

## Evaluation of the Ukrainian-Language E-Course “Socio-Psychological Support of Adaptation of Veterans”

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**Introduction.** Modern mobile applications have fast-growing potential for spreading information about mental health. While other means for psycho-rehabilitation of veterans at risk for post-traumatic stress disorder (PTSD) can reach only limited numbers, electronic interventions are available to engage all who use mobile devices (Kuehn, 2011). Since anti-terrorism operation (ATO) veterans who participated in the armed conflict in the east of Ukraine are predominantly young smartphone users, it may not be necessary to travel far to access mental health care – just download an app and learn to use it accurately. Mental health mobile apps with a strong evidence base are convenient at any time and place, save resources for both caregivers and traumatized individuals, and raise user autonomy and flexibility (Prentice & Dobson, 2014). However, previously there were no evaluations of Ukrainian-language apps with enough supporting evidence for safe usage.

**Purpose.** The Ukrainian-language e-course “Socio-Psychological Support of Adaptation of Veterans” integrated into the app “Pocket Psychologist”, seemed to satisfy the requirements of cognitive-behavioural therapy (CBT)-based information as an alignment with the more traditional way of accessing these psychotherapy methods. The research investigated whether this was an appropriate tool for self-help in PTSD prevention. The e-course itself contains practical information to challenge unhelpful beliefs about the negative outcomes of various situations and involves the user into therapeutic processes such as attention training, acceptance and tolerance training, and mindfulness (Gorbunova, et al., 2016). The purpose of the research was to evaluate the efficacy of using this course and its associated app in decreasing early post-traumatic symptoms.

**Methodology.** The study was designed for two non-equivalent groups with previous and repeated measurements. The experimental group included 30 participants, and a control group of 27 participants, all 26 to 34-year-old male ATO veterans who returned from the combat zone from 3 months to 1 year prior. Data collection was organized by online involvement through the veteran NGO’s pages on Facebook. All participants completed the online questionnaire “Impact of Event Scale” (adapted by the Ukrainian Institute of Cognitive Behavioural Therapy) before and after the experimental timeframe. The experimental group participants had to own a smartphone or tablet, and were instructed how to use the e-course for 30 days, while the control group was encouraged merely to repeat filling the questionnaire after 30 days. In order to determine the levels of psycho-traumatization on the basis of data obtained by the “Impact of Event Scale”, the intra-group norms were determined (low, below moderate, moderate, below high, high levels) and correlated to the participants’ indicators. Since the normality of data distribution was detected by 1-Sample K-S procedure, the difference in the indicators was defined by Independent Samples T-test (SPSS 16.0).

**Results.** The pre-measurements showed that the largest number of participants had moderate levels of traumatic symptoms, and the post-measurements showed more levels in the below-

moderate and low ranges. The decrease of traumatic symptoms in the experimental group appeared to be more significant than in the control group. The difference in the avoidance symptoms before and after the e-course usage was credible on  $p=0.001$ , while the control group with only the time variable had changes of  $p=0.85$ . A similar picture was observed in the intrusions scale –  $p=0.013$  vs  $p=0.86$ , and by the hyper-arousal scale –  $p=0.034$  vs  $p=0.9$  in the control group. These results suggest that participating in the e-course can be an effective tool to provide specific mental health information to veterans in order to decrease early PTSD-symptoms.

**Limitations and strengths.** The study has some limitations. The participants might have been motivated to engage in the e-course by different personal reasons not only because they wanted to deal with their post-traumatic stress. The study wasn't expanded to understand these motives as well as the inner processes of the app usage. The pre-study levels of the stress symptoms were predominantly medium which throws doubt on the studied e-course efficacy for severe symptoms. Finally, there was no measurement of difference between the traditional approach for post-traumatic stress and the tool presented for study. Still, taking into account that this study is limited by the features of the sample and one-dimension methodology, it is still evidential. Accurate assessments, data management, and statistical analysis were used; the confidentiality of the participants was kept up; and the outcomes of app usage were for sure helpful for participants. Additionally, the study is the first to report on the validity of Ukrainian-language apps for overcoming psychological trauma and may start a new wave of investigation related to mental health applications in Ukraine.

**Practical and social value.** The fact that the untimely detection of post-traumatic stress can seriously pathologize everyday lives of the injured persons and their communities indicates that a tool such as "Socio-Psychological Support of Adaptation of Veterans" might be a highly relevant source for people at risk of PTSD. By attracting social attention to such an economically viable psycho-educational tool, the field of socio-psychological rehabilitation can benefit in order to save time and money in early mental health care of veterans.

**Conclusions.** The e-course "Socio-Psychological Support of Adaptation of Veterans" can be successfully used to prevent PTSD development for those veterans who are really susceptible to such stimulus. Access to a mobile device, experience with its usage, personal traits, age, status, and living conditions, etc. can play a big part in the participant's adherence to the e-self-help. Therefore, the findings related to conditions which can engage more injured veterans into the specified mental health apps are assumed to be an open perspective. As the studied e-course encourages users to learn more about their mental state and effective coping-strategies, it is a promising early intervention tool which may assist in mitigating the effects of trauma.

**Keywords:** mental stress, disease prevention, social rehabilitation, mobile phone, computer applications.

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