MOBILE APPLICATIONS: SELF-SUPPORT, TRAINING AND SUPPORT AFTER PSYCHOLOGICAL TRAUMA

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Expanding the capabilities of mobile phones and the technological transition to «smart phones» that can perform advanced computer functions and have a screen of sufficient diagonal for displaying full-color images and text, allow the new direction of psychotherapy – Mental Health Apps (MHapps) – to gain momentum. As part of the mobile therapy (mTherapy), MHapps relate to the Just-in-Time Adaptive Interventions (JITAIs) and allow user to access the help at any time convenient for him using the programs installed on the smartphone.

The World Health Organization determines the prevalence of post-traumatic stress disorder (hereinafter - PTSD) in the population - 3.6%, while studies in pre-

care clinics in the United States show that 11-12% of patients seeking treatment for various reasons suffer from PTSD. The concept of PTSD was transformed from «military fatigue», «combat exhaustion», «military neurosis», «posttraumatic neurosis»] to the DSM-V system introduced in 2013 by the American Psychiatric Association, which provides a refined system of its components signs. PTSD is seen as a system of symptoms that are expressed in flashback, evasion of memories of it, and can be accompanied by emotional numbness or hyperexcitation. The consequences of PTSD are the decline in the quality of life in all its spheres: social, labour and family.

The American Psychological Association recognizes a wide range of psychotherapeutic approaches to the treatment of PTSD (prolonged exposure therapy, currently centred psychotherapy, cognitive-behavioural therapy and its abbreviated options, the reproduction of a sense of security (with the concomitant use of psychoactive substances), desensitization and the processing of traumatic experiences with eye movements.

The creation of specialized MHapps allows to take into account the peculiarities of people who have survived the traumatic experience and to shift psychotherapeutic approaches to treatment into the format of a mobile application. Taking into account the specifics recovery period course in people who have undergone a traumatic event, the need has been identified to find and standardize methods and strategies for the introduction of affordable psychological care, taking into account the characteristics of the PTSD sample.

The use of MHapps' capabilities includes expanding the access of psychological assistance through interest in new «gadgets», increasing efficiency, reducing the stigma associated with visiting a psychologist at or outside the clinic, as well as the ability to circumvent specific barriers to treatment, for example, when PTSD inhibits patient to leave home or live in remote areas.

Psychotherapeutic approaches that use applications for smartphones:

- art – creativity (drawing, colouring, modelling, origami, etc.) and self-expression are used as a means to reduce stress and improve self-esteem.

- gaming – involves the implementation of certain actions associated with the solution of very specific, often non-standard tasks. Activity in the game is conditional, which allows you to distract from the real stress situation, to weaken the level of responsibility for the period of the game.

- meditative – provide the user with a choice of a pre-determined stimulus material (dynamic and static pictures, video, audio files), for organizing meditation practice (deep relaxation and breathing exercises). Developers of these applications take as a basis the daily practice of meditation for psychotherapeutic and preventive purposes or focus on the development of private breathing techniques.

- audio-visual stimulation – based on effective stimulation of the central nervous system with the help of certain visual and audio signals and avoids problems with visualization of images, feelings and emotions. These are different sets of audio rows reproduced through audio devices and light (colour) signals that are displayed using an image (screen, monitor, LED mask or panel)

- combined - allows you to collect and partially analyse data on the current state and further perform tasks and apply relaxation, breathing techniques, keep diaries of thoughts, successes, goals and states, and offer game-tasks that are supportive for fixing positive emotional attitudes and switching attention to neural and positive stimuli.

- biofeedback – use biomedical sensors using data from the camcorder's camera and record the current state of the user in the future offering a series of exercises to reduce stress.

- hypnosis – uses the possibilities of audio instructions and auto-suggestion, which are accompanied by musical and abstract dynamic images.

Among the specialized mobile applications for the development of traumatic experience with PTSD are highlighted available on the basis of Apple and Android:

Self-help applications: PTSD Coach, PTSD Coach Canada, PTSD Coach Australia, Better me Coping skills Mental illness PTSD coach, STAIR Coach, PTSD Family Coach, Mindfulness Coach, VetChange, Vital Tones PTSD, Bust PTSD, PTSD Symptoms & Suggested Treatment, Fears & Phobias PRO – PTSD & Panic Attacks, PTSD Free.

Applications for use under the guidance of a physician: CPT Coach, CPT-i Coach, PE Coach, PTSD Toolkit for Nurses.

The active introduction of MHapps, as an adjunct to the treatment of PTSD, is positioned by the US Department of Veterans Affairs, under the auspices of which applications of this type are developed and tested.

Previous studies of satisfaction with the treatment of PTSD Coach showed that 89% of veteran users are satisfied with its effectiveness in managing stress, overcoming sleep problems and information psychological therapy for establishing communication with loved ones.

The PTSD Coach application, based on preliminary diagnosis in the definition of key symptoms, suggests strategies for the arsenal of cognitive-behavioural therapy within four 30-minute sessions: psychological education on the problem, positive event planning, functional analysis of traumatic triggers, coping strategies, diaphragmatic breathing, recommendations on attracting social support.

The problem remains to create the content of a medical application that would interest the user and motivate him to undergo therapy to the end, without interrupting the session. An analysis of the research of some MHapps shows that although users report positive feedback about practicality and a positive impact on negative symptoms, only 80% of users continue to use applications after the first time and only 37% reach the completion of at least the first stage of mobile therapy. Developers of MHapps offer to attract doctors, psychiatrists, psychotherapists and psychologists to mentoring patients' use of such applications, and will increase their effectiveness. An alternative is to create gaming applications that have attracted the potential of the game to maintain interest in continuing treatment.

Conclusions:

1. The main psychotherapeutic approaches used in the framework of psychological health applications are identified: art, gaming, meditative, combined

(based on cognitive-behavioural therapy), audio-visual stimulation, biological feedback, hypnosis.

2. Two directions of creating applications for smartphones for the treatment of PTSD are considered: self-help applications and applications for use under the guidance of a doctor.

3. The composition of the mobile application protocol for the treatment of PTSD was analysed: 4 sessions of cognitive-behavioural therapy for 30 minutes, under the mentoring of a doctor. Consistent definition of symptoms, psychological information, definition of treatment goals, development of self-help techniques and analysis of actual behaviour and triggers of trauma.