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**AN ATHLETE'S PSYCHOLOGICAL PERSONALITY TYPE AND
SOCIAL ADAPTATION IN SPORTS**

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Abstract

Individual sports like wrestling, martial arts and team sports athletes' psychological personality type and their social adaptation determine the effectiveness and productiveness in sports performance. The correlation between social adaptation and the psychological personality types of wrestling, martial arts, and team sports athletes was investigated in this study. Levels of social adaptation of athletes and their attitudes in situations of cooperation to personal and team performance in sports were studied. 180 athletes participated in the study: 60 wrestling, 60 martial arts, and 60 team sports athletes. A Psychosocial Adaptation Survey (Nikiforov, Dmitrieva, & Snetkova, 2003) was used to assess the level of adaptation, and the psychological personality type was determined using the Keirsej Temperament Sorter-I (Keirsej, 1984). In relation to social adaptation, significant correlations were found between team sports athletes' psychological personality types with preferences for "Judging"- "Perceiving" and "Sensing" - "Intuitive". In contrast, for individual sports, no statistically significant correlation with social adaptation was found for representatives with these psychological personality types. A significant correlation, however, exists between individual sports athletes' personality types with preferences for "Thinking"- "Feeling" and social adaptation, whereas no statistically significant correlation with social adaptation was found for these personality types among team sports athletes. Interestingly, no statistically significant correlation was found between psychological personality types with preferences for "Extraversion"- "Introversion" and social adaptation of any of the athletes who participated in the study. In individual sports, such predominant personal qualities as kindness and harmony, openness and flexibility affect social adaptation. In team sports, predomination of certain personality types indicates that the athletes possess the proper responses to the needs of their team.

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1. Introduction

Sports are divided into individual and team sports. These types of sports differ in their essence, employ different methods, approaches, and training plans, but they still have something in common: the methods and approaches to development of personal qualities, development of motor skills and abilities, the structure of training, which includes the introductory, the main and the concluding part, and medical clearance for training and competitions (Gorbunov, 2012).

The training process is driven not only at achievements but also at personal growth of the athletes, their self-realization and active lifestyle with a specialty in a particular sport (Gorbunov, 2012). Sports activity can be related to achievement of goals at different levels. However, sports with high achievements is a really specific type of activity, which, by certain parameters, can be compared to art, whereas other parameters have no comparison at all (Gorbunov, 2002).

Team and individual trainings are not synonymous, but many things do coincide. In individual training, the athlete must put more effort into work and it is often more difficult to motivate oneself compared to team training. A team has a lot of influence on each athlete. In a team, there will always be someone who will encourage you, remind you of your importance in the team and other factors that will promote concentration in situations when athletes deviate from their goal. In individual training however, the athletes either encourage themselves or the trainer does; but the trainer cannot always be there (Cristea, 2016; Dos Santos, Mesquita, Dos Santos Graca, & Rosado, 2010).

For a group to become a team, the following conditions must be met: mutual and clear goals; accepted norms appropriate for society; unity and mutual solidarity; regular cooperation; clear structure; a certain number of team members (Martin, Cowburn, & MacIntosh, 2017).

Teamwork is considered effective in task performance. However, it has its barriers or hindering factors too which include unclear or unproductive communication, team members perceiving things differently, lack of trust in each other, team members unable to make unanimous decisions when required, and team members not understanding the roles of the other members in the team (Chelladurai, 1984).

If teamwork or its effectiveness does not meet the goals of an athlete, it creates dissatisfaction with the existing situation, and searching for a new sports team begins. Athletes need to complete each other, thus ensuring the opportunity to achieve the highest goals in sports (Valle, King, & Halling, 1989).

One advantage of individual sports is that the trainer has the opportunity to devote more time to the athlete. (Arslanoğlu, 2016).

An athlete's success is based on his or her conscious self-control and self-regulation criteria (Belozerova, Bragina, Semenova, & Semikasheva, 2018) as follows:

1. *Purposefulness*, - the correspondence of chosen actions to a particular goal;
2. *Variation* - the choice of different ways of performing movements according to the changing circumstances of activity;
3. *Economy* - automatic performance of movements, actions, or particular elements to decrease the consumption of an athlete's energy resources;
4. *Resistance* - to environmental stressors – maintaining the success of athletes' activity regardless of the different external hindering factors of physical or mental nature.

The trainer promotes the athlete's personal growth. Each athlete needs an individual plan, which provides the opportunity to improve their personal weaknesses. The individual plan includes group trainings, as well as group meetings (Plante, Moreau, Jaimes, & Turbide, 2016).

Characteristics of team and individual sports overlap. In both types of sports, there are athletes with personal traits and different training tactics, organization, and use of methods; however, the foundation remains the same. Individual personality traits and the success of an athlete's activity are usually related to the individual or team nature of a sport. Individual sports athletes are usually characterized by independence, ability to work successfully regardless of social factors, as well as a lower anxiety level. Team sports athletes exhibit a slightly higher level of anxiety (Hanin, 2010).

In team sports training, the competition, circuit training, and repetition methods need to prevail. In individual sports training, the repetition, distributed practice, teaching by the whole and in parts, and combined exercise methods need to prevail (Dail & Christina, 2004).

Several career stages correspond to the training of an athlete, e.g. preliminary training, the start of specialization in a sport, intensive training in the chosen sport, and perfection in the sport (Ananov, 2001). An athlete undergoes crises when moving from one stage to another, as well as crises of adaptation to the requirements of the sport, to the trainer and to the sports group (Stambulova, 1999).

The following issues of athletes' social adaptation are important in sports activity:

- social adaptation and the psychological personality type of individual sports athletes and team sports athletes (Alekseyev, 2006);
- social adaptation and the psychological personality type of an athlete reflected in the effectiveness of individual and team sports activity (Zinchenko & Tonevitskiy, 2011).

The theoretical base of the above issues above determined the reason for and progress of the study.

2. Problem Statement

Social adaptation of athletes has a significant role in the organization of effective sports activity. The importance of the problem can be justified by the fact that Sport Policy Guidelines (Cabinet of Ministers of the Republic of Latvia, 2013) contain high requirements for athletes, i.e. the psychological ability to get involved in the process of sports activity. The organization and functioning of effective and productive sports activities are largely determined by the human factor – the professional competences and personal psychological differences of the athletes. The variation in athlete individuality is also determined by their psychological personality type, which is related to and affects social adaptation in the process of sports activities. This is why it is necessary to answer the following question: What individual differences in social adaptation are characteristic of individual sports like wrestling and martial arts, and team sports athletes? What psychological personality types prevail in such athletes and what is the correlation between social adaptation and psychological personality types?

For all the sports indicated, social adaptation of athletes is important because organization of sports activities, their effectiveness and productivity is based on cooperation. In individual sports, cooperation is understood as the division of responsibility among the athletes during sports trainings and competitions where the sum of individual results determines the success of the team. Personal results of an athlete determine the achievements of the athlete, the team and the functioning of the federation.

In team sports, there is a strong connection between team members who are oriented at achieving a common goal – this is characteristic of mutual cooperation.

3. Research Questions

What individual differences in social adaptation are characteristic of wrestling, martial arts, and team sports athletes depending on their psychological personality type?

What is the correlation between the social adaptation and the psychological personality types of wrestling, martial arts, and team sports athletes?

4. Purpose of the Study

The study aims to identify the individual differences in social adaptation characteristic of wrestling, martial arts, and team sports athletes depending on their psychological personality type and the correlation between the social adaptation and the psychological personality types of wrestling, martial arts, and team sports athletes

5. Research Methods

A descriptive correlational study was conducted. To determine the correlation between the psychological personality type and social adaptation, 180 individual and team sports athletes took part in the study: 60 wrestling, 60 martial arts, and 60 team sports athletes. Using a purposive sampling design, the participants were selected from the three sports with voluntary consent, taking into account the length of experience in the sports and the age. The study participants were young men with 7 to 8 years of active experience in sports aged between 17 to 20.

To determine the personality types of the athletes, the Keirsey Temperament Sorter-I (KTS-I) (Keirsey & Bates, 1984) was used. The survey consists of 70 questions, each question having two possible answers one of which the respondent needs to select. The survey determines 16 psychological portraits, which consist of four pairs of personality type combinations: “extraversion” (E – predominance of emotional reactions, sociable, and cooperative) and “introversion” (I – focused on inner emotional experiences, reserved), “judging” (J – specific, able to structure, plan, and regulate) and “perceiving” (P – flexible, mobile, open), “sensing” (S – practical, stable, finish what they start) and “intuitive” (N – original, enthusiastic, future orientated); “thinking” (T – analytic, precise, achievement oriented) and “feeling” (F – subjective, altruistic, kind, depends on circumstances).

To determine the specific features of social adaptation of the study participants, the Psychosocial Adaptation Survey (PAS) (Nikiforov, Dmitrieva, & Snetkova, 2003) was used. PAS consists of 59 questions with three possible answers where only one answer is required. The results are evaluated according to the number of points collected: a high level of social adaptation is 108-83 points; pronounced – 82-55; low – 54-28; disadaptation – 27-0. A “deception scale” is also included with 6 questions. The high level presupposes the ability to regulate one’s behavior according to circumstances, flexibility in different life situations; at the pronounced level behavior may be governed by emotional states, sets and attitudes; at

the low level behaviour is governed by the situation; and the disadaptation level is characterized by cognitive, emotional, and motor behaviour dissonance.

The participants were informed that their participation would be confidential. Before completing the survey, the participants were instructed as follows:

- All answers are equal, correct, and there is no wrong answer;
- Do not think about the answers for long;
- Work consecutively, do not skip questions;
- Read every statement, choose one of the answers.

The survey was directly administered by the researchers on the study participants, both in a group and individually, in the afternoon when no sports training took place.

The data obtained was subjected to statistical processing in SPSS to determine Spearman's rank correlation.

6. Findings

The level of social adaptation of the respondents was determined as "high", "pronounced", or "low", or "disadaptation").

The majority (68.33%) of wrestlers have a pronounced level of social adaptation while 25% showed a high level, with 6.67% a low level (see Figure 01). Disadaptation was not characteristic of any respondent.

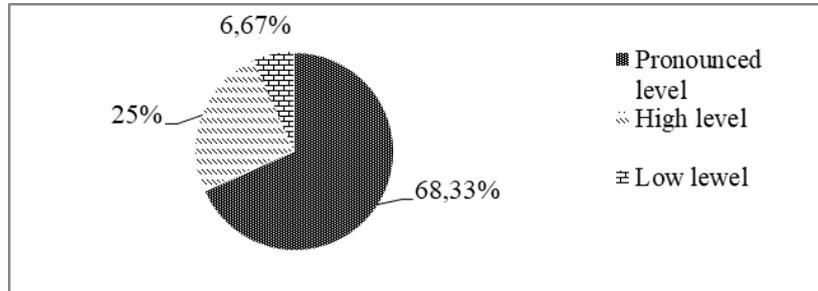


Figure 01. Distribution of wrestlers by levels of social adaptation

33% of martial artists showed a high level of social adaptation, 58.33% a pronounced level, and 3.33% a low level. Among martial artists too, disadaptation was not characteristic of any respondent (see Figure 02).

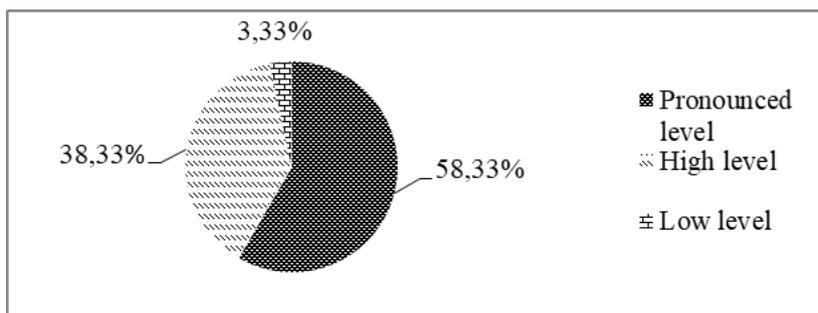


Figure 02. Distribution of martial artists by levels of social adaptation

When comparing the number of athletes with a high level of social adaptation in both individual sports, we can see that among martial artists the number is 13.33% greater than among wrestlers. Whereas the number of respondents with a low level of social adaptation among wrestlers is 3.34% lower than among martial artists, but the number of respondents with a pronounced level of social adaptation is 10% lower, respectively.

The social adaptation of 60 team sports athletes was studied and a comparative analysis of the results obtained was performed: 60% of the respondents displayed a high level of social adaptation, 35% a pronounced level, and 5% a low level (see Figure 03).

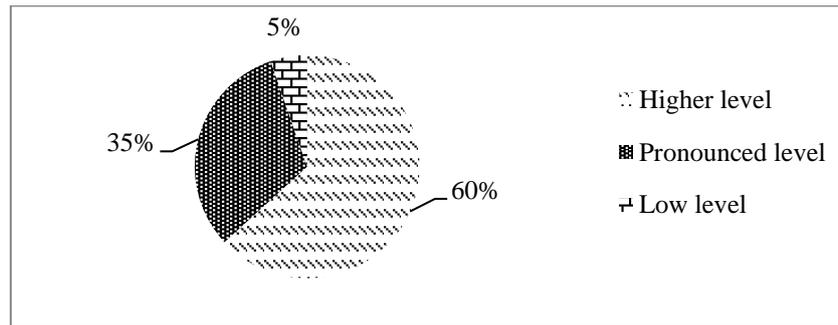


Figure 03. Distribution of team sports athletes by levels of social adaptation

The comparison of the results shows that the number of respondents in team sports with a high level of social adaptation is 35% greater than among wrestlers and 26.7% greater than among martial artists. Disadaptation was not found in any groups under study. In all the groups, the majority of the respondents have high and pronounced levels of social adaptation: 93.33% of wrestlers; 96.66% of martial artists, and 95% of team sports athletes. Only a small number of respondents show a relatively lower level of social adaptation.

The research data was averaged and presented as percentage following the requirements for the processing of results according to KTS-I (see Table 01). The processing and comparison of the results obtained allowed singling out four pairs of psychological personality types: 1) *extraversion* (E) and *introversion* (I); 2) *sensing* (S) and *intuitive* (N); 3) *thinking* (T) and *feeling* (F); 4) *judging* (J) and *perceiving* (P).

The distribution of the psychological personality types of the study participants is presented in Table 01.

Table 01. Distribution of Psychological Personality Types of Study Participants

Pairs of Psychological Personality Types		Groups of Participants		
		Wrestlers (n=60)	Martial artists (n=60)	Team sports athletes (n=60)
1	Extraversion (E)	45%	51.7%	60%
	Introversion (I);	55%	48.3%	40%
2	Sensing (S)	48.3%	51.7 %	76.7%
	Intuitive (N)	51.7%	48.3 %	23.3%
3	Thinking (T)	28.3 %	10 %	66.7%
	Feeling (F)	71.7%	90%	33.3%
4	Judging (J)	18.3%	18.3%	81.7%
	Perceiving (P)	81.7%	81.7%	18.3%

First we analyzed and compared the expression of E and I in all groups of athletes. For the majority of wrestlers, type I is most strongly expressed at 55%. Type I in comparison with type E prevails by 10%. Whereas for the majority of martial artists, type E is most strongly expressed at 51.7%, but type I is characteristic of 48.3% of respondents. Having compared the results, we can note that in individual sports both types are expressed almost equally because the number of type E respondents is only 3.4% greater than the number of type I respondents. The differences are more pronounced in team sports athletes where type E prevails for 60% of respondents whereas type I respondents are at 40%, which is 20% less than type E respondents.

Thus, the findings reveal that in individual sports the athletes do not exhibit a significant prevalence of any of the aforementioned types. One psychological personality type predominates only among team sports athletes, and it is type E. In both individual sports there is an almost equal number of athletes who exhibit focus on the processes of the inner world and subjective attitude and those attracted to communication, cooperation and the processes of the inner world. In team sports, athletes attracted to communication, cooperation and the processes of the external world prevail.

Further, the expression of psychological personality types S and N in all three groups of athletes was studied. For wrestlers, the number of respondents with psychological personality type N is 48.3%, which is 3.4% more than those with psychological personality type S. For martial artists it is vice versa: the number of respondents with psychological personality type S is 51.7%, but the number of those with psychological personality type N is 48.3%, which is 3.4% less than the number of respondents with psychological personality type S. In both individual sports, **no significant differences** were found between psychological personality types S and N. However these were found in team sports athletes where psychological personality type S (76.7%) is explicitly predominant over psychological personality type N (23.3%). The number of respondents with psychological personality type S is 53.4% greater than of those with psychological personality type N. The aforementioned facts show that in both individual sports the number of athletes exhibiting accuracy, practicality and being in touch with reality, and those exhibiting originality, inspiration is almost the same. However in team sports, the majority of athletes exhibit a strong connection with reality, they are attracted by the present, regularity and its exploration.

Further, the expression of psychological personality types T and F in all three sports was studied. For the majority of wrestlers, psychological personality type F is expressed (71.7%), but for 28.3% of respondents, psychological personality type T is expressed. The number of representatives with psychological personality type F is 43.4% greater than the number of representatives with type T. For martial artists, psychological personality type F is predominant too – 90%, but the number of respondents with psychological personality type T is only 10%. Thus the number of respondents with psychological personality type F is 80% greater than the number of respondents with psychological personality type T. Unlike both individual sports, for team sports athletes, psychological personality type T is predominant – 66.7%, but psychological personality type F is characteristic of the minority at 33.3%. The number of respondents with psychological personality type T is 33.4% greater than the number of respondents with psychological personality type F. Thus in both individual sports, the features of psychological personality type F are more pronounced – humanism, beneficence, but for team sports athletes, the features of psychological personality type T are more pronounced – objectivity, precision.

The expression of psychological personality types J and P in the aforementioned sports athletes was analyzed and compared. Both individual sports groups – wrestling and martial arts – have the same number of respondents with psychological type P (81.7 %) and J (18.3 %). Thus, we can state that both individual sports are dominated by athletes exhibiting flexibility and openness; whereas team sports are dominated by athletes with psychological personality type J (81.7%), characterized by a high sense of responsibility, determination and perseverance in the fulfilment of plans.

When testing the data of the correlation analysis for individual sports – wrestling and martial arts – no statistically significant correlation was found between psychological personality types S and N and social adaptation ($r=.226$, $p>0.05$); whereas a statistically significant correlation was found for team sports athletes ($r=.348$, $p<0.01$) between S and N psychological personality types and social adaptation.

Furthermore, a statistically significant correlation exists between social adaptation and psychological personality type F of wrestlers ($r=.374$, $p<0.01$). A statistically significant correlation also exists between psychological personality type T and social adaptation of martial artists ($r=.439$, $p<0.01$). There is a correlation between psychological personality type F and social adaptation of individual sports athletes ($r=.303$, $p<0.05$); whereas for team sports athletes, no correlation was found between social adaptation and psychological personality types T and F ($r=.193$, $p>0.05$).

For the athletes in both types of individual sports – wrestling and martial arts – the analysis of the results obtained shows that no statistically significant correlation exists between psychological personality types E and I and social adaptation ($r=.138$, $p>0.05$). For team sports athletes, there is no significant correlation between social adaptation and psychological personality types E and I either ($r=.106$, $p>0.05$).

A statistically significant correlation exists between psychological personality types J and P in team sports athletes and social adaptation ($r=.373$, $p<0.01$). However for wrestlers and martial artists, no statistically significant correlation with social adaptation was found for representatives with psychological personality types J and P.

7. Conclusion

To answer the research question, which psychological personality types correlate with social adaptation of wrestlers, martial artists and team sports athletes, the following conclusions were made:

7.1. For the sensing (S) and intuitive (N) types representatives:

For athletes in wrestling and martial arts, the *sensing* (S) and *intuitive* (N) psychological personality types do not affect social adaptation. Whereas for team sports athletes, psychological personality types S and N do affect social adaptation. It is understandable that these psychological personality types would predominate in team sports as being an effective team member would require each member to have high levels of sensing and being intuitive in order to respond effectively to the needs of their team.

7.2. For the thinking (T) and feeling (F) types representatives:

For athletes in wrestling and martial arts, the *thinking* (T) and *feeling* (F) psychological personality types have an effect on social adaptation. For team sports athletes with *thinking* (T) and *feeling* (F) psychological personality types, no effect on the social adaptation process in sports was found. It can be

concluded that *thinking* and *feeling* are important to individual sports since the athletes would need to make decisions on their own rather than depend on others (as in a team) to make decisions. Additionally, as they would need to motivate themselves, their feelings are internalised towards that aim. In team sports, because success depends on a team effort, the team members would depend on a collective consensus in which individual thinking and feeling would be submerged.

7.3. For the extraversion (E) and introversion (I) types representatives:

There are no grounds to state that personal traits, regardless of preference for *extraversion* (E) or *introversion* (I), affect social adaptation of individual and team sports athletes. It can be concluded that these two personality traits have no bearing on social adaptation for individual or team sports, so success for these sports does not depend on how extroverted or introverted an athlete is.

7.4. For the judging (J) and perceiving (P) types representatives:

For athletes in wrestling and martial arts, the *judging* (J) and *perceiving* (P) psychological personality types have no effect on social adaptation. For team sports athletes with J and P psychological personality types, an effect on the social adaptation process in sports was found.

8. Implications

As mentioned earlier, the organization and functioning of effective and productive sports activities are largely determined by the human factor – the professional competences and personal psychological differences of the athletes. The variation in athlete individuality is also determined by their psychological personality type, which is related to and affects social adaptation in the process of sports activities. Hence, this study provides an opportunity to get theoretically acquainted with the specific nature of social adaptation in individual and team sports, and to take into account the athlete's psychological personality type. The results of the study may be used for the psychological preparation of athletes for competitions, to understand the specific nature of social adaptation of athletes in a team and in mutual interaction. This increases the importance of individual approach to athlete training and the effectiveness of the training process to secure success in competitions.

Limitations

The research did not take into account the interpersonal and intergroup relationships of the athletes, appreciation by group members satisfaction with one's status in the group and with training conditions.

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