PSYCHOLOGICAL CHARACTERISTICS
OF PARALYMPIC ATHLETES’
SELF-REALISATION

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Abstract
The Paralympic sport has become an important tool for post-traumatic recovery, adaptation, integration and social inclusion of people with disabilities. Disabled people’s involvement into sports activities has important social implications not only for a certain person but also for the society as a whole. Due to relative “young age” of the Paralympic sports, there are not enough studies aimed at creation of necessary scientific support not only for full-scale trainings and competitions of Paralympic athletes, but also for provision of full integration of Paralympians into society with the means of the Paralympic Sports, which is extremely important. High importance of psychological and socio-psychological research in this context is obvious. The article presents the results of our research aimed at finding out common characteristics and factors of Paralympic athletes’ self-realization in order to promote the efficiency of training and competitions and full-scale integration into the society.

Keywords: Paralympics, Paralympic sports, people with disabilities, self-realization, psychological factors of sport achievements.

Introduction
It is well known that approximately every tenth inhabitant of the Earth is an incapacitated person. Disability consequences include not only disorders of body functions or structures but, usually, significant problems regarding wholesome functioning of a person with disabilities as a member of the society (Daďova, 2007; Maryasova, 2013). Researchers are unanimous that adaptive physical training and sports are one of the most important areas of work with disabled people that can substantially provide conditions for their development and socialization, neutralize negative emotional changes, create conditions for physical and mental adaptation to new conditions of life (Ovcharenko, 2005; Ondrušova, Pitekova, Bardiovsky, & Galikova, 2013).
In particular, the Paralympic Sports became powerful motivation to mobilize body reserve capacities for understanding by people with severe disabilities or injuries of their prospects to overcome their illnesses and achieve integration into society (Briskin, 2006; Ovcharenko, 2005). They play an important socializing and informing role by attracting public attention to the problems of disability, barrier-free environment, support for dignity, rights and well-being of people having a status of a disabled person (Maryasova, 2013). The humanistic sense of various sport competitions for persons with disabilities are invaluable because they allow such people to “come back to society” (Daďova, 2007; Shuba, 2013).

Sport has become an important tool for post-traumatic recovery, adaptation, integration and social inclusion. Due to the establishment of good, acceptable and meaningful interpersonal relationships it is easier in sporting activities to overcome social, religious and racial prejudices. Through close interaction with healthy athletes, opportunities can be opened for new friendships, increasing of life satisfaction and compensation of disability effects. Sports provide Paralympic athletes with joy and satisfaction because of exceeding their own “limits”. Sports and long-term sporting trainings are a vital source of self-realisation and existence for them (Dieffenbach & Statler, 2012; Ondrušova et al., 2013).

Moreover, disabled people’s involvement into sports activities has important social implications not only for a person but also for society as a whole (Boychuk, 2011; Shuba, 2013). This approach is a clear reflection of the humanistic tendencies of modern society. Indeed, as it is noted, people with disabilities until recently have been considered as a kind of societal “minority” subjected to discrimination or segregation from the rest of the “normal” people in the society (Coakley, 1998; Daďova, 2007; Woods, 2007).

Due to relative “young age” of the Paralympics, to our mind, there are not enough studies aimed at creation of necessary scientific support not only for full-scale training and competitions of Paralympic athletes, but also at provision of full integration of Paralympians into society with the means of the Paralympic Sports, which is extremely important. High importance of psychological and socio-psychological research in this context is obvious.

Some psychological studies with a focus on athletes with disabilities have been performed only during the last 10-20 years (Kenttä & Corban, 2014). Van de Vliet stresses that the psychological components of sports for people with disabilities have the same importance as the medical ones (Van de Vliet, 2012). It should be noted that physical dependence of athletes with disabilities on other agents of sporting activities generates significant psychological dependence. Productive interaction between athletes and other agents of sport activities (main coaches, accompanying trainers, specially trained volunteers) is possible only if some form of corporative relationships are established between them that provide high efficiency of training and competitive activities of Paralympic athletes (Boyko, 2008; Falcao, Bloom & Loughead, 2015).

According to the research, the main motives of people with disabilities to be engaged into sports are an opportunity to have self-realisation, pleasure, support, awards and physical development and stress reduction (Omar-Fauzee et al., 2010). Such motives are also mentioned as strengthening of identity, health improving, self-improvement/increasing of sports skills and competence, competitiveness, creating of a positive attitude to life, a desire to win (Huang & Brittain, 2006; Jefferies, Gallagher, & Dunne, 2012). In general, athletes with disabilities tend to have a high level of intrinsic motivation (Banack, Sabiston, & Bloom, 2011). The researchers note that athletes with disabilities find greater desire for personality


self-actualization compared with disabled people not involved in sports (Maslov & Rudovsky, 2011).

The results of modern studies have shown that the Paralympic sports enhanced the role of such a social and psychological phenomenon as cohesion, supporting disabled athletes’ need to autonomy and social support, which together improved their quality of life (Alvarez, Balaguer, Castillo, & Duda, 2009; Falcao, Bloom, & Loughead, 2015; Vincer & Loughead, 2010).

Object of the research: characteristics and factors of Paralympic athletes’ self-realization.

Aim of the research: to determine common characteristics and factors of Paralympic athletes’ self-realization in order to promote the efficiency of training, competitions, and full-scale integration into the society.

Participants of the research. The study covers 36 members of the Ukrainian Paralympic teams (aged 17-40) who were preparing to take part at the international competitions (April 2016, Poltava). 26 of them had impaired hearing, 9 people had cerebral palsy (CP). The first team in the same year won the qualifying competitions and the right to participate in the Deaflympics 2017; and the second one was the winner of the Paralympic Games 2016.

Methods of the research

The following techniques were used at the study:

1. The questionnaire developed by the authors for this study aimed to measure the level and factors of Paralympic athletes’ self-realization. It consisted of 10 questions. The first four questions were aimed at obtaining of general information about self-realization in sport of the Paralympics athletes’ characteristics. Other 6 questions aimed at determining the degree of the factors that can determine sporting achievements.

2. Self-efficacy scale of Schwarzer and Yerusalem (Schwarzer, Jerusalem, & Romek, 1996), α=0,92 (in the current study).

3. The self-estimation scales developed by the authors (Kokun, 2004), α=0,92 in the current study, used to determine the significance for the respondents of various external and internal factors as incentives for sporting activities.

Research data were processed with the help of mathematical statistics: descriptive statistics (mean, std. deviation, and frequencies), Spearman’s correlations, unpaired T-test.

Results and Discussion

Analysing the results, we have taken into account some heterogeneity of our sample as for the disability type and as for athletic achievements (some respondents occupied previously top places at the Paralympic or Deaflympic Games but the others did not). Probable differences were determined between the groups in several variables, which would be analysed and discussed after overall result description.

Table 1 shows the results obtained with the first four questions of the self-realization questionnaire replied by the Paralympic athletes.
Table 1. Characteristics of sporting self-realisation of the studied Paralympic athletes

<table>
<thead>
<tr>
<th>No</th>
<th>Parameter</th>
<th>Possible answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Not satisfied</td>
</tr>
<tr>
<td>1</td>
<td>Satisfaction with own competitive carrier</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>How soon is a new goal put forward after sporting goal achievement?</td>
<td>Never</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Clear ideas about personal future in sport</td>
<td>Absent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Has an athlete already reached the top sporting achievements?</td>
<td>Far from reaching</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17%</td>
</tr>
</tbody>
</table>

The above results indicate that the respondents are characterized with overall satisfaction of their competitive carrier – 91% of them are mostly or completely satisfied. They also formulate new sporting goals sufficiently quickly – 89% of them put forward a new goal after reaching the previous one quickly or almost immediately. Logically, these indicators are consistent with the fact that 87% of them imagine clearly their future in sports.

Naturally, given the different age and sporting achievements of the respondents, they showed significant variations of responses to the question whether they have already reached the top achievements in sports. About half of them believed that they were far from reaching such achievements or had reached only partially. Many respondents were convinced in a sufficiently high level of their sporting achievements.

Data on the factors that can determine sporting achievements of the Paralympic athletes are given in Table 2.

Table 2. Evaluation of the factors determining their sporting achievements by the Paralympic athletes

<table>
<thead>
<tr>
<th>No</th>
<th>Factor</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>bad</td>
</tr>
<tr>
<td>1</td>
<td>Relations with sport team members</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Relationship with their coach (coaches)</td>
<td>bad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Relations with the support staff</td>
<td>bad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Interest in sporting activities</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Financial situation</td>
<td>bad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td>6</td>
<td>Living conditions</td>
<td>bad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11%</td>
</tr>
</tbody>
</table>

Among the six selected factors, the most manifested one was positive interest in sporting activities of the Paralympic athletes; they had a high or very high level of such interest. Interpersonal relationships of the Paralympic athletes with other agents of sportive activities –
members of their sport teams, coaches and support staff – were also mainly good (90% of the respondents mentioned relationships as good or very good).

As for their financial situation, it did not cause concern at 80% of the respondents (they thought that it was normal or good). However, 20% people evaluated it as not very good or bad; it can be considered an unfavourable factor of successful training and competitions.

The most unfavourable sporting activities factor for the respondents was their dissatisfaction with the living conditions; more than one third (37%) believed the conditions were low or not good enough. However, given the successful performance at the international competitions in 2016 (the Ukrainian state provided funds for housing bonus for Paralympics prize-winners), their satisfaction with living conditions, would be surely increased.

The summary data on importance of various external and internal factors for the studied Paralympics athletes as incentives for sports activities are presented in Table 3.

Table 3. Evaluation of external and internal factors as incentives for sports activities by the Paralympic athletes

<table>
<thead>
<tr>
<th>No</th>
<th>Factor</th>
<th>$\bar{X}$</th>
<th>$S_x$</th>
<th>Manifestation level/marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>low</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-20</td>
</tr>
<tr>
<td>1</td>
<td>Pleasure of training, physical activities</td>
<td>79,4</td>
<td>19,8</td>
<td>3%</td>
</tr>
<tr>
<td>2</td>
<td>Moral satisfaction of winning a competition</td>
<td>94,3</td>
<td>10,0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Opportunities of personal self-realization</td>
<td>87,9</td>
<td>14,2</td>
<td>6%</td>
</tr>
<tr>
<td>4</td>
<td>Ability to represent their country, club, city at competitions</td>
<td>71,1</td>
<td>27,1</td>
<td>3%</td>
</tr>
<tr>
<td>5</td>
<td>Opportunities or prospects of trips abroad</td>
<td>80,4</td>
<td>26,4</td>
<td>6%</td>
</tr>
<tr>
<td>6</td>
<td>Material incentives – wages, uniforms, awards and others</td>
<td>68,3</td>
<td>32,3</td>
<td>17%</td>
</tr>
<tr>
<td>7</td>
<td>Socializing with friends</td>
<td>87,3</td>
<td>14,3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Acquisition of experience, meeting with new people that might help later in life</td>
<td>83,2</td>
<td>16,5</td>
<td>14%</td>
</tr>
<tr>
<td>9</td>
<td>Ability to correct or compensate health deficiencies</td>
<td>54,3</td>
<td>28,7</td>
<td>9%</td>
</tr>
<tr>
<td>10</td>
<td>Ability to be a full member of society</td>
<td>84,9</td>
<td>20,6</td>
<td>3%</td>
</tr>
</tbody>
</table>

The obtained results indicate that the most significant incentive for sporting activities of the Paralympic athletes is moral satisfaction to win a competition ($\bar{X} = 94,3$). Also, there are six important incentives ($\bar{X} = 79,4-87,9$): opportunities of personal self-realization; socializing with friends; ability to be a full member of society; acquisition of experience, meeting with new people that might help later in life; opportunities or prospects of trips abroad; pleasure
of training, physical activities. Three incentives that remain (ability to represent their country, club, city at the competitions; material incentives – wages, uniforms, awards and others; ability to correct or compensate health deficiencies) are relatively less significant ($\bar{X} = 54.3-71.1$).

It should be noted that the studied Paralympic athletes have reasonably high levels of self-efficacy ($\bar{X} = 32.85; S_x=2.9$), which is higher than the average level of university students without disabilities. Our many-years research attended by over a thousand of students shows that their average level of self-efficacy is lower and within $\bar{X} = 30.8-31.9 (S_x=3.6-4.1)$ for different samples (Kokun, 2004, 2012).

The most relevant, in our opinion, correlations between different groups of parameters that were used in the study have been analysed.

Speed of putting forward a new sporting goal correlated, naturally enough, positively with an interest in sporting activities ($r=0.41; p\leq0.05$), self-efficacy ($r=0.47; p\leq0.01$), moral satisfaction of winning a competition ($r=0.5; p\leq0.01$) and ability to be a full member of the society ($r=0.39; p\leq0.05$).

Self-efficacy correlated positively with relationships with coaches ($r=0.39; p\leq0.05$) and support staff ($r=0.36; p\leq0.05$), as well as with significance for the respondents of opportunities or prospects of trips abroad ($r=0.51; p\leq0.01$). However, it is interesting that the higher the level of self-efficacy was, the less satisfied with their financial situations the respondents ($r=-0.41; p\leq0.5$) were. These correlations correspond with the contents of the self-efficacy construct, which was the base for the technique of self-efficacy study as a person’s confidence (belief) in his/her potential ability to organize and carry out his/her activities needed to achieve a certain goal (Schwarzer, Jerusalem, & Romek, 1996).

Moreover, there was a positive correlation between the evaluation by the respondents of their sporting achievements and satisfaction with living conditions ($r=0.40; p\leq0.05$), which confirmed the aforementioned assumption that satisfaction with their living conditions after a successful performance at the Paralympic games must become better due to the state support.

It is also interesting that the Paralympic athletes’ idea about their future negatively correlated with the significance of financial incentives – wages, forms, awards and others – for them ($r=-0.38; p\leq0.05$). This, together with the comparative results analysed below the table 3, confirms once again that financial incentives for the Paralympic athletes did not have a priority.

As already stated above, the studied sample of Paralympic athletes is, to some extent, heterogeneous by type of disabilities and athletic achievements.

Comparison of the respondents with hearing difficulties and cerebral palsy showed that they had significant differences only in terms of self-efficacy ($p\leq0.001$). This parameter for the first group was equal $\bar{X} = 33.7 (S_x=2.3)$, for the second group it was $\bar{X} = 30.0 (S_x=2.8)$. This result reflected quite objectively the specificity of disabilities of the various groups of the Paralympic athletes: it is really more difficult for athletes with cerebral palsy to achieve their sporting goals than for those with impaired hearing.

There were more significant differences between the groups divided according to achieved sporting results (Table 4).
Table 4. Comparison of the Paralympic athletes who did not win previously the top places at the Paralympic Games/Deaflympic Games (group A; n=22) and did (group B; n=14)

<table>
<thead>
<tr>
<th>No</th>
<th>Self-estimation</th>
<th>group A</th>
<th>group B</th>
<th>p ≤</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Interest in sport activities</td>
<td>X</td>
<td>4,70</td>
<td>4,36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>0,47</td>
<td>0,49</td>
</tr>
<tr>
<td>2</td>
<td>Financial situation</td>
<td>X</td>
<td>2,67</td>
<td>3,14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>0,91</td>
<td>0,36</td>
</tr>
<tr>
<td>3</td>
<td>Living conditions</td>
<td>X</td>
<td>2,52</td>
<td>3,36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>1,07</td>
<td>0,84</td>
</tr>
<tr>
<td>4</td>
<td>Financial incentives for sport activities</td>
<td>X</td>
<td>60,86</td>
<td>79,43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>35,97</td>
<td>21,74</td>
</tr>
<tr>
<td>5</td>
<td>Acquisition of experience, meeting with new people that might help in later life as an incentive for sport activities</td>
<td>X</td>
<td>77,71</td>
<td>91,64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S</td>
<td>9,50</td>
<td>18,04</td>
</tr>
</tbody>
</table>

We can see that the Paralympic athletes who did not win previously the top places at the Paralympic Games/Deaflympic Games had the significantly higher level of interest in sports activities. At the same time, athletes having already experienced the taste of victory at the international sports competitions, and, therefore, received recognition and financial reward associated with higher self-esteem concerning financial situation and living conditions. So, naturally, financial incentives for sport activities and acquisition of experience, meeting with new people that might help later in life were significantly more important for them.

Conclusions
The study of 36 members of the Ukrainian football Paralympic team shows that the Paralympic athletes are characterised mainly by their sport career satisfaction, fast enough putting forward of new sport goals and a fairly clear idea of their future in sports. Most of them said that they had not yet reached their top athletic achievements. All Paralympic athletes had high or very high levels of interest in sports.

Speed of putting forward new sports goals correlated with interest in sports, self-efficacy, moral satisfaction of winning a competition, and ability to be a full member of the society through sports. Self-efficacy, in turn, is related to relationships with coaches and support staff, as well as with the importance of opportunities or prospects of international travels for the respondents.

The Paralympic athletes had quite high levels of self-efficacy that exceeded the average level of university students without disabilities.

Thus the factors that determine sporting achievements of the Paralympic athletes are the following:
• the personal self-realisation ability; interpersonal relationships with other agents of sporting activities (socializing with friends, members of their sports teams, coaches and support staff);
• the ability to be a full member of society; to gain experience, meet people that might help later in life; opportunities or prospects of trips abroad; pleasure of training, physical exercises;
• improvement of financial situation and living conditions that has all the prospects to be successfully resolved after a successful performance at the Paralympic and Deaflympic Games; this is confirmed by higher self-esteem because of bettering of their financial
situation and living conditions for the athletes who have won these competitions;
• the most significant factor among external and internal ones of sports activities for the
  Paralympic athletes is also moral satisfaction of winning a competition;
• the opportunity to represent their country, sport-clubs, cities at competitions; financial
  incentives – wages, uniforms, awards, etc. and ability to correct or compensate health
  deficiencies are relatively less significant.

The Paralympic athletes who did not previously occupy the top places at the Paralympic
or Deaflympic Games had the significantly higher level of interest in sports. At the same
time, athletes having won these competitions had higher self-esteem because of bettering of
their financial situation and living conditions; financial incentives and sports as a means of
experience gaining, meeting with people that might help later in their life had considerably
higher value for them at sports activities.

References
Alvarez, M. S., Balaguer, I., Castillo, I., & Duda, J. L. (2009). Coach autonomy support and quality of
Satisfaction, and Intrinsic Motivation of Paralympic Athletes. Physical Education, Recreation and
Dance, 82 (4), 722-730.
[Psychological Characteristics of Sports Activity of Swimmers in Paralympic Sports]. Pedagogika,
psihologija ta medico-biologichni problemy fizichnovo vihovanija I sportu. [Pedagogy, Psychology
of Physical Activity]. Aktualnyje problemy izicheskoi kultury i sporta [Current Issues of Physical
Training and Sports]. Cheboksary.
Sports. Adapted Physical Activity Quarterly, 32, 206-222.
23, 352-375.
Kenttä, G., & Corban, R. (2014). Psychology within the Paralympic Context – Same, Same or Any
zapespechenija dijalnosti [Optimization of Adaptive Human Capabilities: Psychophysiological
Aspect of Providing the Activity]. Kyiv.
Kokun, O. M. (2012). Psiholohijja proesijonoveni stanovalenijia suchasnovo faxivicia [Psychology of
Professional Development of a Modern Specialist]. Kyiv.
Maryasova, D. A. (2013). Psichicheskaja adaptacijya sportsmenov-invalidov s porazhenijem aporno-
dvigatel’noj aparata [Psychical Adaptation of Athletes with Lesions of the Musculoskeletal
System]. Moscow.
‘psichicheskonom portretu’ [Women in the Paralympic Movement, Contribution to the
“Psychological Portrait”]. In: Materijal’ I Vserosjskovo kongresa “Medicina dla sporta”
[Material of the First All-Russian Congress “Medicine for Sports”]. Moscow.
PSYCHOLOGICAL CHARACTERISTICS OF PARALYMPIC ATHLETES’ SELF-REALISATION

Summary

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The article presents the results of an empirical research aimed at identifying common characteristics and factors of Paralympic athletes’ self-realization in order to promote the efficiency of training and competitions and full-scale integration into the society.

The study covers 36 members of the Ukrainian football Paralympics teams (aged 17-40) who were preparing to take part at the international competitions (April 2016, Poltava). 26 of them had impaired hearing, 9 people had cerebral palsy (CP). The first team in the same year won the qualifying competitions and the right to participate in the Deaflympic Games 2017; and the second one was the winner of the Paralympic Games 2016.

The study has showed that the Paralympic athletes are characterised mainly by their sports career satisfaction, putting forward of new sport goals fast enough and a fairly clear idea of their future in sports. Most of them said that they had not yet reached their top athletic achievements. All Paralympics athletes had high or very high levels of interest in sports.

Speed of putting forward new sport goals for them correlated with an interest in sports, self-efficacy, moral satisfaction of winning competitions and ability to be a full member of a society with the help of sports. Self-efficacy, in turn, was related to relationships with coaches and support staff, as well as with importance of opportunities or prospects of international travels for the respondents.
The Paralympic athletes had quite high levels of self-efficacy that exceeded the average level of university students without disabilities.

The factors that determine sporting achievements of the Paralympic athletes are the following: the personal self-realisation ability; interpersonal relationships with other agents of sporting activities (socializing with friends, members of their sports teams, coaches and support staff); the ability to be a full member of society; to gain experience, meet people that might help later in life; opportunities or prospects of trips abroad; pleasure of training, physical exercises; improvement of financial situation and living conditions that has all the prospects to be successfully resolved after a successful performance at the Paralympic and Deaflympic Games; this is confirmed by higher self-esteem because of bettering of their financial situation and living conditions for the athletes who have won these competitions; the most significant factor among external and internal ones of sports activities for the Paralympic athletes is also moral satisfaction of winning a competition; the opportunity to represent their country, sport-clubs, cities at competitions; financial incentives – wages, uniforms, awards, etc. and ability to correct or compensate health deficiencies are relatively less significant.

The Paralympic athletes who did not previously occupy the top places at the Paralympic or Deaflympic Games had significantly higher level of interest in sports. At the same time, athletes having won these competitions had higher self-esteem because of bettering of their financial situation and living conditions; financial incentives and sports as a means of experience gaining, meeting with people that might help later in their life had considerably higher value for them at sports activities.