BRAIN. Broad Research in Artificial Intelligence and Neuroscience
ISSN: 2068-0473 | e-ISSN: 2067-3957
Covered in: Web of Science (WOS); PubMed.gov; IndexCopernicus; The Linguist List; Google Academic; Ulrichs; getCITED; Genamics JournalSeek; J-Gate; SHERPA/RoMEO; Dayang Journal System; Public Knowledge Project; BIUM; NewJour; ArticleReach Direct; Link+; CSB; CiteSeerX; Socolar; KVK; WorldCat; CrossRef; Ideas RePeC; Econpapers; Socionet.

2020, Volume 11, Issue 2, Sup.1, pages: 107-126 | https://doi.org/10.18662/brain/11.2Sup1/98

Psycho-Pedagogical Prevention of Aggressive Behaviours in Athletes

Oksana LIASHCH[1],
Artem BOICHENKO[2],
Lyudmyla MATSUK[3],
Elena GOMONYUK[4],
Nelli TARASENKO[5],
Iryna DEMCHENKO[6],
Vitaliy DMITRUK[7],
Iryna DENYSOVETS[8],
Inna ZARISHNIAK[9],
Olena HRECHANOVSKA[10],
Nataliia TERENTIEVA[11]

[1] Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Vinnytsia, Ukraine, oksanalyash7@gmail.com

[2] Municipal Establishment «Kharkiv Humanitarian Pedagogical Academy» of Kharkiv Regional Council, Kharkiv, Ukraine, boychenko87@ukr.net

[3] State Higher Educational Institution «Vasyl Stefanyk Precarpathian National University», Ivano-Frankivsk, Ukraine, plo4447@ukr.net

[4] Khmelnitsky National University, Khmelnitsky, Ukraine, elena_gomonyuk29@ukr.net

[5] Municipal Establishment «Kharkiv Humanitarian Pedagogical Academy» of Kharkiv Regional Council, Kharkiv, Ukraine, nelliashka@gmail.com

[6] Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, irynadi67@gmail.com

[7] Lutsk National Technical University, Lutsk, Ukraine, dm.andriy@gmail.com

[8] Poltava National Technical Yuri Kondratyuk University, Poltava, Ukraine, denysovets.ira@gmail.com

[9] Vasyl' Stus Donetsk National University,

Abstract: Life activities of students from higher education institutions are largely influenced by certain adverse factors (social, psychological, environmental ones), which in turn negatively affect their physical and mental health and cause particular behavioural deviations such as aggression. The research aims to theoretically justify, develop and experimentally verify the programme on prevention of aggressive behaviours in athletes due to cultivating their humanistic values and capacity for self-actualization. The research sample of the formative experiment comprised 177 athletes (92 respondents in the experimental group and 85 respondents in the control group). The research assumes that, if well-developed, humanistic values of individual self-actualization (developing one's positive attitude towards the surrounding people, ability to understand them, accept oneself and others and reality, striving for new knowledge, identifying oneself in this world, setting goals) can be considered as a means of prevention of aggressive behaviours in students; the process of developing athletes' capacity for self-actualization as a means of psychological prevention of aggressive behaviours is determined by an appropriate organization of activities performed by students, their parents, psychologists, teachers based on personality-oriented and humanistic approaches. The level of self-actualization was based on E. Shostrom's test and the self-actualization scale by A. Jones and R. Crandall; the level of aggression was identified based on the Buss-Durkee Hostility Inventory. The accuracy of changes in the groups was verified using the Mann-Whitney U Test. Results. A quantitative interpretation of the results obtained from the formative experiment proves that the arithmetic mean of self-actualization parameters in respondents in the experimental group has increased significantly (by 22%), whereas they have remained almost unchanged in the control group. Concerning the arithmetic mean of parameters of aggressive behaviours in athletes, they have decreased significantly (by 18%) in the experimental group. This is because athletes' capacity for self-actualization has been developed without direct influence on their aggressive behaviours. Conclusions. In comparison with their peers in the control group, athletes in the experimental group have significantly improved their conflict management skills as a result of developing a more positive attitude towards others, as well as behavioural flexibility, communication skills and capacity for self-development.

Keywords: *individual self-actualization; humanistic values; work with athletes; work with pedagogical team and parents; work with students' families; psychological sessions with parents.*

How to cite: Liashch, O., Boichenko, A., Matsuk, L., Gomonyuk, E., Tarasenko, N., Demchenko, I., Dmitruk, V.,

Vinnytsia, Ukraine, i.zarishniak@donnu.edu.ua
[10] Vinnytsia National Technical University, Vinnytsia, Ukraine, stellamondo05@gmail.com
[11] T.H.Shevchenko National University "Chernihiv Collegium", Chernihiv, Ukraine, natalerentyeva@gmail.com

Denysovets, I., Zarishniak, I., Hrechanovska, O., & Terentieva, N. (2020). Psycho-Pedagogical Prevention of Aggressive Behaviours in Athletes. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 11*(2Sup1), 107-126. https://doi.org/10.18662/brain/11.2Sup1/98

Introduction

Psychologists and educators consider student aggression to be one of the main causes complicating the educational process. Aggression can manifest itself in interpersonal relations between teachers and students and between students themselves, which results in various destructive manifestations, from direct or indirect threats to aggressive actions. The main characteristic of this age period consists in expressing individuality and uniqueness and striving for self-actualization. When adults pay little attention to the issue of self-actualization, they provoke aggressive behaviours in students, which therefore decreases the effectiveness of interpersonal interaction between students and adults in educational space and society.

Aggressive behaviours in athletes students from higher education institutions are one of the possible ways of self-defence, active preservation of one's self aimed at conscious or unconscious, real or imaginary damage to various objects (to oneself, other people, groups, non-living things, animals, etc.). Aggression is manifested not only in behavioural but also in personal, emotional, cognitive, volitional aspects, which reproduce the inner world of the individual prone to aggression. The interaction between the characteristics of self-actualization and aggression manifests itself in communication and social behaviour of students. Self-actualization of students can be one of the main means of preventing aggressive behaviours in them.

Aggressive behaviours are biologically, psychologically and socially constructed behaviours, which perform adaptive and protective functions. The emergence of aggression is subjectively necessary, which increases one's ability to adapt to society and deal with life difficulties. If the level of aggression is insufficient, one can lose his/her individuality, become passive and tend to conform. A long-term presence in a dangerous environment enhances protective reactions, activates mechanisms of psychological protection and results in destructive behaviours, which initially act as protective reactions and then are transformed into aggression.

Being admitted to a higher education institution is experienced by students as a radical transition to adulthood. It is during this period that most students want to assert themselves and prove their worth to everyone. Therefore, under the influence of the microenvironment, aggressive behaviours appear as a way to fulfil the need for communication, self-expression and self-affirmation, as well as a reaction to an unfavourable atmosphere in the family and poor treatment by parents and a strong

determination to achieve goals. Thus, aggressive behaviours in students are protective mechanisms (Gerasymova, 2019; Homoniuk, 2015; Martynets, 2014; Melnyk, 2019; Nerubasska, 2020; Sheremet, 2019).

Individual aggressive behaviours are viewed as well-established personality traits, which include higher levels of psychopathization and an unstable emotional state manifested in excitability, irritability and depression, which leads to increased anxiety, tension, self-doubt.

The main ways to prevent aggressive behaviours in students are the following: to cultivate their humanistic values and to develop their capacity for self-actualization. In this age period, self-actualization is associated with the shift to adulthood, plans for further development, the ability not only to recreate the external world but also to identify oneself in this world, to know one's inner self, to live one's life, to form an attitude towards oneself (Tytarenko, 1994; Bulakh, 2003). This research defines self-actualization as a process characterized by the following components: recognition of one's inner self, self-acceptance, self-respect, healthy self-esteem, awareness of reality and one's goals and life aspirations, preparation of a life plan, cultivation of autonomy.

Based on the defined characteristics of the concept, various aspects of the connection between humanistic values and individual self-actualization of individuals, who display aggressive behaviours, were analyzed. For one, D. Zillmann (1988) indicates that aggression can be reduced due to well-developed cognitive processes. A. Rean (1996) proves that paradoxical aggressive reactions are intensified with insufficient or impossible self-realization. S. Prentice-Dunn, & R. Rodgers (1989) explain the possibility of reducing aggressive behaviours through developing self-consciousness of the individual. Some scholars believe that an increase in the level of personal self-consciousness pushes the individual towards aggression if he/she considers such behaviour permissible, and vice versa, it keeps him/her from taking aggressive actions if he/she considers such behaviour as inadmissible (Berkowitz, 1989; Scheier, & Carver, 1988). V. Znakov (2005) highlights the fact that this age period is rife with motivational conflicts and low differentiation of cognitive and affective aspects of self-actualization, which are sources of unstable self-attitude provoking aggressive behaviours.

Therefore, the conducted analysis shows that humanistic values and individual self-actualization can help to eliminate the risk of aggression in students. However, it is possible if humanistic values and the capacity for individual self-actualization become real factors in the socialization of athletes. It is precisely during socialization that the need for communication

is realized and the relationships between students and their peers and society are expanded and deepened. All this enables them to communicate and thus fulfil their most important need. Therefore, psychological conditions for cultivating humanistic values in athletes and developing their capacity for individual self-actualization can be considered as a means of preventing aggressive behaviours in them.

Materials & methods

The formative stage of the experiment was conducted at Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Municipal Establishment «Kharkiv Humanitarian Pedagogical Academy» of Kharkiv Regional Council, State Higher Educational Institution «Vasyl Stefanyk Precarpathian National University», Khmelnitsky National University, Pavlo Tychyna Uman State Pedagogical University, Lutsk National Technical University, Poltava National Technical Yuri Kondratyuk University, Vasyl' Stus Donetsk National University, Vinnytsia National Technical University, T.H.Shevchenko National University "Chernihiv Collegium".

At the formative stage of the formative experiment, experimental (92 respondents) and control (85 respondents) groups were identified; the level of self-actualization was based on E. Shostrom's test and the self-actualization scale by A. Jones and R. Crandall (Aleshina, 1987); the level of aggression was identified based on Buss-Durkee Hostility Inventory (Raygorodskiy, 2001).

During the course of the work, the designed classification of groups was used. However, the composition of the group was divided into subgroups or combined into one according to the topic or goals of the lesson, which made it possible to apply an individual approach depending on the characteristics of self-actualization and aggression. The characteristics of aggressive behaviours and self-actualization in student-athletes were studied before and after the formative experiment. The control group was studied concurrently with the experimental group. The formative experiment was not conducted in the control group. The changes in experimental data are accurate and confirmed by the results of statistical processing. The accuracy of changes in the groups was verified using the Mann-Whitney U Test (Sidorenko, 2004).

The psycho-pedagogical recommendations include the views of psychologists on the complex interaction, which involves forming a "pedagogical team" based on the principles of sociopsychological and psycho-pedagogical compatibility of teachers and students at a

psychophysiological level, namely compatibility of temperaments and higher brain functions, professionalism and experience, personal traits and other socio-psychological aspects, which help to discover the most optimal combination of pedagogical communication styles, namely, a favourable combination of didactic interaction, etc. (Ziazuin, 2000; Rybalka, 2003).

These conditions make it possible to combine the efforts of teachers to psychologically prevent aggressive behaviours in athletes and cultivate their self-actualization. The interaction between all participants in the pedagogical process strengthens the role of the teacher and his/her personality. It is the teacher's personality that is extremely important for athletes' self-actualization. Only joint activities (teamwork) of teachers, psychologists, social workers, parents can bring real results. Within this research, certain psychological preventive measures were conducted to implement the formative experiment.

Direct interaction with athletes is one of the ways to prevent aggressive behaviours psychologically. The programme of such an interaction is presented in Table 1. One of the important conditions for effective psychological prevention is the inclusion of athletes in vocational activities based on the production of useful items in workshops, material assets and, most importantly, which they find interesting. Sociopsychological training sessions are considered to be rather effective methods of psychological prevention of aggressive behaviours. The developed integrative training sessions combine the elements of different psychotherapeutic and psychological techniques (Liashch, 2005a; 2005b; 2010).

Table 1. The programme on psychological prevention of aggressive behaviours in student-athletes

Topic	Forms and methods of work
1. Collecting psychodiagnostic information	Tests, questionnaires, observations
2. Reducing a level of personal anxiety	Role-playing games
3. Building awareness of personal emotions, as well as other people's feelings and cultivating empathy	Training sessions, role-playing games
4. Developing a positive self-esteem	Training sessions aimed at cultivating a positive self-image; Involving athletes in different sections, clubs
5. Behavioural therapy aimed at expanding the range of behavioural	Training sessions with elements of role-playing games

reactions in a challenging situation and eliminating destructive elements in behaviour	
6. Correction work aimed at teaching athletes to control their emotions	Using art-therapy and Gestalt therapy techniques
7. Adolescent issues	Counselling
8. Cultivating individual self-actualization	Training sessions

Systematized by the authors

Working with a team of teachers can also contribute to preventing aggressive behaviours in student-athletes. The programme of psychological preventive work with the pedagogical team includes the following forms of organization and methods of work. **Lesson 1** (a lecture; defining the structure and content of teachers and coaches' activities aimed at assuring social and professional adaptation and rehabilitation of students) reveals the concept of adaptation and rehabilitation of students, the characteristics of disadaptation as a possible reason for the appearance of aggressive behaviours, as well as the role of teachers in managing the processes of adaptation and rehabilitation. **Lesson 2** (a practical class; studying personality and team as a necessary condition for successful psychological prevention of aggressive behaviours in students) justifies the characteristics and technologies of psychological diagnostics of aggressive behaviours in students, the exchange of experience between teachers on this problem, as well as the process of developing skills in studying aggressive behaviours in the context of psychology. **Lesson 3** (a lecture; individualizing the educational process) highlights the concept of an individual approach in the context of educational work with taking into account psychophysical condition of students and explains the preparation of an individual plan for preventing aggressive behaviours in students. **Lesson 4** (a psycho-pedagogical practical class; adapting students to occupation and learning) discloses the influence of a conscious or random choice of the profession on adaptation, as well as the process of building an interest in the chosen profession, professional skills. **Lesson 5** (a training session; creating a supportive environment within a group as a means of preventing aggressive behaviours in students. Involving students in socially useful activities) analyzes the involvement of students in socially useful activities, which includes certain components (a student's entry into a team, formulation of his/her thoughts, establishment of positive relationships, ethics of communication in teams) and considers socially useful activities as one of

the means of preventing aggressive behaviours. **Lesson 6** (a lecture; aggressive students and family) clarifies family influence on the generation of aggressive behaviours in students, forms and methods of teachers' work with disadvantaged families. **Lesson 7** (a lecture; correcting and preventing aggressive behaviours in students) specifies the concept of norms and deviations in behaviour, purposeful work on the prevention and correction of aggressive behaviours in students. **Lesson 8** (a practical class with the elements of role-playing games; the psychological culture of teachers) considers the process of developing the psychological culture in teachers and its structure, as well as the role of teachers' psychological culture in establishing relationships with students. **Lesson 9** (a conference; coordinating activities of teachers and families in the context preventing aggressive behaviours in students) shows that only active interaction of the above-mentioned mentions can effectively prevent aggressive behaviours in students.

Purposeful work with the families of students prone to aggressive behaviours is one of the areas of psychological prevention (see Table 2). The generation of aggressive behaviours in students is very much influenced by the conditions of family education. The experience of working with aggressive students and their families shows that parents of such students often require psychotherapeutic assistance, as well as they should be taught skills in constructive interaction with them. To this end, we suggest several exercises aimed at teaching parents to communicate positively with their children. Counselling of parents seeks to remove those factors in communication between the adult and student, which who can provoke aggressive behaviours in the latter.

Table 2. The programme of psychological preventive work with families

Topic	A form of organization and methods of work
1. Studying the social status of families	Parent-teacher meetings, visits to families, counselling, questionnaires
2. Factors of education and communication style promoting aggressive behaviours in students	Parent-teacher meetings with elements of training sessions
3. Conflict interaction between adults and students as the basis of aggressive behaviours	Individual counselling
4. Techniques of effective constructive interaction with aggressive students	Training sessions

5. Techniques of emotional self-control	Relaxation with elements of training sessions
6. Setting limits allowed	Lectures
7. Students' positive intentions in the focus of adults' attention	Training sessions

Systematized by the authors

The main objectives of **psychological work with parents** are the following: to shift the adult's attention from focusing on the student's negative behaviour to personal uncontrolled negative emotions, since the adult's ability to control oneself is the best guarantee of the student's adequate behaviour; to help teachers and parents to master the techniques of constructive, positive communication in order to exclude aggressive behaviours as students' responses.

Results

The results obtained from the EG before and after the formative experiment are presented in Fig. 1.

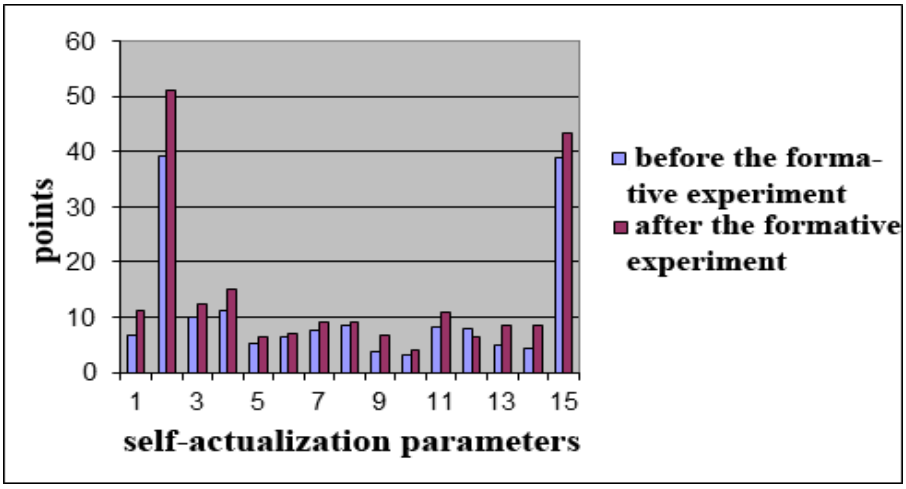


Fig. 1. The dynamics of self-actualization parameters in the EG before and after the formative experiment

Notes: 1 – Time Perception, 2 – Support, 3 – Value Orientations, 4 – Flexible Behaviour, 5 – Sensitivity, 6 – Spontaneity, 7 – Self-Respect, 8 – Self-Acceptance, 9 – Views on Human Nature, 10 – Synergy, 11 – Acceptance of Aggression, 12 – Rapport, 13 – Cognitive Needs, 14 – Creativity, 15 – Self-Actualization.

The obtained data show that the parameters on such scales as time perception, support, flexible behaviour, rapport, creativity have increased to the level of high self-actualization in the EG. The parameters on the scale of value orientations have achieved the standard level. The parameters on the scale of acceptance of aggression have decreased to the standard level. As evidenced by the histogram, these parameters have been the same throughout the year.

The analysis of self-actualization development in the CG shows that the increase in the level of self-actualization is observed only on the scale of support since student-athletes have become more autonomous.

The comparison of self-actualization characteristics in the CG and EG is presented in Fig. 2. The obtained data prove the increase in the level of self-actualization on all scales in the EG in comparison with the CG. The difference is distinctly larger in the parameters on such scales as support and rapport, which indicates high autonomy of respondents from the EG and their ability to interact. One can also observe the increase in the level of self-actualization in respondents from the CG on such scales as self-respect and sensitivity.

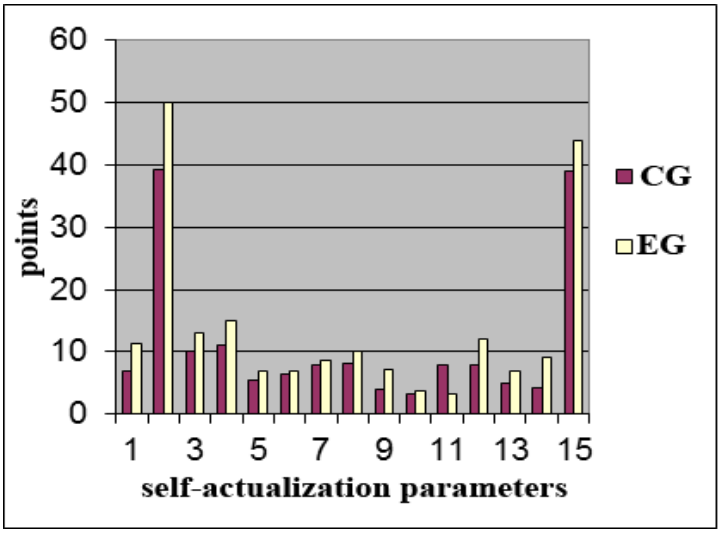


Fig. 2. The characteristics of self-actualization in the EG and CG after the formative experiment

The explanation of the parameters is presented in Fig. 1.

Self-actualization of respondents in the CG has characterized by zero dynamics throughout the year, whereas that in the EG has retained the

indicators obtained after the training and has shown some positive dynamics throughout the year.

The conducted analysis of theoretical and empirical data proves that aggressive behaviours in student-athletes should tend to decrease upon completion of the programme aimed at increasing self-actualization (see Fig. 3). Considering the dynamics of aggressive behaviours in student-athletes in the EG, it must be noted that such forms of aggression as physical aggression, insult, suspiciousness, verbal aggression and guilt have rapidly decreased. Moreover, the decreasing dynamics of aggressive behaviours has been observed on the following scales for a long time.

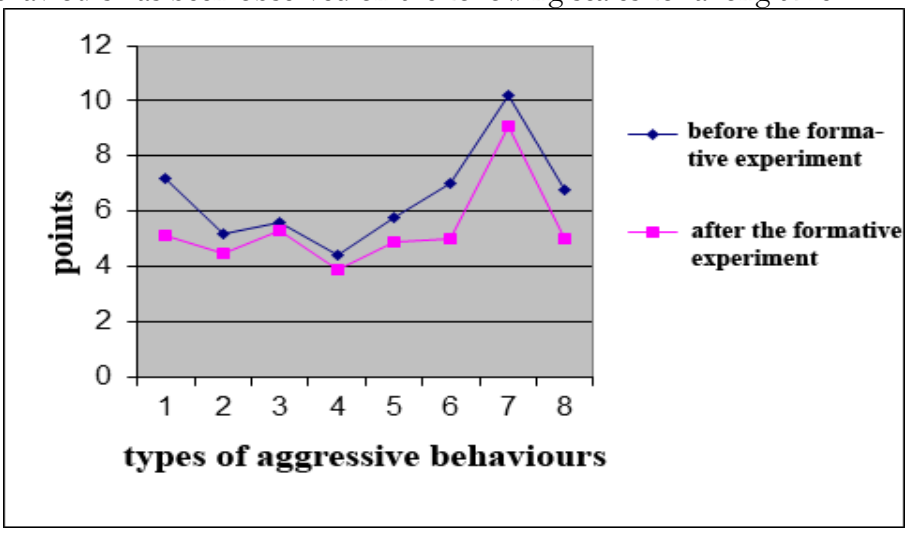


Fig. 3. The dynamics of aggressive behaviours in student-athletes from the EG before and after the formative experiment

Notes: 1 – physical aggression, 2 – indirect aggression, 3 – irritability, 4 – negativism, 5 – insult, 6 – suspiciousness, 7 – verbal aggression, 8 – guilt.

The analysis of the changes in various types of aggressive behaviours in student-athletes in the CG shows the following: most of the aggression parameters have increased, whereas such parameters as insult and negativism have remained almost unchanged.

According to the Mann-Whitney U test, the differences in the arithmetic mean of types in the EG and CG are random based on Buss-Durkee Hostility Inventory (Uemp is equal to 31.8, which is significantly more than U0.05). Thus, the parameters of aggressive behaviours are balanced before the formative experiment.

Comparative analysis of the results on types of aggressive behaviours obtained from the EG before and after the formative experiment indicates

significant differences in the levels of the studied characteristics of respondents from this sample (Uemp is equal to 14; $p \leq 0.05$). Such shifts in values of aggressive behaviours are not random since one can observe the decrease in their levels (see Table 3). In contrast to the results in the EG, shifts in the levels of aggressive behaviours in the CG are random, which is confirmed by the following value: Uemp is equal to 18 (more than U0.05).

Table 3. The parameters of self-actualization and aggressive behaviours in respondents from the EG and CG before and after the formative experiment

The arithmetic mean of self-actualization parameters in respondents based on E. Shostrom's test (in points)															
	Time perception	Support	Value orientations	Flexible behaviour	Sensitivity	Spontaneity	Self-respect	Self-acceptance	Views onhuman	Synergy	Acceptance of aggression	Rapport	Cognitiveneeds	Creativity	Self-actualization
Experimental group															
Before the formative experiment	6.8	39.2	10	11.3	5.2	6.3	7.7	8.6	3.7	3.3	8.1	7.8	4.8	4.3	39
After the formative experiment	11.1	51.2	12.5	15.1	6.5	7.1	9	9.1	6.8	4	10.6	11	6.5	8.4	48.3
Control group															
Before the formative experiment	6.3	39.4	10	10.6	4.4	6.6	7.6	7.9	3.3	3.1	6.8	8.2	4.3	4.9	37.3
After the formative experiment	10.3	40	10.1	14.5	4.5	6.3	8.1	7.8	3.7	2.8	7.3	7.9	4.8	5.2	35.2

The arithmetic mean of self-actualization parameters in respondents based on the Buss-Durkee Hostility Inventory (in points)								
	Physical aggression	Indirect aggression	Irritability	Negativism	Insult	Suspiciousness	Verbal aggression	Guilt

Experimental group								
Before the formative experiment	7.2	5.2	5.6	4.4	5.8	7	10.2	6.8
After the formative experiment	5.1	4.5	5.3	3.9	4.9	5	9.1	5
Control group								
Before the formative experiment	7.4	4.7	6.1	4.2	5.6	6.2	10.6	7.2
After the formative experiment	7.5	8	8	4.9	6	8	11.2	7

Systematized by the authors

As evidenced by the Mann-Whitney U test, significant differences are found between parameters of aggressive behaviours in the EG and CG (Uemp is equal to 11.5; $p \leq 0.05$), which proves a highly effective impact of the formative experiment on reducing aggressive behaviours in respondents. Accordingly, the EG and the CG were verified based on E. Shostrom's test (Sidorenko, 2004). The obtained values are significantly different: Uemp is equal to 54; $p \leq 0,05$.

The comparison of types and levels of aggressive behaviours in student-athletes in the EG and CG reveals the following aspects (see Fig. 4): firstly, parameters of aggressive behaviours in the EG are lower on all scales; secondly, parameters of aggressive behaviours in the CG maintain the increasing dynamics compared with the EG; thirdly, the changes in the structure of aggression remain the same in both groups, EG and CG. Particular attention should be paid to the fact that the EG demonstrates the high level of verbal aggression and negativism, which is related to the characteristics of this age period. Quantitative interpretation of the results obtained from the formative experiment proves that the arithmetic mean of self-actualization parameters in respondents from the EG have increased significantly (by 22%), whereas they have remained almost unchanged in the CG.

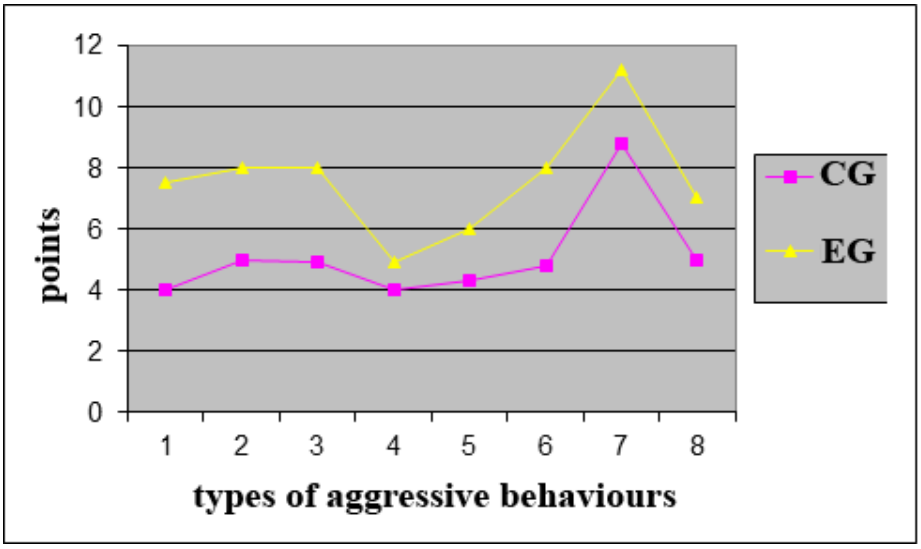


Fig. 4. *Comparison of aggressive tendencies in the EG and CG*

The explanation of types of aggression is presented in Fig. 3.

Concerning the arithmetic mean of parameters of aggressive behaviours in student-athletes, they have decreased significantly (by 18%) in the EG. This is because students' capacity for self-actualization has been developed without direct influence on their aggressive behaviours.

In comparison with their peers in the CG, students in the EG have significantly improved their conflict management skills as a result of developing a more positive attitude towards others, as well as behavioural flexibility, communication skills and capacity for self-development.

As evidenced by the feedback of respondents in the EG, they stopped feeling guilty and suspicious, started to trust other people and developed a positive attitude to them, began to better understand their feelings and control them, significantly improved their communication skills and behaviour. These characteristics prove the presence of well-developed humanistic values and effective individual self-actualization in students from higher education institutions.

Discussion

Thus, it is the prevention of pedagogical neglect is one of the important aspects of psychological prevention. It can be manifested at a rather early age and includes ignorance, underdevelopment, poor upbringing of students. R. Ovcharova (2013) considers the main features of pedagogical neglect in this age period and highlights the socio-pedagogical level, which is

also proved by this research. This level can be manifested in the following: problematic attitudes, including an attitude towards oneself; delay and low level of cognitive processes development; low cognitive culture, pathological development of personality (accentuation).

The current research also proves findings by certain scholars (Babanskiy, & Potashnik, 1983; Bozhovich, 2008; Dubrovina, 1998; Potashnik, 2000), which reveal another form of work in addition to the prevention of pedagogical neglect, namely psycho-pedagogical counselling since it involves preventive, diagnostic, corrective work aimed at solving pedagogical tasks from the psychological point of view. The results of this research coincide with those achieved by R. Ovcharova (2013), which imply that rehabilitation is one of the most important functions of counselling since it protects the interests of the student, who live in the unsatisfactory family and educational conditions. The essence of family rehabilitation consists in increasing the student's status as a family member and eliminating the negative image created by teachers, classmates or groupmates. Besides, counselling performs a corrective function, which involves designing a special programme for eliminating deviations in the mental development of the individual.

The obtained findings also prove the views of R. Baron and D. Ricardson (1999), who, in addition to widely used methods and techniques for correcting aggressive behaviours such as punishment and catharsis, consider other very effective ones. These include demonstration (it relates to the cases, when someone keeps calm in a critical situation or encourages others to not fall victim to provocations), cognitive factors (attributions performed by the individual; the presence of mitigating circumstances; an attempt to defend the aggressor and explain his/her aggressive behaviour, etc.), the induction of incompatible reactions (i.e., reactions incompatible with anger or open aggression). Special attention is paid to the following: empathy or affection towards potential objects of aggression, humour and laughter, moderate sexual arousal, which arises as a result of the influence of moderate erotic stimuli. On the contrary, explicit sexual stimuli generate high levels of excitation, which can cause frustration, as well as both positive and negative reactions. Thus, these stimuli do not reduce aggression and can even reinforce it. The lack of elementary communication skills and basic social skills can also worsen the effects of the existing problem. The research confirms A. Bereznikov's statement (1999) that it is possible to gradually reduce the cases of aggressive behaviours using developing social skills in individuals prone to aggression.

The research, however, rejects the view that aggressive behaviours can be prevented only in preschool and primary school age. It is indeed true that the sources of aggressive behaviours originate in childhood. Therefore, it is necessary as early as possible to prevent such behaviours. Some researches show that there is a connection between early childhood aggression and deviations from normal behaviour in students and young adults (incomplete formation of reluctance to work, etc.) (Brook, & Newcomb, 1995). Thus, one can conclude that prevention of aggressive behaviours can influence the future of the individual. As a result of several objective and subjective reasons, it can become difficult to prevent or correct aggressive behaviours with age. As evidenced by the obtained results, the respondents of this research possess quite powerful protective mechanisms, which can significantly complicate the process of preventive work.

L. Semenyuk (1996) indicates that aggressive behaviours in students are caused not so much by organic reasons as by sociopsychological ones. As the main method of preventing and correcting aggressive behaviours, the scholar considers the involvement of aggressive students in a system of socially recognized and socially approved activities. During behavioural therapy aimed at expanding the spectrum of behavioural reactions in problematic situations and eliminating destructive elements in behaviour, one can observe positive influence of students' involvement in planning socially approved activities, various games, competitions and contests, organizational and social activities, various financial and moral incentives, as well as teachers' participation in everyday activities of students, joint activities of adults and students during trips.

Conclusions

The results obtained from the formative experiment prove the effectiveness of the proposed programme since the arithmetic mean of self-actualization parameters in respondents in the experimental group has increased significantly (by 22%).

It must be noted that the obtained results include a steady decrease in the level of aggression and a more well-established structure of self-actualization at a level higher than expected based on the following scales: time perception, support, value orientations, flexible behaviour, sensitivity, spontaneity, self-respect, self-acceptance, views on human nature, synergy, acceptance of aggression, rapport, cognitive needs, creativity, self-actualization. During the course of the work, the designed classification of

groups was used. The complex interaction and cooperation of all participants in the pedagogical process have steadily reduced aggressive behaviours by increasing the level of self-actualization. Comprehensive mathematical and statistical analysis proved the effectiveness of the formative experiment.

Therefore, methodological recommendations for preventing aggressive behaviours in athletes can be as follows: to create a system for targeted identification and selection of "risk groups" student-athletes; to provide a favourable emotional and psychological climate for rehabilitation of difficult student-athletes; to consolidate the efforts of various specialists (teachers, coaches, parents) in order to create a coherent picture of personal uniqueness; to encourage student-athletes to understand the surrounding people and to analyze their relationships with them; to ensure continuity and unity in implementing preventive measures; to provide favourable conditions for occupational self-realization of student-athletes.

The proposed programme and the methodology of the formative experiment can be improved to achieve even better results of psychological prevention of aggressive behaviours in athletes.

It should be noted that it is easier to prevent many psychological problems and difficulties such as aggressive behaviours in student-athletes than to eliminate them. Systematic prevention of aggressive behaviours is rather effective. If implemented early, it can involve student-athletes in various forms of self-actualization and thus contribute to developing their positive attitude towards the surrounding people, ability to understand them, accept oneself and others and reality, to strive for new knowledge, to identify oneself in this world, to set goals. This will eventually lead to reducing aggressive behaviours in them. It is indeed effective to involve the very students and teaching staff and parents in the organization of preventive measures. Therefore, psychological prevention should be based on the cooperation of students, teachers, parents and practising psychologists.

Acknowledgments

Such a number of authors depends on the number of educational institutions involved in the experiment. The formative stage of the experiment was conducted at Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Municipal Establishment "Kharkiv Humanitarian Pedagogical Academy" of Kharkiv Regional Council, State Higher Educational Institution "Vasyl Stefanyk Precarpathian National University",

Khmelnytskyi National University, Pavlo Tychyna Uman State Pedagogical University, Lutsk National Technical University, Poltava National Technical Yuri Kondratyuk University, Vasyl Stus Donetsk National University, Vinnytsia National Technical University, T. H. Shevchenko National University "Chernihiv Collegium". Each author was responsible for the experiment in the control and/or experimental group. At the formative stage of the formative experiment, experimental (92 respondents) and control (85 respondents) groups were identified. Also, each author was a participant in the group working on the development of the programmes for preventing aggressive behaviours in athletes.

References

Aleshina, Yu. E. (1987). *Sociopsychological methods for studying marital relations*. Moscow: Publishing House of Moscow University.

Babanskiy, Yu. K., & Potashnik, M. M. (1983). *Optimizing the pedagogical process: questions and answers.* (2nd ed.). Kyiv: Soviet School.

Baron, R., & Richardson, D. (1999). *Aggression*. Saint Petersburg: Piter.

Bereznikov, A. A. (1999). The programme on effective interaction with aggressive students. *Journal of Practicing Psychologist*, 3, 3–5.

Berkowitz, L. (1989). Frustration aggression hypothesis: examination and reformulation. *Psychological Bulletin*, 106, 59–73.

Bozhovich, L. I. (2008). *Personality and its formation in studenthood*. Saint Petersburg: Piter.

Brook, I. S., & Newcomb, M. D. (1995). Studenthood aggression and unconventionality: impact on later academic achievement, drug use and work-force involvement. *The Journal of Genetic Psychology*, 156 (4), 393–410.

Bulakh, I. (2003). *Developing moral self-awareness of adolescent's personality (socio-psychological training)*. Kyiv: M. P. Drahomanov National Pedagogical University.

Dubrovina, I. V. (1998). *Practical psychology of education*. (2nd ed.). Moscow: Sphere.

Gerasymova, I., Maksymchuk, B., Bilozerova, M., Chernetska, Yu., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2019). Forming professional mobility in future agricultural specialists: the sociohistorical context. Revista Romaneasca pentru Educatie Multidimensionala, 11 (4), 345-361. http://lumenpublishing.com/journals/index.php/rrem/article/view/1604/pdf

Homoniuk, O. M. (2015). Pedagogical technologies for developing readiness in future teachers of natural sciences for preventive work with athletes. *Modern Information Technologies and Innovative Teaching Methods in Training of Specialists: Methodology, Theory, Experience, Problems*, 41, 259–264.

Liashch, O. P. (2005a). Psychological prevention and correction of aggressive behaviours in athletes. *The Collection of Scientific Works of the National Academy of the State Border Guard Service of Ukraine*, 22 (2), 258–268.

Liashch, O. P. (2005b). The socio-cultural aspect of preventing aggressive behaviours in students from universities. In V. Rybalka (Ed.), *Developing Psychological Culture in Students in the System of Continuing Vocational Education* (pp. 276–282). Kyiv: The Institute for Pedagogy and Psychology of Professional Education of the Academy of Pedagogical Sciences of Ukraine.

Liashch, O. P. (2010). *Principles of psychological practice*. Vinnytsia: Vinnytsia Insitute of "Ukraine" University.

Martynets, L. (2014). *The role of the teacher in preparing high school students for life and work at the present stage*. Proceedings of the Scientific and Practical Conference of the Institute of Issues in Upbringing of the National Academy of Pedagogical Sciences of Ukraine on Modern Education Process: the Essence and Innovative Potential. Ivano-Frankivsk: Nair.

Melnyk, N., Bidyuk, N., Kalenskyi, A., Maksymchuk. B., Bakhmat, N., Matviienko, O. … Maksymchuk, I. (2019). Models and organizational characteristics of preschool teachers' professional training in some EU countries and Ukraine. *Zbornik Instituta za pedagoska istrazivanja*, *51* (1), 46–93. https://ipisr.org.rs/images/pdf/zbornik-51/Natalija-Meljnik.pdf

Nerubasska, A., Maksymchuk, B. (2020). The Demarkation of Creativity, Talent and Genius in Humans: a Systemic Aspect. Postmodern Openings, 11 (2), 240-255. https://www.lumenpublishing.com/journals/index.php/po/article/view/2625

Ovcharova, R. V. (2013). *Sociopedagogical neglect of students and athletes*. Moscow; Berlin: Palmarium.

Potashnik, M. M. (Ed.). (2000). *Education quality management*. Moscow: Pedagogical Society of Russia.

Prentice-Dunn, S., & Rodgers, R. W. (1989). Deindividuation and the self-regulation of behavior. In P. B. Paulus (Ed.), *Psychology of Group Influence* (pp. 87–109). Hillsdale, NJ: Erlbaum.

Raygorodskiy, D. Ya. (2001). *Practical psychodiagnostic. Methods and tests*. Samara: BAKHRAKH-M.

Rean, A. (1996). Aggression and personal aggressiveness. (Methodological and theoretical problems of psychology). *Psychological Journal*, 5, 3–18.

Rybalka, V. V. (2003). *Methodological issues of scientific psychology (the experience of personality-centred systematization of categories and concepts)*. Kyiv: Nika-Center.

Scheier, M. F., & Carver, C. S. (1988). A model of behavioral self- regulation: translating intention into action. In L. Berkowitz (Ed.), *Advances in*

Experimental Social Psychology (Vol. 21, pp. 303–346). New York, NY: Academic Press.

Semenyuk, L. M. (1996). *Psychological characteristics of aggressive behaviours in athletes and the conditions for its correction*. Moscow: Enlightenment.

Sheremet M., Leniv Z., Loboda V., Maksymchuk B. (2019) The development level of smart information criterion for specialists' readiness for inclusion implementation in education. *Information Technologies and Learning Tools*, 72, 273-285. https://journal.iitta.gov.ua/index.php/itlt/article/view/2561

Sidorenko, E. V. (2004). *Methods of mathematical processing in psychology*. Saint Petersburg: Speech.

Tytarenko, T. M. (2003). *The world of personality: structural and genetic approach*. Kyiv: Lybid.

Ziaziun, I. A. (2000). *Pedagogy of kindness: ideals and realities*. Kyiv: Interregional Academy of Personnel Management.

Zillmann, D. (1988). Cognitive-excitation interdependencies in aggressive behavior. *Aggressive Behavior*, 14, 51–64.

Znakov, V.V. (2005). *Psychology of understanding: Problems and prospects*. - M.: Publishing House "Institute of Psychology RAS".