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Typical manners and psychological reactions of university students in model self-defence situation / Typowe zachowania i reakcje psychologiczne studentów uniwersyteckich w modelowej sytuacji samoobrony

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Key words: self-defence, stress coping, problem solving

Introduction. It seems to be surely enough that self-defence depends not only on tactical and technical skills of defender. Psychological traits of every person are important for safety escaping from physical conflict. Pilot study is aimed to describe typical manners and psychological reactions of university students in model self-defence situation.

Material and methods. University students (n=17), both men and women, were exposed to verbal and physical stress in controlled specific model situation. Their task was to solve prepared situation, when unknown attacker attacked them from the front and from behind. Experiment was recorded and used for post analysis of patterns for solving the model situation. Subjective data were obtained from specific questionnaire filled in immediately after the experiment. Semi objective data were obtained in vivo from expert observation. Graduated psychologist and self-defence expert gave evaluation of every model situation.

Conclusions. Stress coping should be the main factor in self-defence training. Typical manners of defenders include irrational escalation of aggression, or turning back movements. Different physiological changes were observed.

Introduction

It is an undoubted right to defend oneself and it should be a duty to defend the other when he or she is under physical attack. There are many possibilities, how to overtake sexual harassment without violence, and without behaving in a bad way.

It seems to be surely enough that self-defence depends not only on tactical and technical skills of defender. Psychological traits of every person are important for safety, to escape from physical conflict.

This application of combatives needs, above all, a very good psychological grounding. We use fighting activities, eliminating fear of contact, to raise self-confidence, to make the people trust in their own abilities and believe they are able to defend themselves.

Youth and young adults are able to learn different techniques and to use them in simple model situation. As Harding's [2004] results showed, students increased the number of different techniques they performed when reinforcement and extinction procedures were conducted during the drill condition, and that this increase in response variability generalized to the sparring condition. Variety of physical techniques is not useful without proper tactics. Of course, the best tactics is to avoid physical contact and to solve conflict before physical contact starts.

Self-defence should be linked with good communication skills. Verbal as good as non-verbal self-defence is an essential precondition of physical self-defence. In the society, it is the most important to know, how to avoid violence parallel with ways, how to use physical contact when in danger.

Self defence in Masaryk University, Brno

Among others, there is also self-defence as a specialty in facultative physical education for students of Masaryk University in Brno. This specialty can join anybody of the students except students of Faculty of sport studies. In the fall 2007 term n=28 students attended subject (specialty) self-defence. They practise 10 lessons per 1.5 hour. Lessons were divided to introduction

to self-defence, low and ethical norms, strategy and tactics, defence against basic attacks such as punching, kicking, strangulation and close quarter fighting. Students practised self-defence techniques in controlled physical contact. They were examined by specific model situation test in the ninth lesson. After that, in the tenth lesson, they discussed with the teacher, and got feedback to ensure that they can understand real conditions for solving self-defence situation.

Material and methods

Pilot study is aimed to describe typical manners and psychological reactions of university students in model self-defence situation.

University students (n=17), 9 girls and 8 boys, were exposed to verbal and physical stress in a controlled specific model situation. Their task was to solve prepared situation, when unknown attacker attacked them from the front and from behind. Attacker was a well-trained martial artist in aikibudo and taekwondo with horrifying musculature (weight 107 Kg). He had a mask to hide his face. He used also verbal attack and bad language to frighten the defender.

The Experiment was recorded and used for post analysis of patterns for solving a model situation. Subjective data were obtained from specific questionnaire filled in immediately after the experiment. Semi objective data were obtained in vivo from expert observation. Graduated psychologist and self-defence expert gave evaluation of every model situation.

Model self-defence situation (MSS)

The lesson before the last one was prepared for testing students in model self-defence situation (MSS). Conditions for testing were given and consulted with experts in self-defence and sport psychology. Testing took place in combative gym on tatami with students' teacher and sport psychologist in presence. All events were recorded on a digital video camera. Students were acquainted with testing, a way of attack, its intensity as well as defence manners. They know that attacker will be aggressive; he will physically and verbally attack them. Situation can be potentially dangerous and they must agree with testing before doing it. Students were instructed that defence could be intensive and aggressive. All hits, kicks, chokes, etc. were allowed. Except from extreme dangerous techniques as attacks on eyes and ears. Attacker was instructed to attack in an aggressive manner to make the attack persuasive. He had to control the attack and should stop it when needed.

Stress, trepidation and anxiety

Stress, trepidation and anxiety come along with mankind from its beginning. Those symptoms are exposed when inner homeostasis is threatened. They belong to basic processes, that are necessary to have successful reproductive cycle and they are typical of live organism. Stress is one of the most important factors damaging man's health and it is regarded as a trigger of many complicated life situations. It can cause stress situation or worse, serious disease. I. P. Pavlov, creator of stress theory did many experiments on animals [Křivohlavý 2001, p. 55]. American physiologist W. Cannon [1932] described so called sympatoadrenalin system when in stress. One can fight or flight when in a stress situation. H. Selye [1976] represents corticoid conceiving of stress. According to this theory hypothalamus – hypophysis system is activated. It causes to abandon any attempt to solve the situation. R. Lazarus [1966] set on theory of cognitive coping problems. We differentiate solution strategy aimed on a problem (eg. constructive solution of situation) and solution strategy aimed on emotional regulation. Inconvenient effect on personality (outer and inner) can cause hard life situations and they are called stressors [Křivohlavý 2001]. Demands, which are inadequate (real or supposed) in comparison to individual resistance surely make stress. Stress is usually connected with distress. Some inner tension put together with experience of danger can in specific situations induce intensive satisfaction as it is in risk sports [Paulík 2002]. Stress is the first of all consequences in many other negative reactions of organism, which triggers are negative emotions. Results can be seen as a change of hormones level in the blood (adrenalin and noradrenalin particularly) and behaviour expression (mood

change and movements reaction). Stress is well described in both of psychological [Křivohlavý 2001], and physiological fields [Cohen 1978]. One can fight with a stress situation only when in good health and when he is adequately strong. In defence are produced coping strategies [Lazaurus 1966]. Individual resistance is given by positive attitude coping with stress and stress situations. Many today's people have diathesis for diseases as bipolar disorder, schizophrenia etc. Psychology and medicine can stress and distress objective diagnose and cure.

Results

Evaluation of mental reaction

In our speech we focused on self-defending reactions in a stress situation, which was known from teacher instruction. We used standardised psycho diagnostic methods – Stress test [Selye 1993] and subjective evaluation of the observer. At the end of stress situation all students answered how high was amount of stress they got and continuously they were evaluated by an independent observer. This observer registered their amount of stress and also how they react during self-defending action.

Prepared self-defending action caused different reactions by every person. Different reactions are evoked with respect to arisen situation and with respect to former experiences of participants.

Our pilot study takes in males and females with their gender-specific reactions. These gender-specific reactions are affected by many personal traits, which can influence current performance and activity. Somebody at the time of assault reacts completely inadequately in spite of their natural reactions and custom practices, others are using learned patterns and some can not manage such situations at all and are frustrated, apathetic or panic.

Study samples get on level of moderate stress (11 points) in stress test after stress reaction. 16 of 17 participants managed situation in interval no stress – middle stress.

Only one participant hardly managed the situation and showed high stress up to a level of a serious harm. This participant did not report any level of anxiety and was evaluated by an independent observer as a person capable to use learned experiences in case of need to defend his/herself. The highest level of stress was in domain “behaviour” (behavioural signs of stress), middle level of stress was in domain “physiological signs” and the lowest level of stress was in emotional signs.

In relation to temperament we explored individual types of temperament and their relation to perception of anxiety in a stress situation. Phlegmatic types of persons get the lowest level of stress; the highest level of stress get phlegmatic-melancholic types. In relation to stability was stress more displayed in emotionally labile participants, with boundary middle level of stress, while in emotionally stable participants reached level of stress with moderate values.

Anxiety leads to higher level of defence mechanism. It is more significant in males. Female participants who are not anxious get higher level of stress measured by standardised questionnaire. Male participants who are not anxious get lower level of stress. We have found out gender differences. Anxiety is related significantly to self-defence skills in the same extent in both of females and males. We have found the same number of females and males who were not anxious and were able to defend themselves (4 males, 4 females). Only two anxious females were able to defend themselves for a short time. Three anxious males were defeated and three females as well.

Technical evaluation

Ten participants were passive or almost passive from the total number of 17 people. Seven participants were evaluated as active. According to psychological results four males and four females were probably able to defend themselves in real situation. Remaining nine participants would probably fail in a real self-defence situation.

While participants were stressed and anxious in self-defence model situation, we can differentiate several movement patterns: stepping back, raising hands, avoiding grip, avoiding hug. Participants rarely used punches and kicks. Females used them more frequently. Participants were able to use only few from known self-defence techniques like blocks, punches, head protecting, and partially counterattack. No one tried to use arm lock or to throw opponent.

Discussion

As a model of self-defence situation solving shows, that to train self-defence is not possible only by practising self-defence techniques itself. When the participants are exposed to unknown attacker, they react totally differently than in a regular self-defence training. The main factor is stress situation. Unusual situation, strange attacker with a hidden face and by verbal attack and its intensity cause stress. We can suppose that self-defence training should be aimed on simple defenses as blocking, proper distance and counter attack from the defensive stance. Most of model self-defence situations ended by throws of defender. We should pay more attention to close quarter defence. The most important benefit of model self-defence situations is the fact of experience close to real situation of attack. Person can feel his or her own physical, mental, and technical abilities of self-defence. For the defender is also important to work with his and attacker's aggression. He can also feel his emotions in safe environment in the presence of the teacher.

Conclusion

Stress coping should be the main factor in self-defence training. Typical manners of defenders include irrational escalation of aggression, or turning back movements. Different physiological changes were observed.

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Słowa kluczowe: samoobrona, radzenie sobie ze stresem, rozwiązywanie problemu

STRESZCZENIE

Wstęp. Stwierdzenie, że samoobrona zależy nie tylko od taktycznych, ale i technicznych umiejętności broniącego się, wydaje się wystarczające. Psychologiczne cechy każdej osoby są ważne przy ucieczce od konfliktu fizycznego. Badanie pilotażowe ma na celu opisanie typowych cech i reakcji psychologicznych studentów w modelowej sytuacji samoobrony.

Materiały i metody. Studenci uniwersytetu (w liczbie 17), zarówno mężczyźni, jak i kobiety, zostali wystawieni na werbalny i fizyczny stres w specyficznej kontrolowanej modelowej sytuacji. Ich zadaniem było rozwiązanie przygotowanej sytuacji, kiedy to nieznany napastnik atakował od przodu i z tyłu. Eksperyment był nagrany i użyty do późniejszej analizy wzoru dla rozwiązania sytuacji modelowej. Subiektywne dane były otrzymane z specjalnego kwestionariusza uzupełnionego natychmiast po wykonaniu eksperymentu. Pół-subiektywne dane otrzymano *in vivo* (na żywo) z obserwacji eksperta. Wykwalifikowany psycholog i ekspert w dziedzinie samobrony przedstawił ocenę każdej modelowej sytuacji.

Konkluzje. Radzenie sobie ze stresem powinno być głównym czynnikiem w treningu samoobrony. Typowe zachowanie się broniących obejmuje irracjonalną eskalację agresji lub odruch ucieczki. Zaobserwowano również inne zmiany.