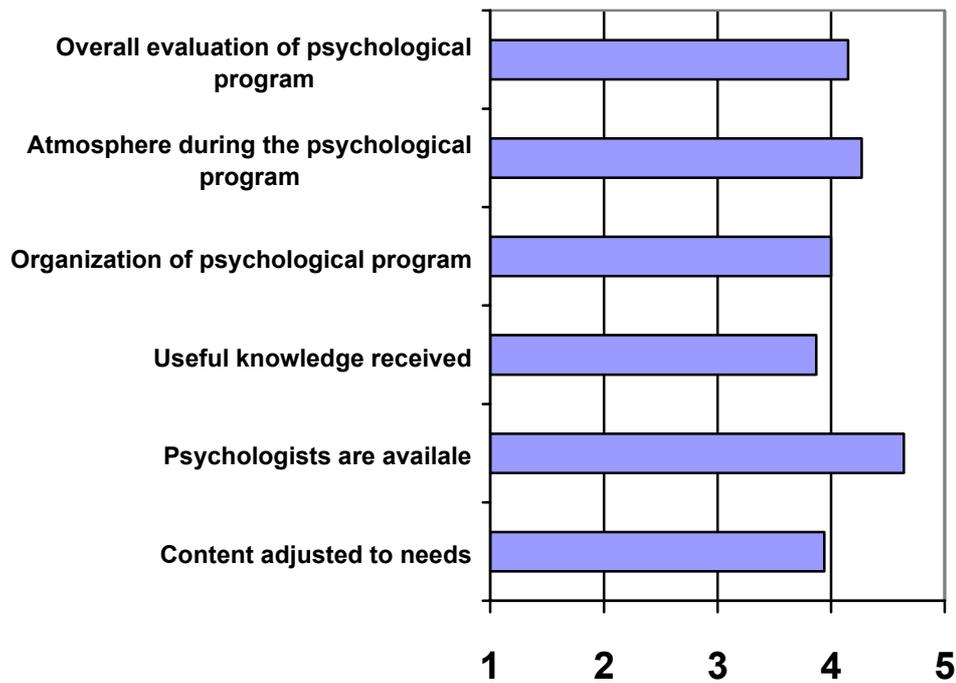
The benefit of the exercise for individuals exposed to chronic stressors or depleting situations (both in physical and psychological aspect) in quickly restoring calmness and satisfaction, was explained to the pilots; they were also told that different outcomes can be expected as few people are able to clearly visualise the exercise, and that the exercise serves a purpose even if one is not able to do so himself/herself, as visualisation has to be learned too.

Attendees received handouts with the instructions on how to do each exercise.

Following each exercise they were allowed 5 - 10 minutes to verbalise their impressions and ask questions.

**4) Individual counselling** pilots were also offered individual counselling if necessary, as it did not fit into group work.

The program was completed with satisfaction evaluation, conducted by means of a questionnaire whereby pilots rated their satisfaction with adequacy of the program, usefulness of "lessons learned", organisation of the program itself, the atmosphere during the seminar and how psychologists approached them. The factors were rated on 1-5 scales, and the evaluation was anonymous.



**Figure 1: SATISFACTION WITH THE PSYCHOLOGICAL PROGRAMME**

The results obtained are shown in Figure 1., revealing the best ratings for psychologists commitment and the atmosphere during the workshop, albeit other aspects won recognition too. Generally, pilots appreciated learning about relaxation and stress reduction. As many as 88% of them welcomed the idea of regular practice of relaxation techniques programs in their bases.

With this in mind, preceding other parts of the Programme in air bases was autogenic training course, in view of its long-lasting effect in chronic stress situations. A manual was prepared for the purpose, and an audio-tape containing autogenic exercises to enable attendees practice them daily, which only ensures relaxation and lasting regulation of emotional condition.

In air bases each group follows a 3-month course (30-min exercises twice a week), conducted by military psychologists, who emphasise the significance of autonomous practicing (guided by the audio-tape) to complete the course itself.

The exercise log is kept with each group, where psychologists file their own observations and attendees' comments for future reference.

The course completed, attendees get certificates of attendance. The course has so far been conducted with 4 groups of pilots, and goes on with new groups. Courses on other relaxation techniques are being considered, in view of their benefit for pilots' psychological operational flight readiness.