IMPLEMENTING ‘GUIDED IMAGERY’ METHOD IN PSYCHO-CORRECTIVE WORK WITH ATHLETES WITH ANXIETY

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SUMMARY

The article is devoted to the approbation of ‘Guided Imagery’ techniques (katathym-imaginative psychotherapy) in athletes’ anxiety correction in psychological provision of athletic activity. The necessity of such a research is derived from the fact that athlete’s trait anxiety characterizes a strong propensity to perceive a wide range of situations as threatening, reacting on such situations with anxious state. State anxiety is characterized by tension, restlessness, and nervousness. High level of state anxiety triggers difficulty concentrating, sometimes with fine motor coordination disruption. Very high level of trait anxiety directly correlates with the presence of neurotic conflict, with emotional and neurotic collapses, and with psychosomatic disorders, that, in turns, can lead to lowering the athlete’s performance, or, even, can lead to the athlete’s career termination.

The article reveals the meaning of the notion of anxiety in sports activity, the need for corrective work for high level trait and state anxiety was analyzed. Chosen psychotherapeutic approach for corrective work was...
substantiated. The individual psycho-corrective work viability with young martial arts practitioners was analyzed. The positive changes were noticed in emotional reactions of research subjects that gives a green light in using the guided imagery techniques in psychological support of an athlete in his/her achievements.

**Keywords:** anxiety, guided imagery (katathym-imaginative psychotherapy), psycho-emotional state, psychological support of athletic activity.

**Introduction**

The success in athletic competitions requires multifaceted support in athlete’s preparation, including, psychological support. Psychological support of the athletic activity is a set of actions directed to special development, improvement, and optimization of the psycho-regulation systems of the athlete’s body functions and behavior with account of selection, training, and competitions.

Athlete’s psycho-emotional state impacts cognitive, willing, and motivational spheres and, as a rule, determined by inner and outer conditions which are preconditioned by specifics of the situation and the specifics of the person’s perception. Depending on the satisfaction level of the individual’s needs and qualities of the influence on the person’s activity character, psycho-emotional state can be favorable and unfavorable.

In sports psychology the notion of emotional-willing regulation is most commonly used and it’s not without a reason. The studies state that athletes, when choosing the reasons of the challenges, selected 49% objective reasons (equipment, strategies, tiredness, etc.) and 51% subjective ones (fear of competition, sports im-

plement, failure, poor result, lack of confidence, etc.). The objective challenges are overcome mostly by means of training level, meanwhile among the subjective challenges are owing to first and foremost inadequate emotional reactions and states.

The research shows the positive correlation between physical exercises and psychological well-being (Hassmén, Koivula, & Utela, 2000), for example, physical exercises improve self-esteem and lower the anxiety and negative mood (Callaghan, 2004). However, athletes are not immune to mental disorders either (Armstrong & Oomen-Early, 2009; Gulliver, Griffiths, Mackinnon, Batterham, & Stanimirovic, 2015; Schaal et al., 2011; Yang et al., 2007).

The most common mental disorders among the athletes are depression and anxiety (Schaal et al., 2011).

High excitement level or anxiety can trigger muscle tightness, tiredness, and lack of concentration (Landers, Wang, & Courtet, 1985; Nieuwenhuys & Oudejans, 2012; Pijpers, Oudejans, Holsheimer, & Bakker, 2003).

By anxiety the sports psychology means
temporary, negative emotional state which is characterized by the feelings of nervousness, worry, and anxiety in combination with energizing and excitement of the body. For the high anxiety level it is common to see negative emotional-sensory, emotional-motor, and emotional-associative disorders.

At the physiological level the anxiety reactions are expressed in a form of: palpitation, rapid breathing, increasing in blood circulation; increasing of excitement overall; lowering sensitivity threshold.

At the psychological level the anxiety is felt as: intenseness; worry; nervousness; feeling of uncertainty, feeling of threatening danger, failure; inability to make decision, etc.

The psychological aspects in athletes’ training, including young martial arts practitioners were studied by Aleskeev, 2006; Boychenko, 2007; Hryn, 2015; Yilyin, 2009; Weinberg, & Gold, 1998; Yakovlev & Babushkin, 2016. In particular, the study of anxiety was done by foreign researchers like Davidson et al., 1965, Spielberger, 1972, and national researchers: T.A. Nemchyn, 1966; 1983; N.V. Tarabrina, 1971; Y.L. Khanin, 1978, etc.

The personality with the distinctive traits of anxiety, as Spielberger, 1972; 1972; Y.L. Khanin, 1978 states, is prone to perceive the environment as such that has threat and danger in much high level comparing to the perception of personality with low anxiety level. On the opinion of L. M. Sobchyk (1990), anxiety indexes positively related to the motivation of avoidance. As a subjective symptom of person’s ill-being, anxiety is at the center of attention for doctors-psychiatrists, psychotherapists, and clinical psychologists. Some of the authors view the anxiety as a complex construct that include neuroticism alongside with anxiety and fear, meaning lowering of adaptive abilities and readiness to formation of neurotic ill disorders. (Y.A. Oleksandrivskyi, 1992).

Anxiety state is the most common state in athletes before the start and beginning of challenging task, which is performed for the first time. The symptoms of anxiety are doubts in future results, increased motor reaction time, breathing disturbances, decreasing the volume and frequency of breathing.

The anxiety development process includes the following components as the impact of stress-producing factors (sports activity situations), threat perception, and anxiety state itself. Thus, the author shows that mental and physiological disorders in the athlete’s body develop at the stage of threat perception; meanwhile anxiety determiner is a failure prediction (Spielberger, 1972).

Anxiety is the emotional reaction on danger. Unlike fear, it is unclear and indistinct like a fear of unknown. (Karen Horney, 1950). K. Horney introduced the notion of ‘neurotic anxiety’, the essence of which is the absence of the danger that triggers it or in disproportion between danger and anxiety intensity. Neurotic anxiety is usually
as intense as anxiety triggered by real danger.

Certain anxiety level is a natural and necessary trait of active personality. For each person and especially for the athlete, it is intrinsic to have an individual optimal anxiety level, where mental and physical abilities are at maximum. ‘Optimal functioning area’ of the psycho is intrinsic to each athlete. Athlete’s performance efficiency will be at its best when excitement level doesn’t exceed this area limits. This way, in Y. L. Khanin’s opinion, athletes will achieve the best results on the condition that they have the highest level of excitement, others will achieve their best at a complete relaxation, and the rest – at a medium excitement level.

According to D. B. Kretti, anxiety state changes depending on specifics of the future activity. While doing his research he found that exactly medium anxiety level in athletes helps them to achieve high performance.

From a physiological point of view, anxiety is a reactive state. It triggers physiological changes in the body that prepare the body for fight or flight response, flight or protest, aggression, and attack. During anxiety the cardiovascular system is activated (more frequent heart beat rate, elevation of the arterial blood pressure), meanwhile the gastro-intestinal tract is being suppressed (decrease in activity of the secretion and motility). The blood from the digestion tract is redirected into the muscle system. Thus, the body is preparing itself for active performance. The wide range of physiological reactions which accompany the state of anxiety explains why the body develops different psychosomatic distress and disorders, in particular, in long lasting anxiety state.

Psycho-diagnostic research on athletes showed that elevated anxiety causes over fatigue, temporary work decrement under the influence of prolonged exertion. The energy is spent not for sports performance but to suppress the anxiety which as a result depletes inner resources of the individual and, if the issue is not solved, it can lead to neurotic state development.

In addition, 20% athletes with high anxiety level develop disengagement, neurotic lack of sense of reality, losing their personality, as well as aggressive behavior directed to physical or psychological abuse and accompanied by emotional states of anger, hostility, and hatred.

Along these lines, Glass, Spears, Perskaudas, and Kaufman (2018) observed that six sessions of mental training (mindful) resulted in a lower anxiety and depression index in college athletes (Merino Fernandez, M. (2019). That’s why lately one of the sports psychology problems has been the research of the psychological athlete’s resource and its causes in cognitive, behavioral, and emotional components of the personality.

To correct psycho-emotional state and enhance the athletes’ performance and their professional results different methods and techniques of self-regulation are used in modern psychological practice: autogenic training, motor imagery prac-
We are offering a method of ‘guided imagery’ (katathym-imaginative psychotherapy) as an effective psycho-technique that can be used together with the abovementioned ways of emotional regulation.

Guided imagery is one of the psychotherapy approaches, it is based on depth psychology principles, where the special method to work with the imagination is used in order to demonstrate person’s unconscious desires, fantasies, conflicts, and defense mechanisms.

Guided imagery elements and other techniques of active imagination were already utilized, in particular, in athletes’ rehabilitation after injuries and long-term immobilization (K.Eddy, S. Mellalieu, J. Newsom and others), in their preparation to the competitions. American doctors R.C.Thelwell and I.A.Greenless elaborated special psychological training for athletes involved in triathlon. With the help of specially elaborated images for them to imagine, athletes enhanced their motivation before the competitions and better dealt with the pain during resting period. Imaginations are also used in sports psychology to improve complex motor skills (Denis, 1985; Feltz & Landers, 1983; A. Richardson, 1994; D. Smith, 1990).

Psycho-physiological studies of neurological and endocrine system under the influence of imaginations show that it helps to lower the activation of the hypothalamus pituitary adrenal axle that can lead to lowering gluco-corticoids and catecholamine levels (Lowenstein, 2002; Schaub & Dossey, 2009). In autonomous nervous system relaxation, by means of the feedback, activates parasympathetic nervous system – lowering blood pressure, heart beat, and breathing (Donavan, 1980). At the brain level, the positive images and relaxation stimulate endorphins production, which connect to opiate receptors in central nervous system and block the transmission of pain impulses. (Bloom, 1981).

Behavioral therapists use characters of imagination in treatment of phobias and anxiety disorders (Stampfl & Levis, 1967; Wolpe, 1973); imagery techniques were included into the relaxation and stress management training right from the moment they were created (Benson, 1975; Jacobson, 1976; Meichenbaum, 1985; Selye 1974).

Out of all known psychotherapy approaches up to date that utilize imagined patterns, the guided imagery is the most thoroughly developed with the help of systematically organized method which has fundamental theoretical and experimental basis. Its effectiveness was also proven by the modern scientific researches which were conducted particularly in Germany and Russia.

Psychotherapy using the method of guided imagery is used for: neurosis and neurotic disorders of the personality, neurotic fears and phob-
bias; depression disorders; psychosomatic disorders; psychotherapy of borderline conditions; sexual problem solving; helping to solve family relation issues; child and teenage psychotherapy; helping people in grief of family member loss; guiding and supporting people near end of life; working with existential problems.

Psychotherapy by the guided imagery method can be done in a form of individual psychotherapy, group psychotherapy, and couple psychotherapy (married partners or a child and one of the parents).

A method was elaborated by the famous German psychotherapist and professor Hannscarl Leuner (1919–1996). The long lasting experimental work took precedence of the appearance of the guided imagery as an independent approach in psychotherapy; the experimental work was carried out by Leuner on the grounds of the clinic for nervous diseases of University of Marburg in years of 1948-1954. Today the guided imagery is popular in Germany, Austria, Switzerland, the Netherlands, Sweden, Czech Republic, Slovakia, Russian, Ukraine, Republic of Belarus, Republic of Kazakhstan, Estonia, Lithuania and Latvia. This method is officially recognized by the health insurance system in a range of European countries. High effectiveness of the guided imagery was proven by multiple studies (H. Leuner, 1996; Y. L. Obukhov, 2005; Y. M. Omelchenko; I. V. Boyev, Y. L. Obukhov, 2009; H. Leuner, 1954, 1955; M. Stigler; D. Pokorny, 2008, 2012; H. Ullmann; E. Wilke, 2012, etc.).

Remaining exclusively on the psychoanalytical positions, this method has a lot in common with theory of archetypes and collective unconscious by Carl Jung, together with the method of active imagination elaborated by him as well.

From phenomenological stand point, it is possible to trace the parallels of this method in play therapy for children, in psychodrama by J. Moreno and G. Leutz, and in the elements of gestalt-therapy by F. Perls. In a technical sense, guided imagery has similar elements with conducting psychotherapeutic conversations by C. Rogers and some of the strategies of behavioral therapy, for example, by J. Wolpe.

Material and Methods

The research was carried out on young martial arts practitioners in the age group from 11 to 15 years old. 10 children with high level of state and trait anxiety out of 60 athletes were selected by means of C. Spielberger and J. Taylor’s questionnaires.

The selected children underwent individual psycho-corrective work by guided imagery method for four months. They had 15 sessions total.

Organization of the Research

At the first stage of the research the young martial arts practitioners’ level of state and trait anxiety was determined. The only method that allows differentially measure anxiety as both personal
trait and as a state is the method by Spielberger (Spielberger, 1972). The method consists of two questionnaires: state anxiety index (SAI) and trait anxiety index (TAI). The assessment of trait anxiety level was done according to the Spielberger’s index: a score of up to 30 tells that it’s a low anxiety level; from 30 to 45 – medium anxiety level; above 45 – high anxiety level. State anxiety index consists of 20 questions, where the research subject is supposed to answer: No, it’s not true; Maybe yes; True; Absolutely true. Trait anxiety index consists of 20 questions as well, where the research subject is supposed to answer: Never; Hardly ever; often; and almost always. State and trait anxiety measurement is done with the help of the keys.

We also used J. Taylor’s questionnaire created in 1955 and intended to measure the level of trait anxiety (adopted by T.A. Nemchyn in 1966). The questionnaire consists of 50 statements that should be answered with ‘Yes’ or ‘No’. Total sum: 40-50 is considered as a very high anxiety level; 25-40 tells about high anxiety level; 15-25 is medium anxiety level (with propensity to high level); 5-15 is medium level (with tendency for low level) and 0-5 is considered as low anxiety level.

According to the test results out of 60 athletes the majority had medium trait anxiety level and accounted for 75%, 18% had high anxiety level, and low level accounted for 7%.

Due to D. B. Kretti’s research exactly medium anxiety level helps athletes to show high performance.

As a result of diagnostic work, we selected 10 athletes with high level of both state and trait anxiety (6 boys and 4 girls).

The selected young martial arts practitioners, after receiving their parents’ agreements, underwent individual psychotherapeutic work for four months (15 sessions) using guided imagery method.

At the second research stage the assessment of dynamics of showings of anxiety level in athletes after psycho-corrective impacts was done. The assessment was carried out according to the J. Taylor’s questionnaire. The results are shown in Table 1.

60% of research subjects had a decrease in anxiety level from high level to medium with tendency to high;

20% of research subjects had a decrease in anxiety level from medium level with the tendency to high to medium level with the tendency to low;

20% of research subjects had a decrease in anxiety level from very high to high level.

Discussion

Based on the research results we were able to trace psycho-corrective impact on inner component of anxiety states of the martial arts practitioners which provided the opportunity to see the practicability of using the katathym-imaginative psychotherapy methods (guided imagery) in working with the athletes.
H. Leuner offers a range of standard motives that are used in psychotherapy according to the guided imagery method as «Meadow», «Creek», «Mountain», «House», «Fringe of the forest»; motives of medium and high stages of guided imagery: «Significant person»; «Same gender person’s name» (Ideal Self); motives in working with the aggression – «Lion», «Wild cat»; motives to work on deep mental structures – «Cavern», «Opening in the swamp»; «Volcano»; «Tome», etc.

In certain cases specific motive symbols are utilized: imagining a real situation in a school or a building; memory from the past; imagining last dream scene, and continuing this scene under the psychotherapist’s control; inner organs’ introspection (travel into your body); imagining certain objects, that have special emotional meaning.

During individual psychotherapeutic sessions we used most of the abovementioned motives in research subjects depending on personal children’s experience.

Images of the imagination facilitate the reconstruction of traces in long-term memory (Garakana, Mathew, Charney, 2006), thus, the imagination can provoke: complete depotentialising (the elimination of neural connections) in

### Table 1. The findings for dynamics of trait anxiety prior to and after the corrective impact

| Research subject | Anxiety level (in numbers) prior to corrective impact | Anxiety level rating | Anxiety level (in numbers) after corrective impact | Anxiety level rating |
|------------------|-------------------------------------------------------|-----------------------|-----------------------------------------------------|----------------------|
| 1 male           | 26                                                   | high                  | 15                                                  | Medium with tendency to high |
| 2 male           | 36                                                   | high                  | 22                                                  | Medium with tendency to high |
| 3 male           | 34                                                   | high                  | 20                                                  | Medium with tendency to high |
| 4 male           | 40                                                   | Very high             | 27                                                  | high                  |
| 5 male           | 32                                                   | high                  | 20                                                  | Medium with tendency to high |
| 6 female         | 41                                                   | Very high             | 28                                                  | high                  |
| 7 female         | 19                                                   | Medium with tendency to high | 8                                                  | Medium with tendency to low     |
| 8 female         | 25                                                   | Medium with tendency to high | 15                                                 | Medium with tendency to low     |
| 9 female         | 29                                                   | high                  | 18                                                  | Medium with tendency to high   |
| 10 female        | 37                                                   | high                  | 25                                                  | Medium with tendency to high  |
brain parts responsible for conditioned anxiety reaction (Kim et al., 2007; Ruden, 2010), or re-write connections in those parts.

The important role in using the guided imagery method is painting the imaginary motive by a child. The specialists of Katathym-Imaginative Psychotherapy Institute in Germany developed a special method to conduct psychodiagnostics on basis of client’s painting. The painting of experienced while in the imaginary character is especially beneficial while working with the children, who don’t have developed enough imagination, have difficulties with verbal self-expression, restricted by taboos and complexes, as well as overwhelmed by the power of the imaginary character. Relaxing techniques which were used prior to every motive also facilitated practicing the skill to focus one’s attention on bodily sensations, and relaxation.

Conclusion

This article was devoted to study the capabilities of guided imagery method while working on anxiety correction in young athletes. The attempt was made to identify the correlation between psychotherapy session implementation and changes in personal attributes in martial arts practitioners.

So, using corrective impact by means of guided imagery method we proved a positive dynamics in anxiety. More specifically, the athletes with high anxiety levels after retesting upon completion of the corrective program demonstrated lower and more affirmative anxiety index results, beneficial for their personal growth and particularly in sports activities.

Conflicts of interest

The authors state that there were no conflicts of interest.

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хосоматичними розладами, які, в свою чергу, можуть призвести до зниження продуктивності спортсмена, або, навіть, до припинення кар’єри спортсмена.

У статті розкрито значення поняття тривожності у спортивній діяльності, проаналізовано потребу в корекційній роботі при наявності тривожності у спортсменів. Обґрунтовано обраний психотерапевтичний підхід до корекційної роботи. Проаналізовано життєздатність індивідуальної психокорекційної роботи з молодими практиками бойових мистецьт. Позитивні зміни були помічені в емоційних реакціях суб’єктів дослідження, що дає зелене світло у використанні техніки «керованого уявлення» зображення в психологічній підтримці спортсмена в його досягненнях.

**Ключові слова:** тривога, керована уява (кататімо-образна психотерапія), психоемоційний стан, психологічна підтримка спортивної діяльності.

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**ВНЕДРЕНИЕ МЕТОДА “УПРАВЛЯЕМОГО ВООБРАЖЕНИЯ” В ПСИХОКОРЕКТИВНУЮ РАБОТУ С АТЛЕТАМИ С ТРЕВОЖНОСТЬЮ**

**Анотация**

Стаття посвячена апробації техніки “управляемого воображения” (кататим-образної психотерапії) по корекції тревожності спортсменів при психологічному забезпеченні спортивної діяльності. Необхідність такого дослідження визначається з того, що тревога спортсмена характеризує сильну склонність восприятию широкий спектр ситуацій як угрожаючих, реагуя на такі ситуації з тревожним станом. Состояние тревожности характеризуется напряженностью, беспокойством, нервозностью. Высокий уровень состояния тревожности вызывает трудности концентрации, иногда с определенными нарушениями моторной коор-
динации. Очень высокий уровень тревожности непосредственно коррелирует с наличием невротического конфликта, с эмоциональными и невротическими разрушениями, а также с психосоматическими расстройствами, которые, в свою очередь, могут привести к снижению производительности спортсмена, или даже к прекращению карьеры спортсмена.

В статье раскрыто значение понятия тревожности в спортивной деятельности, проанализирована потребность в коррекционной работе при наличии тревожности у спортсменов. Обосновано выбран психотерапевтический подход к коррекционной работе. Проанализирована жизнеспособность индивидуальной психокоррекционной работы с молодыми практиками боевых искусств. Положительные изменения были замечены в эмоциональных реакциях субъектов исследования, что дает зеленый свет в использовании техники «управляемых воображений» изображения в психологической поддержке спортсмена в его достижениях.

**Ключевые слова:** тревога, управляемое воображение (кататимо-образная психотерапия), психоэмоциональное состояние, психологическая поддержка спортивной деятельности.

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