BEHAVIOR PATTERN RECOGNITION AS A NOVEL METHOD OF SOCIAL THREATS IDENTIFICATION

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Social security remain actual worldwide, especially in the century, when progress can as well provide benefits for human beings, as cause irreversible damages. To identify what a person or personal in objects of critical infrastructure (airports, nuclear power stations and others), who has access to novel and special technologies has mind, would make possible prevention of unsuspected threats. The aim of this study is to investigate person's behavior pattern in different psychoemotional states. The present study included the examination of 37 persons, basically healthy. As method was used inregistration and analysis of heart rate variability (HRV), as the only one contemporary objective method for investigation of vegetative nervous system in different states. By method of imaging was initiated the required psychoemotional state, specifically - happiness (main group) and fear (real and virtual fear) - control group. These states were objectified as well with registration and full HRV analysis as by additional completing of questionnaires. The Oxford Happiness Questionnaire (OHQ) (for happiness) and the Spielberger-Hanin State and Trait Anxiety Questionnaire (for fear). For this study were chosen these emotions to evoke necessary psychoemotional states, because in perception of these emotions both of them include as well a cognitive component as an affective one. The study observed two types of reactions on the context of slides during imaging. One showed desire of interaction between the tested person and the image (which was proofed by results of HRV analysis), in comparison with initial state with a statistical significance ($p \leq 0.0001$). The other type of reaction - inducing the person in state of calm observation, in comparison with initial state ($p \leq 0.001$). This evoking technique was applied to find out how reacts the HRV to every component of these emotions by itself. The effected study shows, that emotion of happiness do not always provoke an increase of heart rate variability and fear does not always decrease it. In 85% of cases when was observed a reduction of heart rate variability+ HRV, prevails cognitive component, versus the affective one in persons' emotional perception during psychoemotional evoked states – negative or positive ($p \leq 0.001$). In conclusion due to obtained results we can make a suggestion that persons who are able to make a crime would percept violent images predominant by the cognitive component of emotional perception versus persons who are not able to make a crime – when the response is due to the affective component. Which component prevails different conditions we can say very precise due to the spectral analysis of HRV.

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