



University of Physical Education in Krakow, Poland

Studies in Sport Humanities

21

INDEX  COPERNICUS
INTERNATIONAL

Kraków 2017

University of Physical Education in Krakow, Poland

Studies in Sport Humanities

21

INDEX  COPERNICUS
INTERNATIONAL

Kraków 2017

Editorial board

Editor-in-Chief

Associate Professor Jan Blecharz, Ph.D.

Vice Editor-In-Chief

Associate Professor Halina Zdebska-Biziewska, Ph.D.

Department editors

Philosophy of physical culture – Associate Professor Maria Zowiśło, Ph.D.

Pedagogy of physical culture, Olympism – Associate Professor Halina Zdebska-Biziewska, Ph.D.

Physical education theory – Associate Professor Grażyna Kosiba, Ph.D.

Psychology of physical culture – Associate Professor Małgorzata Siekańska, Ph.D.

Sociology of physical culture – Piotr Nowak, Ph.D.

History of physical culture – Associate Professor Ewa Kałamacka, Ph.D.

Secretary to the Editorial Board

Marlena Banasik, Ph.D

Advisory Board

Prof. Sandro Anastasi (Università di Messina)

Prof. Zbigniew Dziubiński (Jozef Pilsudski University of Physical Education, Warsaw)

Prof. Richard Gordin (Utah State University)

Prof. Ivo Jirásek (Palacky University Olomouc)

Prof. Scott Kretchmar (Penn State University)

Prof. Jerzy Kosiewicz (Jozef Pilsudski University of Physical Education, Warsaw)

Prof. Józef Lipiec (Jagiellonian University, Kraków)

Prof. Wojciech Lipoński (University of Szczecin)

Prof. Norbert Müller (University of Kaiserslautern, TU)

Prof. Jim Parry (Charles University in Prague)

Prof. Artur Poczwardowski (University of Denver)

Associate Professor Janusz Zdebski, Ph.D. (Holy Cross University in Kielce)

Proofreading

AmE Native Katarzyna Smith-Nowak

Editor's Office

Studies in Sport Humanities

AWF im. B. Czecha

al. Jana Pawła II 78, 31-571 Kraków, Poland

Typesetting

Studio Graficzne Piotr Kurasiak

Copyright © University of Physical Education in Krakow, Poland

e-ISSN 2450-9515



Studies in Sport Humanities – digitalizacja – zadanie finansowane w ramach umowy 544/P-DUN/2017 ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę

Contents

| | |
|---|----|
| From the Editor | 5 |
| Jeff Coleman, Gershon Tenenbaum: A Functional Model of Team Leadership for Sport | 7 |
| Joanna Kotek, Józef Maciuszek: Psychological ways of preparing to start by athletes; pre-performance language routinesr | 19 |
| Viktoria Bohuslavska: Priority of theoretical preparation for cyclic sports (on the material of examination of sportsmans and trainers) | 29 |
| Eligiusz Madejski, Grażyna Kosiba, Roger Madejski: Role of family in child preparation to participate in physical activity in free time | 37 |
| Michał Artur Słoniewski: Political determinants of the participation of the romanian representation in the XXIII Olympic Games in Los Angeles in 1984. | 49 |
| Jan Blecharz: Report from participation in the 14 th World Congress of the International Society of Sport Psychology on 10–14 June 2017 in Seville | 57 |

From the Editor



Studies in Sport Humanities is a scientific journal that publishes original works on physical culture prepared with a multidisciplinary approach (including the perspectives of history, psychology, sociology, philosophy, cultural anthropology, Olympism, physical education theory, recreation and tourism theory, and management sciences). The journal in-

cludes book reviews, polemics, conference proceedings, and reports from other important scientific events. Detailed guidance for preparing texts, procedures for reviews, and other editorial requirements are located in the publishing regulations.

The current, 21st issue is the first under my edition. In recent years, the chief editor was Professor Halina Zdebska-Biziewska, who put in much effort to raise the scientific and editorial level of our journal. My and my corroborators' goal is to follow the direction for the journal's further development designated by Mrs. Zdebska-Biziewska. Our ambition is the publication of superior texts by both foreign and domestic authors.

The journal is published by the University of Physical Education in Kraków. The journal appears on list B of scientific journals promoted by the Ministry of Science and Higher Education. It is also indexed in the Index Copernicus international database. Since 2016, the journal has only been published in electronic version (open access).

We warmly invite you to submit texts related to social studies and the humanities linked with the broadly understood notion of physical culture.

Editor-in-Chief

A handwritten signature in blue ink, which appears to read "Jan Blecharz". The signature is stylized and includes a horizontal line at the end.

Associate Professor Jan Blecharz, Ph.D.

A Functional Model of Team Leadership for Sport

Jeff Coleman¹, Gershon Tenenbaum²

¹ Center for Enhanced Performance, United States Military Academy, West Point, NY, USA

² Florida State University, department of Educational Psychology, COE, Florida, USA

Summary

The purpose of this study was to propose and examine a new leadership framework, the Team Leadership Model for Sport. Specifically, the aim was to examine a functional leadership paradigm in sport where full range of leadership behaviors by the coach and by the collective athletes influence team cohesion, and thereby increase the likelihood of team goal achievement. Data were utilized from 518 NCAA Division I-III athletes from 36 softball teams and 13 baseball teams. The participants completed the Multifactor Leadership Questionnaire (Avolio & Bass, 2004), the Team Multifactor Leadership Questionnaire (Avolio & Bass, 1996), the Group Environment Questionnaire (Carron, Brawley, & Widmeyer, 1985), and the Team Outcome Questionnaire that was developed for this study. Structural equation modeling indicated that the original hypothesized model did not fit the data, but an acceptable alternative model was established, which included transformational leadership and two transactional leadership variables influencing perceptions of cohesion. Transformational leadership had a significant positive path to cohesion, which in turn had a significant positive path to goal achievement. We discuss a potentially fruitful direction in the examination of team leadership, within which the first step involves a closer examination of measurement of coach leadership, shared athlete leadership, and cohesion.

Keywords: transformational, cohesion, shared leadership, baseball, softball

A Functional Model of Team Leadership for Sport

Effective leadership is considered one of the most important social constructs leading to team successful performance (Zaccaro, Rittman, & Marks, 2001). Acknowledging the main leadership role of the coach (Chelladurai, 2007), the examination of leadership in sport has been almost synonymous with coaching. Yet leadership in sport can be seen at all levels, and more recently, the role of athletes as leaders has been considered more closely (Loughead, Hardy, & Eys, 2006). For instance, Holmes, McNeil, and Adorna (2010) reported that athletes believe leaders should lead by example, have solid communication skills, and be trustworthy. Similarly, Loughead et al. (2006) found that coaches and athletes viewed skill-level and sport competence as crucial leadership factors. Nonetheless, how coach and athlete leadership have a combined influence on team effectiveness was not sufficiently studied. The appointed leader of a team, often the coach in the case of sport, may not meet the leadership needs of his/her team (Pearce & Manz, 2005). Loughead and Hardy (2005) provided evidence, which indicated that coaches are more autocratic and task-oriented, while athletes are more democratic and social-oriented. Price and Weiss (2013) uncovered that coaches may provide more support for individual athlete outcomes while peer leadership contributes more so to team's social cohesion.

While these contributions provide initial evidence that coaches and athletes may serve different leadership functions, how these behaviors influence team effectiveness is still not fully clear.

An alternative approach to examine leadership and team effectiveness, which has yet to be studied in the sport context, is *shared leadership*. Shared leadership is the lateral collective peer influence, which supplements the vertical influence of an appointed leader (Cox, Pearce, & Perry, 2003). The supplement of shared leadership may result in a greater range of leadership behavior, and in more trust and cohesion (Bergman, Rentsch, Small, Davenport, & Bergman, 2012). Coaches may actually empower athletes to become leaders as described by the *cascading effect*, a proposition of transformational leadership theory (Bass & Riggio, 2006). Preliminary evidence for this effect was found in the parks and recreation system (Kent & Chelladurai, 2003). If both coaches and athletes are involved in the leadership process then it may be more likely a team's needs are met.

It is somewhat surprising that transformational leadership has not been given more attention in the sport context considering its prevalence in I/O psychology. Coach's transformational leadership may influence athletes but only few studies have examined it in sport (Chelladurai, 2007). A transformational leader raises the level of awareness about the importance of goals, and encourages subordinates to transcend self-interest in order to motivate people to perform beyond expectations (Bass,

1985). In contrast to this is transactional leadership, which centers on the exchange of rewards (or punishment) between the leader and his/her subordinate in response to some outcome. Together these leadership styles form the Full Range of Leadership Theory (FRLT; Bass & Riggio, 2006), which states that leaders should exhibit both types of leadership behaviors, but optimally transformational leadership behaviors are exhibited more frequently. It is no surprise considering the empowering properties of transformation leadership, that coaches who exhibit these behaviors appear to influence athlete motivation (Arthur, Woodman, Wei Ong, Hardy, & Ntoumanis, 2011; Charbonneau, Barling, & Kelloway, 2001). In addition, and of particular interest to this study, coaches' transformational leadership has directly been linked to team cohesion (Callow, Smith, Hardy, Arthur, & Hardy, 2009; Price & Weiss, 2013) indirectly via intrateam communication (Smith, Arthur, Hardy, Callow, & Williams, 2013).

A functional definition of leadership was considered in designing the Team Leadership Model for Sport in the current study. According to this definition, it is the leader's responsibility to ensure that all the critical functions needed for team maintenance, and the accomplishment of team goals are provided for (Hackman & Walton, 1986). This definition is in part the foundation of Zaccaro et al.'s (2001) leadership model for performance teams. This model considers leadership as social problem solving, and describes four essential leader functions: *Information Search and Structuring*, *Information use in Problem Solving*, *Managing Material Resources*, and *Managing Personnel Resources*. According to Zaccaro et al., the leader's execution of these functions affects the team's processes thereby enhancing group maintenance and goal achievement. Propositions in the model, though not tested specifically in sport, reflect research on performance/psychomotor and competitive tasks. As such, it appears reasonable to assume that this concept be used for sport team leadership (see Figure 1). Specifically, focusing on the *Managing Personnel Resources* function of leaders, the aim of this study is two-fold: (1) to test the conceptual framework, and (2) to test the congruence of shared athlete leadership and coach leadership in determining team processes.

The proposed conceptual framework focuses on *Managing Personnel Resources* since it involves the actual implementation of plans in the social problem-solving process, which includes the motivation, development, utilization, and monitoring of team members. Burke, Stagle, Klein, Goodwin, Salas, and Halpin (2006) suggested that the leadership behaviors within FRLT well represent this process. As such, the transformational and transactional leadership of both head coaches and the collective team represent the leader inputs which influence team processes in the proposed model. Task-oriented cohesion is the team process most often linked to leadership (see Carron, Hausenblas, & Eys, 2005, for a review). Transformational leadership of ultimate Frisbee team captains was found to have a positive relationship with cohesion (Callow et al., 2009), and athletes' peer leadership was associated with

team's cohesion (Price & Weiss, 2011). Thus, we assume that both the coach and shared leadership will uniquely be positively associated with team cohesion.

The final prediction of the model is that leader processes affect team effectiveness via their influence on team processes. Referencing the functional definition of leadership, team effectiveness is achieved if the collective goals of the team are met, and the group is maintained. Sport provides a somewhat unique problem in terms of team effectiveness. Ultimately teams are judged upon wins and losses against other teams, but these outcomes are often dependent on an opponent's performance as well as a team's own performance. In addition, where competing teams often do not have equal resources, it is of concern to judge effectiveness on wins and losses alone. Steiner (1972) presented group effectiveness in terms of potential productivity and process loss. In other words, a team can be considered effective if it is meeting its potential goals, both process and outcome, given its resource limitations. Ultimately a team's effectiveness in sport can be judged upon its progress toward relevant team performance goals. This view of team effectiveness matches well the functional definition of leadership described herein.

Considering the concept of leadership in the sport domain, the purpose of this study is to provide initial evidence for a conceptual framework for team leadership. Through introspective measures, the authors examine the congruence of shared athlete leadership and coach leadership as antecedents to effective team processes and outcomes.

Method

Participants

In determining what sport to include in this study, the types of interactions that exist between coaches and athletes were considered. Team processes are less critical in sports such as swimming or golf where the athlete's tasks are independent of his/her teammates. In contrast, Yukl (2002) explained that team processes are critical when a great deal of coordination and interaction is required among members with like-tasks. Considering this, Division I, II, and III NCAA collegiate softball and baseball teams, which involve interdependent team interactions, were used for the study. Data were collected from a total of 50 teams including 14 men's teams and 36 women's teams. Overall, 518 athletes participated in the study. Their ages ranged between 18 and 24 ($M = 19.89$, $SD = 1.24$ years). Most of the respondents were underclassman with 153 freshmen (29.5%), 148 sophomores (28.6%), 109 juniors (21.0%), 96 seniors (18.5%), and 10 graduate students (1.9%). Captains or co-captains were represented by 74 respondents (14.4%). Participants from 6 teams indicated in various ways that their teams did not have captains, and in some cases, they stated that everyone was a leader.

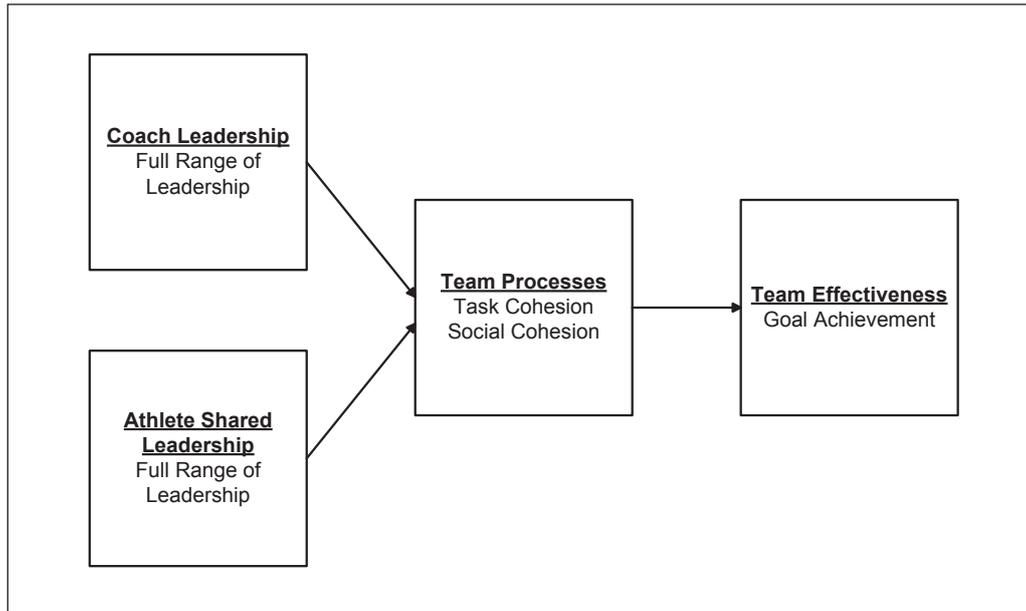


Figure 1. A Conceptual Model of Managing Personnel Resources Effect on Team Effectiveness

Measures

Coach Leadership Behavior (Multifactor Leadership Questionnaire; MLQ-5X, Avolio & Bass, 2004). The MLQ-5X measures 9 leadership factors that represent FRLT. It consists of 5 transformational factors (*Idealized Influence Attributed*, *Idealized Influence Behavior*, *Inspirational Motivation*, *Intellectual Stimulation*, and *Individual Consideration*), 3 transactional factors (*Contingent Reward*, *Management by Exception Active*, and *Management by Exception Passive*), and one non-leadership factor (*Laissez-faire*). Each leader factor consists of 4 items, which describe leader behaviors. The rater form of the MLQ-5X was used which asked athletes to rate how frequently the statement fits their coach using a 5-point Likert-type scale ranging from 0 (*not at all*) to 4 (*frequently, if not always*).

Substantial psychometric evidence yielding ample reliability and validity information was reported for the previous and current versions of the MLQ (see Avolio & Bass, 2004 for review). The most common criticism of the MLQ is a lack of discriminant validity between transformational leadership scales resulting in combining scales (Bass & Riggio, 2006). In addition, although the MLQ has been used in multiple settings there is comparatively less evidence of its utility in the sport domain. One exception is that the 9-factor model was supported via confirmatory factor analysis, $NFI = .93$, $CFI = .93$, $RMSEA = .062$, utilizing a sample of martial arts students (Rowold, 2006). Considering issues of discriminant validity and relative lack of use in sport, the structure of the 36-item MLQ was examined thoroughly during preliminary analysis and an alternative structure to the 9-factor model was considered.

Shared Athlete Leadership Behavior (Team Multifactor Leadership Questionnaire; TMLQ, Avolio & Bass, 1996). The TMLQ was designed considering FRLT, and therefore has an identical 9-factor structure to the MLQ. The instrument comprises 45 items, 5 items per subscale. The items ask participants to identify the frequency, on average, of behavior their group displays in each statement. A Likert-type scale ranging from 1 (*not at all*) to 5 (*frequently, if not always*) is used to rate each item. Like the MLQ, the transformational scales often correlate, and authors may combine the scales (Avolio, Sivasubramaniam, Murry, Jung, & Garger et al., 2003); hence, its structure was tested similarly to the MLQ during preliminary analyses.

Cohesion (Group Environment Questionnaire; GEQ, Carron, Brawley, & Widmeyer, 1985). The GEQ was designed to assess individual athletes' perceptions of cohesion described as "Group Integration" and "Attraction to the Group." Athletes assess these two concepts in terms of the dichotomy of task and social interaction resulting in four separate scales called Group Integration-Task (GI-T), Group Integration-Social (GI-S), Interpersonal Attractions to the group-Task (ATG-T), and Interpersonal Attractions to the Group-Social (ATG-S). Each of the 18 items asks respondents to select a value that best represent his/her view on a scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*).

Li and Harmer (1996) using a sample of 321 collegiate athletes conducted a CFA on the GEQ, and found that the 4-factor model was a good fit to the data, $\chi^2 = 2.135$, $CFI = .910$, $TLI = .892$, and $RMSEA = .059$. Contrary to this, Schutz, Eom, Smoll, and Smith (1994) found poor factorial validity of the GEQ, and criticized

several items for low factor loadings. The GEQ has also received criticism for typically low internal consistency reliability, and Carron Brawley, and Widmeyer (1998) have argued that the scale is susceptible to more variability considering respondents are answering for an entire team rather than for just themselves. The GEQ was chosen for this study considering its wide popularity, but its structure was examined carefully during preliminary analysis considering some of its potential limitations.

Team outcomes. This scale, developed for this study, consists of 9 items that describe goals relating to skills, strategy, effort, competitive outcomes, and fitness. These areas were selected partially considering a content analysis of team goals by Brawley, Carron, and Widmeyer (1992). Participants are asked to answer to what degree did their team achieve each goal on a 5-point Likert-type scale ranging from 0 (*Not at all*) to 4 (*Completely*). This scale was hypothesized to have both an outcome dimension (5 items) and process dimension (4 items). This 2-factor structure was tested during preliminary analyses.

Procedure

Once permission was granted from the universities internal review board, the 1,563 head coaches from every Division I, II, and III softball and baseball teams were contacted via email. The email message briefly explained the study and asked permission to administer on-line surveys to the athletes on their teams. The use of web-based questionnaires particularly fitted this project to facilitate the gathering of information from many teams required of structural equation modeling. This method also helped in terms of accessibility to participants as coaches were not asked to allocate important practice time to survey completion. In addition, the electronic method ensured that the surveys were completed at a similar point in each team's season. Avolio et al. (2003) emphasized that as teams work together for a longer period, their level of agreement on leadership ratings should become more congruent. Considering this, the questionnaires were available for completion at the three quarters point of each team's season.

The coach of the team provided an email to his or her athletes briefly explaining the purpose of the study, and asking them to complete the questionnaires within a set two-week period. To increase response rate, three reminder emails were sent during this period. Informed consent was obtained from the athletes as the first page of the online questionnaires.

Data Analysis

To test the model-data fit, structural equation modeling (SEM) was utilized. This method allows for the estimation of complex causal relationships of latent variables based on justified theory (Hair, Anderson, Tatham, &

Black, 1998). Before conducting this statistical analysis, certain criteria were inspected. First, the measurement properties of each instrument were examined closely. Without proper measurement of the hypothesized variables it is difficult to attain sufficient results via SEM. Inter-item correlations within scales were examined as well as the mean inter-items correlations among each instrument's sub-scales. This process was conducted to determine if certain items were not fitting well within sub-scales. Subsequently Exploratory Factor Analysis (EFA) was considered for each instrument through SPSS with maximum likelihood extraction, and a direct oblimin rotation with a delta value of zero. An Eigen-value of > 1 was used to extract the number of factors. Items were deleted from each instrument using an iterative process. First, Henson and Roberts (2006), in a review of studies using EFA, found a loading of .40 was most typically used as a cutoff for a meaningful loading; as such this criterion was used herein. Next, items which loaded on two or more factors were considered for removal. Finally, the content of items was reviewed to ensure the resultant structure matches the theory.

Following recommendations by Anderson and Gerbing (1988), a two-step process was applied including a test of a measurement model followed by a test of the structural model. The test of the measurement model equated to that of a confirmatory factor analysis. The hypothesized model included the latent variables of *coach leadership*, *team leadership*, *cobesion*, and *goal achievement*. If the fit of this model was poor, alternative models were considered with the understanding that a poor measurement model cannot result in a good structural model. Alternative models were only considered if theoretically sound, and included information from the path coefficients and from modification indices given by the LISREL 8.80 software.

With confirmation of a sound measurement model, the structural model was tested to examine the causal links among the psychological constructs. In testing the overall fit of these models, it is appropriate to use multiple "goodness of fit indices" (Hair et al., 1998). Kline (2005) suggested the χ^2 statistic, the *Root Mean Square Error of Approximation (RMSEA)* and *Comparative Fit Index (CFI)* as a partial set of indices for assessing model fit. Kline also emphasized that no one index is the "gold standard," and that is reason for a model to be assessed by multiple indices. Once the overall fit of the model was tested, the path coefficients for the structural model were evaluated. Missing data ($< 1\%$) were replaced by using the EM algorithm.

Results

Preliminary Analyses

Internal Consistency Reliability and the Structure of the MLQ. The internal consistency reliabilities for the 9 MLQ subscales ranged from .63 to .89. To test the ex-

tent the scales overlapped, a corrected correlation was computed between scales. Except for *Intellectual Stimulation's* comparison with *Idealized Influence* ($r = .83$) and *Inspirational Leadership* ($r = .82$), all the corrected correlations between transformational scales were above the .85 threshold indicating a lack of discriminant validity between scales (John & Benet-Martinez, 2000). These results are consistent with previous findings that the transformational subscales of the MLQ are highly correlated (Tejeda, Scandura, & Pillai, 2001).

Due to the current results, and to historical precedent (Jung, Chow, and Wu, 2003), the structure of the MLQ was reevaluated via EFA resulting in a 3-factor model including 18 items. This model accounted for 53.23% of the total variance with $\chi^2(117) = 255.86$, $p < 0.01$. The first factor included items from the transformational leadership scales and was named *Transformational Leadership Coach* (TLC; $\alpha = .91$). The second factor consisted of *Management by Exception Passive* items and *Laissez-Faire* items and was named *Avoidant Coach* (AC; $\alpha = .86$). Finally, the third factor included the four *Management by Exception Active* items, and was subsequently named *Management by Exception Active Coach* (MBEAC; $\alpha = .77$). The corrected correlations (r 's = .26 - .62) among the revised MLQ scales were all well below the .85 threshold indicating sufficient discriminant validity. The correlations between subscales and inclusion of items within each support the FRLT. Lastly the revised structure is similar to the modification made by Price and Weiss to the MLQ (2013).

Internal Consistency Reliability and the Structure of the TMLQ. Reliability coefficients for the nine scales of the TMLQ ranged from .66 - .85. An examination of the corrected correlations between scales revealed that all transformational scales had corrected correlations equal to or above the .85 threshold. Given this, the TMLQ was submitted to the same EFA procedure applied to the MLQ yielding a 32 item 3-factor model accounting for 49.28% of the variance with $\chi^2(403) = 919.40$, $p < 0.01$. The first factor had a reliability coefficient of .96, and was named *Transformational Team Leadership* (TTL). The second factor was labeled *Management by Exception Active Team* (MBEAT), and its reliability coefficient was .74. The final third factor had a reliability coefficient of .83, and considering it included both *Management by Exception Passive* items and *Laissez-Faire* items was named *Avoidant Team* (AT).

The factor structure and correlations of the revised TMLQ are similar to the revised MLQ and are supported by FRLT. The calculated corrected correlations between subscales ranged from .29 to .70; all below the .85 threshold. The EFA result of combining the *Management by Exception Passive* and *Laissez-Faire* subscales from the original TMLQ also follows Avolio et al.'s (2003) precedent and suggestion.

Internal Consistency Reliability and the Structure of the GEO. The internal consistency reliabilities for the GEQ subscales were as follows: Group Integration-Task (GIT) = .78; Group Integration-Social

(GIS) = .81; Attraction to Group-Task (ATGT) = .72; and Attraction to Group-Social (ATGS) = .71. Considering the somewhat low internal consistency reliabilities with the data here, it was determined that an EFA should be run to potentially improve the measurement of the GEQ.

The results of EFA yielded a 9 item 2-factor model accounting for 52.34% of the variance with $\chi^2(19) = 146.80$, $p < 0.01$. The first factor of the revised GEQ scale was labeled *Task Cohesion* (TC; $\alpha = .81$), and the second factor *Social Cohesion* (SC; $\alpha = .80$). The corrected correlation between the two scales was calculated to be .56, indicating the scales discriminate appropriately. The revised version of the GEQ meets Carron et al.'s (1998) assumption that group members have both a group orientation to attain goals, and an orientation toward social relationships. It is not uncommon for researchers to focus solely these task and social aspects of cohesion. For instance, Zaccaro et al.'s (2001) functional team leadership model considers only task and social aspects of cohesion. The revised GEQ meets the needs of this model in this regard.

Internal Consistency Reliability and the Structure of the TOQ. The final instrument for evaluation was the TOQ. Though the TOQ was hypothesized to have outcome and process dimensions, the corrected correlation between these scales was calculated to be .99 suggesting that the subscales were essentially measuring the same construct. An EFA provided further support for this as it yielded a 1-factor model accounting for 54.48% of the variance with $\chi^2(20) = 141.17$, $p < .01$. The factor loadings ranged from .57 to .86.

Descriptive statistics and correlation among subscales

The descriptive statistics and correlations among subscales for each of the revised instruments are displayed in Table 1. Note that all the reliability coefficients are above .74 with most scales above .80. It is noteworthy that the transactional leadership scales have negative correlations with all other scales as would be predicted by FRLT. Also, a high correlation between TTL and SC ($r = .72$) was observed. While correlations this high may not be uncommon among indicator variables, Grewal, Cote, and Baumgartner, (2004) argued that correlations between .60 and .80 combined with low reliability and high measurement error can result in more likely Type II error in Structural Equation Modeling.

The scales in Table 1 are composite scores. To adjust for measurement error in the subscales for the structural equation modeling analysis, these were transformed into true scores (Hayduk, 1987). A participant's true score for a variable was computed by calculating the item mean for a subscale, and then multiplying it by the square root of the alpha coefficient of that subscale. In addition, the *Management by Exception Active* and *Avoidant* subscales were reverse scored for the SEM.

Table 1. Descriptive Statistics and Correlations among Scales for Instruments used in the Model

| Scale | TLC | MBEAC | AC | TLT | MBEAT | AT | TC | SC | OC |
|----------|-------|-------|------|------|-------|------|-------|------|------|
| TLC | 1 | | | | | | | | |
| MBEAC | -.09 | 1 | | | | | | | |
| AC | -.47 | .29 | 1 | | | | | | |
| TLC | .51 | -.23 | -.45 | 1 | | | | | |
| MBEAT | -.10 | .50 | .23 | -.22 | 1 | | | | |
| AT | -.35 | .31 | .53 | -.61 | .38 | 1 | | | |
| TC | .20 | -.12 | -.29 | .42 | -.18 | -.34 | 1 | | |
| SC | .46 | -.24 | -.50 | .72 | -.28 | -.53 | .45 | 1 | |
| OC | .38 | -.21 | -.34 | .52 | -.20 | -.41 | .24 | .62 | 1 |
| M | 4.00 | 1.92 | 3.24 | 3.67 | 2.99 | 2.41 | 6.87 | 6.98 | 3.37 |
| SD | .73 | .82 | .95 | .71 | .75 | .74 | 1.83 | 1.76 | .73 |
| Range | 1-5 | 1-5 | 1-5 | 1-5 | 1-5 | 1-5 | 1-9 | 1-9 | 1-5 |
| Skew | -1.08 | 1.01 | -.28 | -.43 | -.04 | .29 | -1.07 | -.96 | -.35 |
| Kurt | .97 | .52 | -.46 | -.29 | -.29 | -.23 | .72 | .49 | .28 |
| α | .91 | .77 | .86 | .96 | .74 | .83 | .81 | .80 | .90 |

TLC – Transformational Leadership Coach, MBEAC – Management by Exception Active Coach, AC – Avoidant Coach, TLC – Transformational Leadership Coach, MBEAT – Management by Exception Active Team, AT – Avoidant Team, TC – Task Cohesion, SC – Social Cohesion, GO – Goal Achievement

Structural Equation Modeling

Though 518 participants participated in the study, some of the athletes did not complete all four instruments. In summary 486 of the 518 participants completed all the instruments. To retain all 518 participants and account for missing data, full information maximum likelihood estimation was used as suggested by Peugh and Enders’ (2004).

The hypothesized measurement model is depicted in Figure 2. The error variance of the TOQ was fixed to 0 for the model to be identified. Considering the TOQ was calculated using true scores, this error variance was deemed appropriate. This initial model was found to have less than acceptable fit, $\chi^2(22) = 248.699, p < .01, RMSEA = .14, CFI = .86$. Close examination of the path diagram revealed that in both cases of *Coach Leadership* and *Team Leadership*, the *Management by Exception Active* observed variable was loading quite low ($< .40$) compared to the other indicators. Modification indices suggested that the correlation of error terms between the MBEAC and MBEAT variables would significantly improve the model. In addition, a high correlation ($r = .86$) between Coach Leadership and Team Leadership was detected showing that the two factors were highly related.

To resolve the lack of fit in the measurement model, theoretically sound alternatives were considered. First, the structure of both the MLQ and TMLQ instruments

before and after EFA were identical, and both represent FRLT as described by Bass and Riggio (2006). Accordingly, it was expected that *Transformational Leadership* would be the most effective style and utilized most often. The data, as well as FRLT, appeared to suggest that each of these subscales represented a different leadership style exhibited by the collective athletes on the team as well as the coach. As a result, an alternative measurement model was tested, which hypothesized the three leadership styles (*Transformational Leadership*, *Management by Exception Active*, and *Avoidant Leadership*) would influence perceptions of cohesion. Each leadership style was a hypothesized latent variable with two observed variables indicated by the corresponding coach and team leadership subscale. The alternative measurement model is depicted in Figure 3.

The fit indices for the alternative measurement model were, $\chi^2(18) = 97.018, p < .01, RMSEA = .092, CFI = .95$. The χ^2 indicated that the data does not fit the model, and the *RMSEA* exceeded the minimum criteria of .08 for reasonable fit. Alternatively, the *CFI* of .95 met Hu and Bentler’s (1999) standard of good fit. All the factor loadings within the measurement model were above .49 with only the *TC* minimally below Hair et al.’s (1998) suggested .50 threshold of practical significance. The correlations among latent variables were moderate except those between *Transformational Leadership* and *Cohesion* ($r = .88$). *Transformational Leadership* would be expected to correlate highly with *Cohesion*, still the magnitude is alarming.

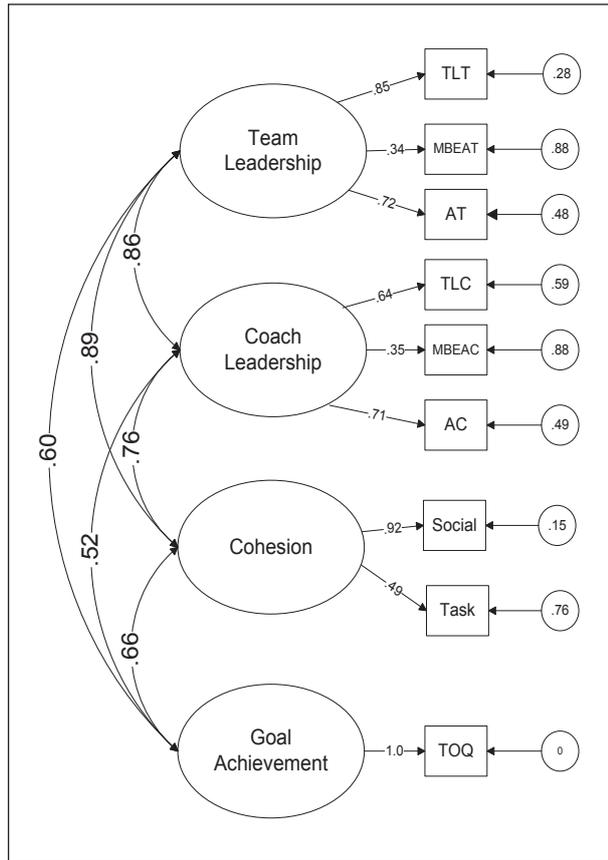


Figure 2. Hypothesized measurement model and standardized coefficients

With no other theoretically sound means to improve the model, the alternative structural model was then tested (see Figure 4). Values of the selected fit indices were, $\chi^2(21) = 97.54$, $p < .01$, $RMSEA = .084$, $CFI = .95$. Like the measurement model, the χ^2 statistic was higher than desirable, but overall this model demonstrated reasonable fit. To evaluate the fit of the structural part of the model, a χ^2 difference test was conducted resulting in a non-significant test statistic, $\chi^2 = .52(3)$, $p > .10$. This suggests that the structural part of the model fit the data well. The observed $RMSEA$ failed to meet the accepted standard of .08, but was better than that of the measurement model. The CFI equal to the threshold of .95 suggesting a good model-data fit.

The standardized coefficients reported in Table 2 indicate that *Transformational Leadership* by the head coach and collective team has a significant relationship with team *Cohesion*. More specifically, as the perception of *Transformational Leadership* increases by one SD, the perception of team *Cohesion* increases by .96 of a SD. *Management by Exception Active* was observed to influence the perception of cohesion to a small extent. *Avoidant Leadership* indicated a small negative causal effect on cohesion. One possible explanation for this is that a case of negative suppression occurred considering *Transformational*

Leadership and *Avoidant Leadership* were highly correlated ($r = .84$). This arises when the predictor variables are correlated with each other, as well as the outcome variable (Kline, 2005). Finally, the results indicated that 81% of the variance of *Cohesion* was accounted for by the different leadership styles.

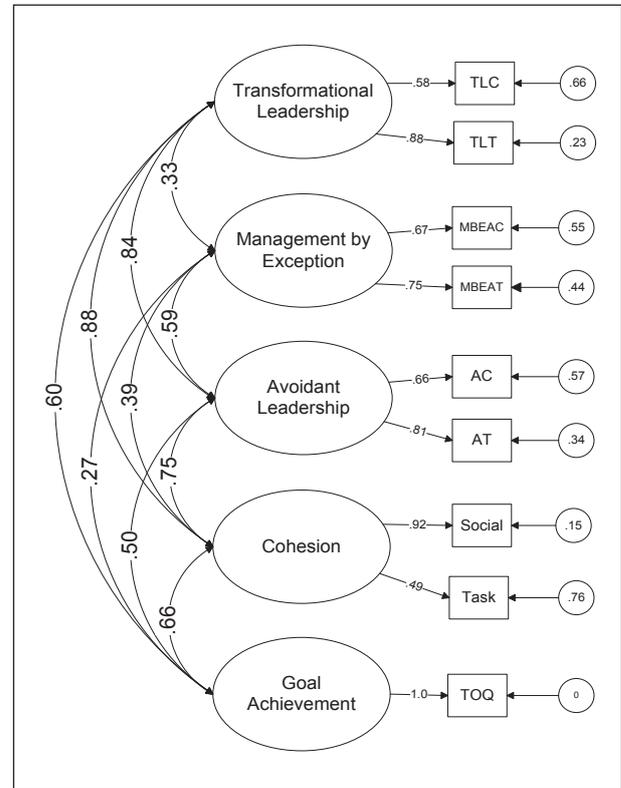


Figure 3. Revised measurement model and standardized coefficients

As expected, perceptions of cohesion have a significant positive relationship with the perception of team *Goal Achievement*. More specifically, a one SD increase in *Cohesion* increases the perception of *Goal Achievement* by .67 SD. In addition, 44% of the variance of *Goal Achievement* was accounted for by the team's cohesion, and *Transformational Leadership* had a significant indirect effect of .64 on *Goal Achievement*.

Though the structural model made it difficult to assess the relationship between *Coach Leadership* and *Team Leadership*, it did make it possible to explore Bass and Riggio's (2006) "augmentation hypothesis". *Transformational Leadership* accounted for more cohesion variance ($r^2 = .79$) than either *Management by Exception Active* ($r^2 = .15$) or *Avoidant Leadership* ($r^2 = .58$). The overall model's accounted variance of *Cohesion* ($r^2 = .88$) is also greater than the account variance for any of the individual leadership styles alone. Together this suggests that *Transformational Leadership* is most important to an athlete's perception of cohesion, but transactional leadership styles also contribute uniquely to this perception.

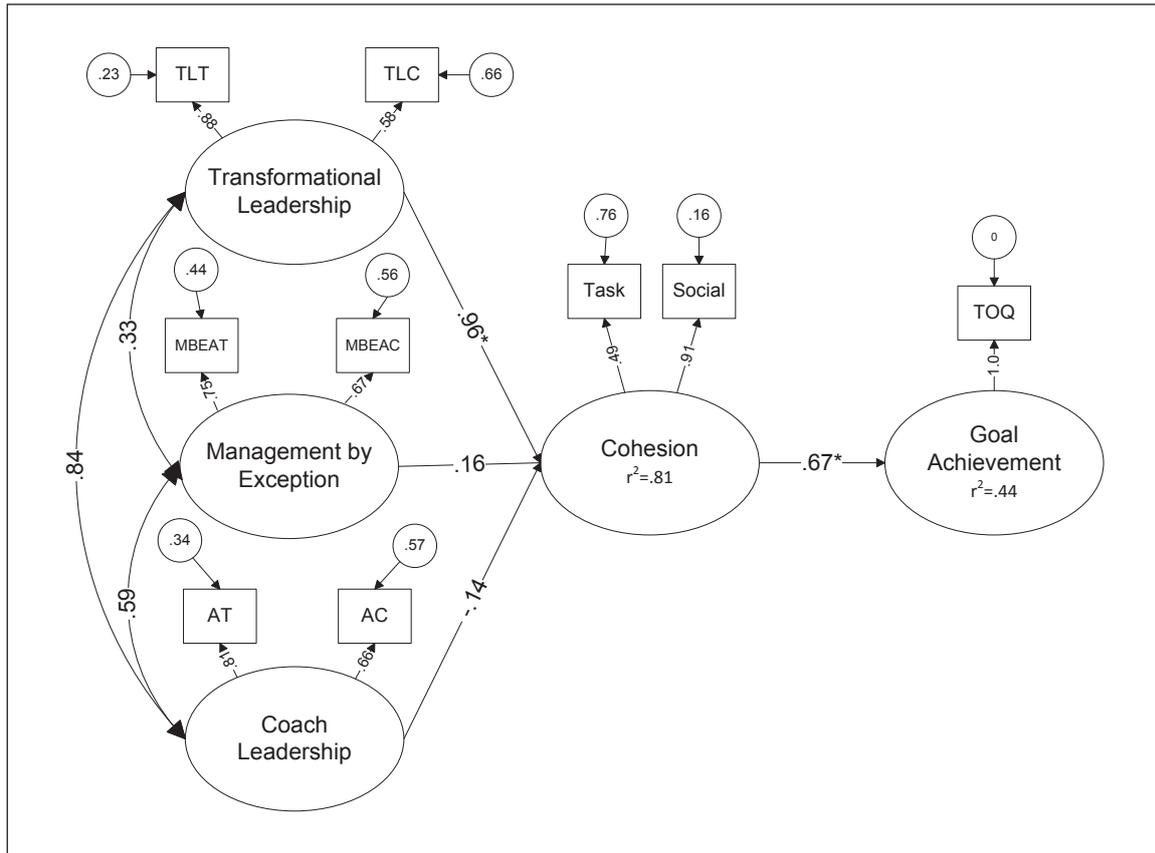


Figure 4. Structural model and standardized path coefficients

Table 2. Standardized Direct and Indirect Effects of the Structural Model

| Outcome | Determinant | Standardized effects | |
|--|--------------------------------|----------------------|----------|
| | | Direct | Indirect |
| Cohesion (r ² = .81) | Transformational Leadership | .96* | |
| | Management by Exception Active | .16 | |
| | Avoidant Leadership | -.14 | |
| Goal Achievement (r ² = .44) | Cohesion | .67* | |
| | Transformational Leadership | | .64* |
| | Management by Exception Active | | .10 |
| | Avoidant Leadership | | .10 |

* p < .01

Discussion

The primary purpose of this study was to test a new framework of team leadership in sport based upon the functional team leadership concepts proposed by Zaccaro et al. (2001). Though the data did not support the original hypothesized model, which separated *Coach Leadership* and *Shared Athlete Leadership* as two separate team leadership inputs, an alternative model was identified still following the basic tenets of the proposed func-

tional leadership framework. The antecedent latent variables within the revised model were the three leadership styles of *Transformational Leadership*, *Management by Exception Active*, and *Avoidant Leadership*. Coach leadership and collective athlete leadership then served as the indicator variables for each of these leadership styles. The results showed that perceptions of *Transformational Leadership* by the coach and collective team significantly and positively influenced perceptions of team cohesion. The other two leader styles had an insignificant influence on cohesion.

In addition, perceptions of team cohesion influenced perceptions of team goal achievement significantly.

The fit of the alternative structural model showed mixed results. While the CFI indicated model fit, the χ^2 and RMSEA indicated that the model could be improved. It is likely that model fit was limited by some of the high correlations between the latent variables. For instance, *Transformational Leadership* and the reversed scored *Avoidant Leadership* were highly correlated, and both also correlated highly with the *Cohesion* latent construct.

The significant positive causal path from *Transformational Leadership* to *Cohesion* was not a surprise as this outcome reflects the results of other studies examining this relationship (Callow et al., 2009; Heydarinejad & Adman, 2010). Regarding this particular relationship, there are two unique aspects of this study. First, transformational leadership of both the collective athletes and coach were used to predict cohesion, whereas previous studies have solely focused on coach leadership or singular peer leadership. The results of the study supplement previous research by Price and Weis (2011), and Vincer and Loughhead (2010) indicating that athlete leadership has a significant relationship to cohesion. It does make intuitive sense that shared leadership relate directly to cohesion, particularly task cohesion. Teams high on task cohesion work well together to decide on types of strategy and coordination. A team high on transformational leadership proactively and enthusiastically works toward team goals, which may indeed include deciding on appropriate strategies.

The second unique aspect of this study is that the alternative structural model allowed for the examination of how *Transformational Leadership* and the two transactional leadership styles of *Management by Exception Active* and *Avoidant Leadership* differentially influence perceptions of team cohesion. As predicted by the “augmentation hypothesis,” (Bass & Riggio, 2006), perceptions of *Transformational Leadership* influenced *Cohesion* above and beyond that of the other leadership styles on *Cohesion*. Rowold (2006) found similar evidence in martial arts, although in contrast to this study, the *Management by Exception Active* leader behaviors were significantly positively related to athlete outcomes. Two potential reasons for this discrepancy could be that the present study was focused on a team sport rather than an individual sport, or by the fact that *Management by Exception Active* was represented by not just the coach, but also by shared leadership. For instance, the head coach of a baseball team may be very involved in the active correction of mistakes of his athletes, but the shared athlete leadership on a team may not reflect this corrective aspect of leadership.

While cohesion is generally predicted to positively affect athlete outcomes, results to this end have been inconsistent (Bray & Whaley, 2001). That the results of this study indicate perceptions of cohesion have a positive effect on perceptions of goal achievement is significant, especially since the Team Leadership Model follows Hackman and Walton’s (1986) proposal that the job of the leader is to provide whatever is needed to help the

team achieve its goals. It is not a new idea in sport that the effect of transformational leadership on performance is mediated by an athlete’s trait or process. Charbonneau et al. (2001) provided evidence that intrinsic motivation mediates the effect of coach transformational leadership on athletic performance. The results here continue to indicate the importance of leadership to team outcomes, but this relationship does not appear to be a direct one. This supports the often said cliché by coaches: “Coaches don’t win games; players win games.”

From both a conceptual and measurement perspective, it is not surprising that coach leadership correlated with team leadership relatively highly. From a measurement perspective, the original TMLQ was partially based on MLQ items and the modified leadership instruments had identical subscales. Conceptually, this result provides evidence of the *cascading effect* described by Bass and Riggio (2006). While no causal effect between coach and collective team leadership is examined herein, it is possible that this matching is a result of the athletes replicating their coach’s style of leadership. A question that still must be answered is to what extent correlated leader styles are beneficial to team processes and ultimately goal achievement. Loughhead and Hardy (2005) found coaches and team leaders provide for different needs of team functioning and suggested that there must be a counterbalance between coach and athlete leadership. Because the hypothesized model had to be revised, it was impossible to examine how the two leadership sources may have differentially influenced cohesion. By examining the two different sources of leadership separately along with multiple team processes, researchers can determine how coach and athlete team leadership best balance or counterbalance each other.

From a practical standpoint, most leadership interventions are directed at the coach or at the athletes, and few involve the coordination of the two. The theoretical model proposed here suggests that for a team to be truly cohesive, collective team leadership and coach leadership should both be considered. It is likely that this coordination is more complicated than a simple correlation. Aoyagi, Cox, and McGuire (2008) found that when perceived leadership behaviors were incongruent with preferred leadership behavior cohesion increased. It was hypothesized that when athletes have discord with their coach they turn to each other for support. Clearly more research must take place to examine this complex relationship, but regardless, there appears to be a need for sport psychologists to find ways to integrate leadership team building with coaches and athletes. A possible preliminary undertaking could be working to nest team visions within the coach’s vision.

Though the results of this study are promising, some caution must be taken considering its results. First, both leadership measures used were not designed for the domain of sport. In addition, each of these measures failed to distinguish between the different transformational leadership styles and required significant modification. Data used to reconstruct these instruments and test the

theoretical structural model is not desirable. In addition common method bias must be considered a limitation which may have influenced some of the high correlations found between constructs. Lastly, future endeavors should consider the nesting effect of athletes with-in teams; this could not be accurately examined here because of the relatively small group sample size of 50 teams with an unequal number of athletes on each team (Hox & Maas, 2001).

To truly test this model the measurement of both coach and team leadership constructs must be closely examined. With good measurement confirmed, then these improved instruments can be used to further confirm the proposed theoretical model in future studies. As a good start, Callow et al. (2009) have found preliminary support for a sport oriented instrument named the Differentiated Transformational Leadership Inventory (DTLI). The DTLI has shown to have factorial validity of transformational factors and contingent reward. In regard to shared athlete leadership, it could be potentially fruitful area of future research to develop an instrument to measure this specifically for sport.

Finally, the Team Leadership in Sport Model may include many team processes besides cohesion that affect team outcomes. Given the limitation SEM has in evaluating very complex models, as limited by sample size, only the team process of cohesion was examined here. Other very important team processes such as communication, collective efficacy, and coordination should be examined in the future as well.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411-423.
- Aoyagi, M. W., Cox, R. H., & McGuire, R. T. (2008). Organizational citizenship behavior in sport: Relationships with leadership, team cohesion, and athlete satisfaction. *Journal of Applied Sport Psychologist*, *20*, 25-41.
- Avolio, B. J., & Bass, B. M. (1996) *Multifactor Leadership Questionnaire for Teams*. Mind Garden, Inc.
- Avolio, B. J., & Bass, B. M. (2004) *Multifactor Leadership Questionnaire*. Mind Garden, Inc.
- Avolio, B. J., Sivasubramaniam, N., Murry, W. D., Jung, D., & Garger, J. W. (2003). Assessing shared leadership: Development and preliminary validation of a team multifactor leadership questionnaire. In C. L. Pearce and J. A. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 143-172). Thousand Oaks, CA: Sage Publications.
- Bass, B. M., (1985). *Leadership and performance beyond expectations*. New York: The Free Press.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational Leadership* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Bray, C. D., & Whaley, D. E. (2001). Team cohesion, effort, and objective individual performance of high school basketball players. *The Sport Psychologist*, *15*, 260-275.
- Burke, C. S., Stagl, K. C., Klein, C., Goodwin, G. F., Salas, E., & Halpin, S. M. (2006). What type of leadership behaviors are functional in teams? A meta-analysis. *Leadership Quarterly*, *17*, 288-307.
- Bergman, J. Z., Rentsch, J. R., Small, E. E., Davenport, S. W., Bergman, S. M., (2012). The shared leadership process in decision-making teams. *The Journal of Social Psychology*, *152*, 17-42.
- Brawley, L. R., Carron, A. V. & Widmeyer, W. N. (1992). The nature of group goals in sport teams: A phenomenological analysis. *The Sport Psychologist*, *6*, 323-333.
- Callow, N., Smith, M. J., Hardy, L., Arthur, C. A., & Hardy, J. (2009). Measurement of transformational leadership and its relationship with team cohesion and performance level. *Journal of Applied Sport Psychology*, *21*, 395-412.
- Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (1998). The measurement of cohesiveness in sport groups. In J. L. Duda (Ed.), *Advances in sport and exercise psychology measurement* (pp. 213-226). Morgantown, WV: Fitness Information Technology.
- Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (1985). The Group Environment Questionnaire.
- Carron, A. V., Hausenblas, H. A. & Eys, M. A. (2005). *Group dynamics in sport* (3rd ed.). Morgantown, WV: Fitness Information Technology.
- Charbonneau, D., Barling, J., & Kelloway, E. K. (2001). Transformational leadership and sports performance: The mediating role of intrinsic motivation. *Journal of Applied Social Psychology*, *31*, 1521-1534.
- Chelladurai, P. (2007). Leadership in sports. In Tenenbaum, G., & Eklund, R. C., *Handbook of Sport Psychology* (3rd ed.; 113-135). Hoboken, NJ: John Wiley & Sons, Inc.
- Cox, J. F., Pearce, C. L. & Perry, M. (2003). Toward a model of shared leadership and distributed influence in the innovation process: How shared leadership can enhance new product development team dynamics and effectiveness. In C. L. Pearce and J. A. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 48-76). Thousand Oaks, CA: Sage Publications.
- Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and measurement error in structural equation models: Implications for theory testing. *Marketing Science*, *23*, 519-529.
- Hackman, J. R., & Walton, R. E. (1986). Leading groups in organizations. In P. S. Goodman (Ed.), *Designing effective workgroups* (pp. 72-119). San Francisco: Jossey-Bass.
- Hair, J. E., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hayduk, L. (1987). *Structural equation modeling with LISREL*. Baltimore: Johns Hopkins University.
- Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research: Common errors and some comment on improved practice. *Educational and Psychological Measurement*, *3*, 393-416.
- Heydarinejad, S., & Adman, O. (2010). Relationship between coaching leadership styles and team cohesion in football teams of the Iranian university league. *Studies in Physical Culture and Tourism*, *17*, 367-372.

- Holmes, R. M., McNeil, M., & Adorna, P. (2010). Student athletes' perceptions of formal and informal team leaders. *Journal of Sport Behavior, 33*, 442-465.
- Hu, L. T. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives, *Structural Equation Modeling, 6* (1), 1-55.
- John, O. P. & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and scale construction. In H. T. Reiss, & C. M. Judd (Eds.), *Handbook of research: Methods in social and personality psychology* (pp. 339-369). Cambridge, UK: Cambridge University Press.
- Jung, D., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *Leadership Quarterly, 14*, 525-544.
- Kent, A. & Chelladurai, P. (2003). Multiple sources of leadership and employee reactions in a state parks and recreation department. *Journal of Park and Recreation Administration, 21*, 38-60.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. New York, NY: Guilford Press.
- Li, F. & Harmer, P. (1996). Confirmatory factor analysis of the group environment questionnaire with an intercollegiate sample. *Journal of Sport and Exercise Psychology, 18*, 49-63.
- Loughead, T. M., & Hardy, J. (2005). An examination of coach and peer leader behaviors in sport. *Psychology of Sport and Exercise, 6*, 303-312.
- Loughead, T. M., Hardy, J. & Eys, M. A. (2006). The Nature of Athlete Leadership. *Journal of Sport Behavior, 29*, 142-158.
- Pearce, C. L., & Manz, C. L. (2005). The new silver bullets of leadership: The importance of self- and shared leadership in knowledge work. *Organizational Dynamics, 34*, 130-140.
- Peugh, J. L., Enders, C. K. (2004). Missing data in educational research: A review of reporting practices and suggestions for improvement. *Review of Educational Research, 74*, 525-556.
- Price M. S., & Weiss, M. R. (2011). Peer leadership in sport: Relationships among personal characteristics, leader behaviors, and team outcomes. *Journal of Applied Sport Psychology, 49*-64.
- Price M. S., & Weiss, M. R. (2013). Relationships among coach leadership, peer leadership, and adolescent athletes' psychosocial and team outcomes: A test of transformational leadership theory. *Journal of Applied Sport Psychology, 26*5-279.
- Rowold, J. (2006). Transformational and transactional leadership in martial arts. *Journal of Applied Sport Psychology, 18*, 312-325.
- Schutz, R. W., Eom, H. J., Smoll, F. L., & Smith, R. E. (1994). Examination of the factorial validity of the group environment questionnaire. *Research Quarterly for Exercise and Sport, 65*, 226-236.
- Steiner, I. D. (1972) *Group processes and group productivity*. New York: Academic.
- Tejeda, M. J., Scandura, T. A., & Pillai, R. (2001). The MLQ revisited: Psychometric properties and recommendations. *The Leadership Quarterly, 12*, 31-52.
- Vincer, D. J. E., & Loughead, T. M. (2010). The relationship among athlete leadership behaviors and cohesion in team sports. *The Sport Psychologist, 24*, 448-467.
- Yukl, G. A. (2002). *Leadership in organizations (5th ed.)*. Upper Saddle River, NJ: Prentice Hall.
- Zaccaro, S. J., Rittman, A. L. & Marks, M. A. (2001). Team Leadership. *The Leadership Quarterly, 12*, 451-483.

Psychological ways of preparing to start by athletes; pre-performance language routines

Joanna Kotek¹, Józef Maciuszek²

¹ Instytut Psychologii Stosowanej, Uniwersytet Jagielloński

² Instytut Psychologii Stosowanej, Uniwersytet Jagielloński

Summary

Introduction

Article investigates direct psychological preparation to start by analysing techniques used by athletes to indicate an optimal starting state. Main goal was to differentiate pre-performance routines from sport mantras, understood as repetitive use of language, and to answer the question if the mantras have different effects on the process of preparation to start. The article is based on own research and literature.

Subjects and procedure

Research contains survey, covering the issue of mental techniques used by athletes before the start (146 respondents). 15 interviewees were chosen for semi-structured interviews about use of pre-performance mantras.

Results and conclusions

The outcome was the definition of sport mantra and description of variations of its use. Differences between this technique and other strategies of mental preparation to start were described. The results of the study address that and the characteristics of the mantras technique. It also provides clues for teaching pre-performance preparation.

Keywords: sport psychology, mental training, preparation to start, pre-performance routines, sport mantras

Introduction

In the field of sport psychology a lot of concern is devoted to the topic of immediate psychological preparation to start. There are numerous techniques that the athletes use to get into the optimal zone of functioning which helps them to perform at the top level of their abilities and preparation. These techniques are also often the subject of psychological scientific investigation. The aim of this article is to show the results and implications of such a study.

The topic in question comes from well-researched psychological issues such as emotions and motivations, concentration, and pre-performance routines.

Theoretical background

The theoretical background of this study consisted of the findings of the field of sport psychology connected to the topic of emotions, motivations and concentration. It also uses some findings from the topic of mental training and pre-performance routines. In sport psychology emotions are covered widely, especially when one takes into account the fact that some of the authors (see Jarvis, 2007) broadened their scope to cover the whole topic of arousal.

In the situation of competition one can distinguish three different states of emotion: readiness, passion, and apathy (Gracz, Sankowski; 2007). Basing on the Yerkes and Dodson laws of optimal functioning (1908) and Hanin's theory of the zone of optimal functioning (1986) we can say that the best state for participating in a competition is the middle one – in Gracz's and Sankowski's coverage – the start readiness which is synonymous to the optimal zone of functioning. The ability to change one's level of arousal and teaching how to use it is the main goal of most programmes of mental training (Blecharz, 2006). They often contains elements of emotional regulation, concentration, and motivation (Łuszczynska, 2011). The athlete can manage arousal in a following ways: by changing thoughts, managing external symptoms of stress, conducting a special type of the warm-up, performing massage, changing the focus for the stimuli with different emotional potential, performing breathing exercises, listening to coach's suggestions, relaxing (Wjatkin in Gracz et.al., 2007). The athletes use the techniques of immediate psychological preparation to start in order to reach the zone of optimal functioning. The main techniques studied in this research are connected mostly to the change of thoughts, special warm-up, and changing the focus types of influence.

The topic of motivation is also vital for the field of sport psychology. In most cases one of the most import-

ant topics in that field is the difference between intrinsic and extrinsic types of motivation (Jarvis, 2007). The previous research (see Lidor, 2007) shows that the preparatory techniques connected to the cognitive-behavioural types of influence are efficient in the enhancing the intrinsic motivation and lowering the use of introjections. The main focus of that study – sport mantras and pre-performance routines – can be seen as cognitive-behavioural techniques.

When we talk about the topic of concentration, finding the optimal zone of functioning is also important – similarly to the arousal and motivation levels. The best state for performing appears to be the flow state (Csikszentmihalyi, 1990) when the athlete is fully focused on the task at hand and no other distracting thoughts are in his or her head. According to some researchers, concentration could be the most important mechanism connected to the sport routines (see Shaw, 2002). These findings also reported that athletes who use these types of preparatory techniques are seeing the lowering levels of distracting. Also in many cases the routine becomes an automatic response of the organism and starts to be used consciously only in the moments when the athlete does not feel optimal for the performance.

Two main techniques connected to the topic of this study are self-talk and pre-performance routines. The findings concerning these two techniques were mostly used for the theoretical reference in this research. These techniques were verified mostly in the studies with the participation of elite athletes.

Self-talk is used mostly with aim to enhance the athlete's motivation (Łuszczynska, 2011). It is defined as a self-dialogue in which the person is interpreting his or her feelings and perceptions, regulating and changing the results and beliefs, and giving to oneself instructions and reinforcements (Hackfort, Schwenkmezger; 1993). According to study coverage made by Łuszczynska, there is not a conclusive evidence for it being efficient, but it is still widely used by athletes during both competitions and trainings (Hardy, Gammage, Hall; 2001) and has reported high subjective effectiveness. The sport mantra is the most similar to one type of this technique called cue-word or triggers (Moran, 1996) but they are not identical because the trigger does not take into account the diversity that can be found in mantras. In general the text of self-talk is much longer than sport mantras, which in most cases are just short expressions. The important thing is also connected to the repetitiveness of mantras – the element that self-talk is lacking.

The pre-performance routine is defined as the systematic sequence of motoric behaviours, cognitive and emotional responses which are performed in a particular order before the self-paced task (Moran, 1996). Pre-performance routines include also the self-paced tasks performed by athletes during the game – like serve in volleyball or tennis or penalty kick in football. The impact of routines could be seen as an effect of different psychological phenomena such as conditioning or magical thinking (the last was already falsified – see Moran, 1996). The

routines could also contribute to lowering the pressure and stress before start by putting athlete in the known environment. The same results could be partially an effect of the visualisation training (Morris, Spittle, Watt; 2005). The research shows that the most important is not the time of the routine but its stability. The athletes who have altered the sequence of their behaviours in the routine were performing significantly worse than athletes with alteration in time of executing routines. And the group without altering their routine has the best outcomes (see Lidor, 2007).

The main research question was connected to the fact that we know numerous examples of the pre-performance routines and not so many mantras which can possibly have different effects because of the use of the specific type of influence – language, which can carry larger amount of content than behaviour. Initial definition of the mantra was a **repetitive language element which is a part of the immediate pre-performance preparation, executed by athlete in explicate, spoken form or in form of the internal speech**. The main research question was: Do the mantras, because of their language content, have different effects on the process of immediate psychological preparation to the sport performance and can give a different outcomes in terms of performance results?

Subjects and procedure

The study was divided into two stages. The whole study was conducted between August 2014 and April 2015 on the athletes representing different disciplines of the qualified sport (taking part in the competitions).

The first stage was the Internet survey taken by athletes of different qualified sports regarding issues of immediate psychological preparation to start. The questions were closed, semi-closed and open which helped to obtain enough information about the techniques used in researched group in a short survey. The study was conducted with the close attention to the issues of voluntariness and privacy.

In the first part of research 146 subjects took part. 123 of them were still active athletes and 23 have already ended their athletic career. 93 subjects were male and 53 – female. The average age of the group equals 25.03 years (the youngest participant was 15 years old, the oldest – 67 years old). The average time of being an active athlete equals 7.5 years (from 1 year to 39 years). 15 participants were working with the sport psychologist during their athletic careers. The subjects represented the whole spectrum of the sport levels – from amateurs to representatives of the national teams at the World Championships and Olympic level.

The participants represented 29 sport disciplines. The biggest group was formed by athletics (27 participants), mostly runners (23 participants), motor sports (22 participants including 18 representatives of car racing and rally driving), and team sports (59 participants in-

cluding 19 volleyball players and 20 players of frisbee ultimate).

All disciplines represented in the study are shown in the chart below.

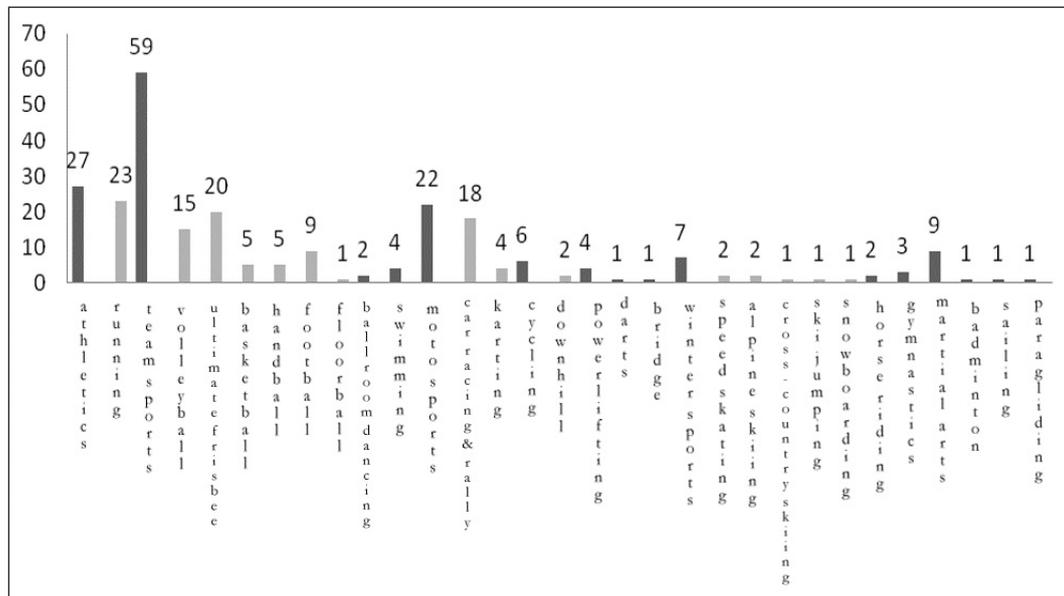


Table 1. The disciplines represented in the study

The main goal of this part of the study was to choose the participants to the next stage, the semi-structured interviews with the athletes who use the sport mantras, defined in the beginning of the research as **repetitive language element which is a part of the immediate pre-performance preparation, executed by athlete in explicate, spoken form or in form of the internal speech.**

In this part 15 participants took part. They were chosen in the procedure of nonprobability sampling. 14 of them were still active athletes, one of them has already ended a sport career. The participants represented 12 sport disciplines (handball, volleyball, windsurfing, downhill, swimming, long-distance running, athletics, powerlifting, freestyle football, dart, karate, basketball). 3 of them were representatives of team sports, 12 – the individual disciplines; 9 were representing Olympic disciplines and 6 – non-Olympic disciplines. 11 participants were male, 4 – female. The average age equals 22.5 years (from 17 to 29 years). The length of the sport career for participants in average equals 7.2 years (from 2 to 16 years). 3 of the participants worked with sport psychologist before. All of the participants in this stage of the study were using the sport mantras (as defined above) before taking part in the study. The average time of use for this technique equals 4.6 years (from 2 months to 11 years).

Every interview lasted approximately an hour and was prepared as a list of questions organized in clusters of topics. Depending on the course of the interview, the questions could be added to explore some interest-

ing topics in greater detail or removed to avoid redundancy.

The main clusters of topics are as following:

1. **Formal factors:** length, conscious vs. automatic use, integration with the routine;
2. **Origins of mantra:** influence of others for the use of the technique (both for trying the technique itself and for the content of it), consciousness of the process of learning to use the technique;
3. **Subjective outcomes:** importance of the mantra for the preparatory process, possible outcomes of not using it, and differences in outcomes for using routine and mantra;
4. **Chronology:** the length of using this technique, changes in time in both importance and way of use, subsequence in developing mantra and routine;
5. **Content factors:** the topic and the exact words used in it.

All the participants were informed about the topic of the study, the possibility of withdrawal at any time without any consequences and gave the informed contents for the participation in research. When the participant was underage the procedure was also conducted with her or his parents. Also all of the study was conducted with close attention to the privacy and data security issues. At the end of an interview every participant had a chance to talk with researcher and obtain answers for all questions connected to the issue of the study and sport psychology in general. Some of them took advantage of such a possibility, some of them did not.

Results

The main result of the first part of the study was an insight into the topic of techniques used by athletes for immediate psychological preparation for the start. Most of the participants use more than one technique (the number of it varying from 2 to 5) – 98 participants gave such an answer. Only 48 subjects use only one technique for start preparation. It is worth to add that for this participants all of the preparatory techniques were serving as a database of ways of preparation for the start. Especially when we talk about participants with 4 or 5 techniques, they mainly choose the right one for the start they are participating in basing on the feelings and needs of the moment.

The number of participants using different numbers of preparatory techniques is shown on the chart below.

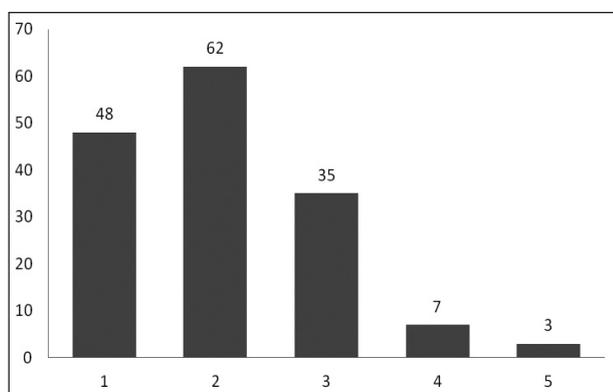


Table 2. The number of participants using different numbers of preparatory techniques

The answer for the question about the type of preparatory techniques used by the participants show that most of them use pre-performance routines (87 participants). The next position are sport mantras (47 participants), controlling thoughts and concentrating (30 participants), listening music (28 participants), talking with somebody (27 participants), controlling emotions (24 participants), visualization (24 participants). 22 participants were reporting the superstitious type of behaviour. It is important to note that many participants were describing at this point their reactions before the competition – mostly stress reactions – without knowing that it is not something they do to enhance performance but just a reaction of the organism, often the one that should be combat.

The results of the study in every field of interview described above are as following:

1. Formal factors

The first thing participants was asked about was their own definition of mantra. The answers covered both man-

tra as a form of activity (“habit that calms me down”, “the sequence of things I say to myself”) and its outcomes (“cheering for myself”, “preparation for every occurrence”, “something that gives me optimal motivation to the start”).

The answer for the question of the length of mantra is not simple, mostly because participants reported having more than one kind of them. In this study it varies from one word to few simple sentences. Most often (in 9 cases) it was few words or short exclamation. Only two persons reported having longer form of mantra, with longer sentences coming in the definite order (in one case it was a prayer). There were also participants who use several of their mantras in a random order, but in this case we cannot talk about any bigger sequence or long mantra. Many athletes were explicitly talking about the need to keep the mantras short because of the limited time for preparation and bigger possibility to adjust it to the situation.

Similarly to the findings from the first stage of study, many of the interviewees (9 of them) talked about integration of mantra and routine. 6 of them talked about paying particular attention to the sequence of the preparation and were talking a lot about necessity of maintaining this sequence for achieving a desired outcome. 4 participants reported using also a visualisation. That technique was not integrated to the procedure of immediate preparation to the start – in most cases it was used on the day before the competition. Only 3 participants did not report the use of any other technique than the sport mantra.

Most of the participants (10 of them) talked about conscious use of mantras – their choice depending on the situation or need, influence of others, developing that technique on purpose or intentionally putting it on the particular place in the sequence of the preparation. 5 participants were talking about automatism in this area, like “it just comes to me”, “I’m not analysing this before at any way”. This group sometimes also reported that they did not know that it is any particular technique and never thought about it until the study interview.

Most of the interviewees use mantras privately, in thoughts (11 participants). Some of them use it also explicitly, saying it out loud (7 participants). Interesting are the groups that are using as someone else’s speech as their mantra (use of music, with paying a special attention to the lyrics and use of some motivational speeches). Important is also the fact of developing spoken mantras from the ones that was listened to. The fact of using songs to develop spoken mantras is also important. It is worth to note that there were also 3 participants who reported the sport mantras featuring the participation of other people. It was the case of influence of the members the team (a captain influencing the teammates or with training or starting partner) – both given and received.

Other thing worth a notation here is the fact that participants were reporting using mantras not only as a preparation to the start but also during the competition (especially in the endurance sports) and during training.

2. Origins of mantra

The most frequent answers here were connected with the influence of other persons – mostly coaches and idols (13 answers). Most of respondents was talking about the influence of the coach – very often without the coach’s awareness of the fact. This influence is connected both to the fact of athletes being taught about the technique and with using some expressions that later became mantras. Often it is also the influence of culture (12 answers) – here participants talked mostly about inspiration for the

content of mantras, rarely about the idea of trying out the technique. Some participants talked also about music and mantras coming from the lyrics of songs listened as an immediate preparation to the start. 9 answers were connected to the subject of experience – such as “I’ve tried it and seen how it helps me”. Only 2 persons was taking it out as superstitions (“the start when I did it for the first time was successful, so I’m doing it every time now”).

The chart below shows what source of inspiration was used by interviewees to develop their mantras:

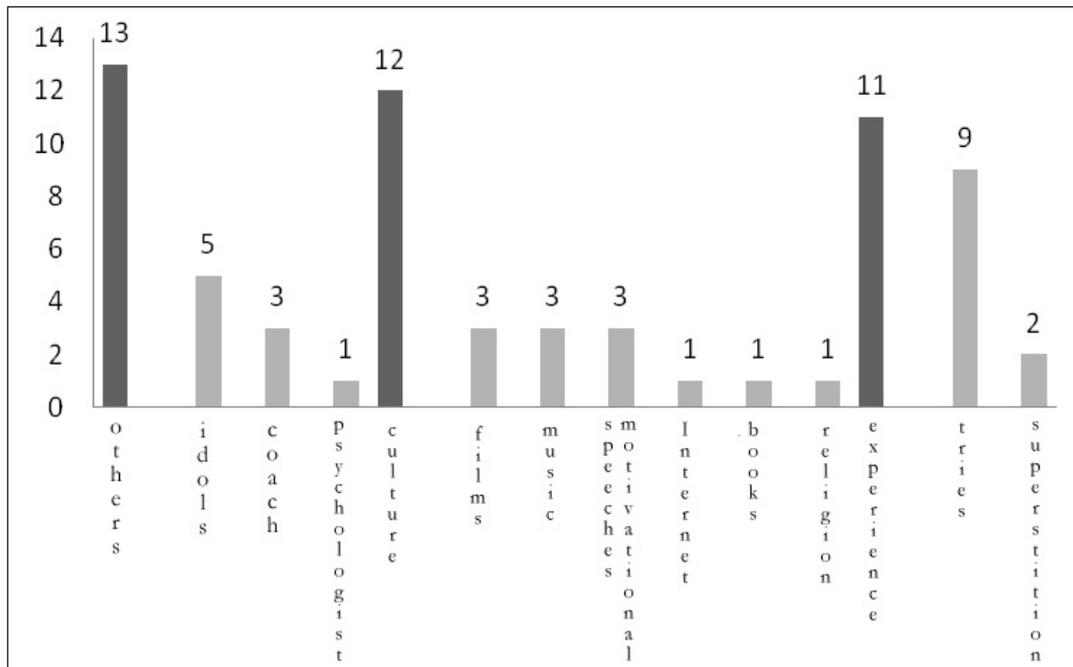


Table 3. The source of inspiration for mantras development

In general, the personal experience was the most important thing that was coming out of the participants answers. For both those who developed mantras consciously as a way of preparation to start and those who created them unconsciously, just by trying out different things, the personal experience and testing different forms of mantra was the most important and the most valuable in this process. It is also worth to note that these answers were split evenly, similarly to the answers for question concerning the awareness of using this technique prior to the study.

3. Subjective outcomes

This topic was the most important part of the conducted interviews because of the research question. As an answer for the question of the subjective outcomes of using

mantras, the participants were talking about arousal and motivation (14 answers), concentration – understood both as a way of shutting down the distracters and the “trigger stimulus” (10 answers), calming down and enhancing the perceived level of safety (12 answers), and enhancing self-confidence (6 answers). 13 participants explicitly pointed out that for them the most important in using mantras is the content and meaning they come with.

Only 11 participants out of 15 use both mantra and routine. Only 2 of them answered that the effects of both are exactly the same. Most participants that have seen the differences was talking about routines as a way to prepare the body for the competition – for example, enhancing arousal. Mantras for them have more psychological effects – mostly motivational which was not mentioned by anyone in connection to the topic of routines.

The main differences in the effects of using mantras and routines are shown on the chart below:

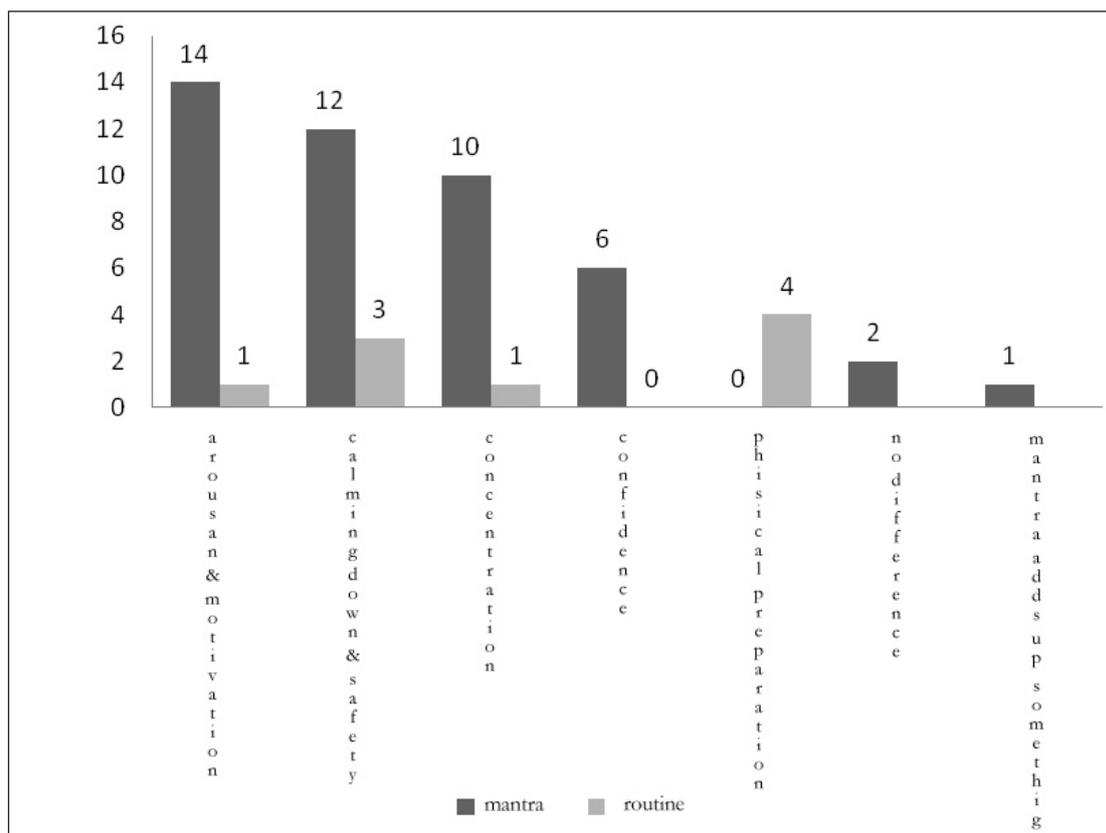


Table 4. The main differences in the effects of using mantras and routines

According to that findings the answer for the main research question is positive – the sport mantras do have different psychological effects than pre-performance routines and therefore should be considered a separate technique of the immediate psychological preparation to start.

6 out of 11 respondents said that for them mantra is important or very important and 5 participants said it would not be any problem for them to left it out of the preparation. One answer was particularly interesting: the participant stated that mantras have impact only at the beginning of the competition and after that it is not important anymore whether he used it or not. Only 2 participants were showing any sign of magical thinking and using mantras in a superstitious way but most of them (12 participants) would notice the difference in performance if they did not use their mantras – mostly in lowering concentration level, higher perceived pressure and lower feel of safety.

4. Chronology

Several participants reported using mantras from the beginning of their sport career (7 participants). There were also cases when the respondents could not show a precise moment they started using mantras. It was often difficult for them because of the reported spreading of

the use of such technique in different parts of life – in some cases it was used before in other areas and then got transferred to the field of sport competition; in some cases it was the other way around. Some of the athletes do not have any trouble with identifying the point in time when they started using mantras. In these cases it was connected to the specific change in the career, like beginning the participation in a higher level competitions (5 participants).

10 interviewees noticed the change in importance of mantras for them. 7 reported that this importance was growing with the development of their sport careers, mostly because of their gaining experience – both in sport and in using mantras. 2 participants described the lowering of mantra's importance (mostly because they have got more experience and do not need so many tools for containing stress and pressure) and 2 of them reported non-linear changes, mostly connected to the changes in their sport careers (like starting to get new experience in the different level of competition or changing the discipline). The chronology of developing mantras and routines was not definite. For 4 participants the mantra was first, for 3 participants the routine was first, and 3 participants developed them both simultaneously. These findings also support the conclusion about mantras and routines being different techniques that can be developed separately and in random order.

5. Content factors

The content of mantra is mostly connected to the discipline performed by the interviewee. There are mantras with the purpose to magnify one's abilities and devalue the task in hand in such manner as "only 2 more km", "you've lifted more during practice", "one more round to go", etc. Other type of content is devaluating the opponent (mantras like "he is also tired, he also feels pain"). Some of the participants also reported using mantras to make sure they are aware of the strategy ("don't go to fast on the beginning", "be careful for the serve", "I will be calm and concentrated", etc.). Some mantras are also, as said before, used by athletes as "cheering for themselves"

and sound like that: "you are the best", "you're doing great", "I'm really well prepared", etc. This effect seems to be the most important for the participants. Many of the interviewees were also talking about mantras featuring war metaphors ("better dead than weak", "this is the fight for life", etc.). Some of the participants talked also about mantras connected to the particular result they wanted to achieve on that particular event, some of them – on the contrary – were highlighting the value of fun and participation.

It is worth to note that only a few participants refused to quote their mantras, in most cases because they wanted to avoid using vulgarisms during the interview.

The amount of the mantras with the particular content is shown on the chart below:

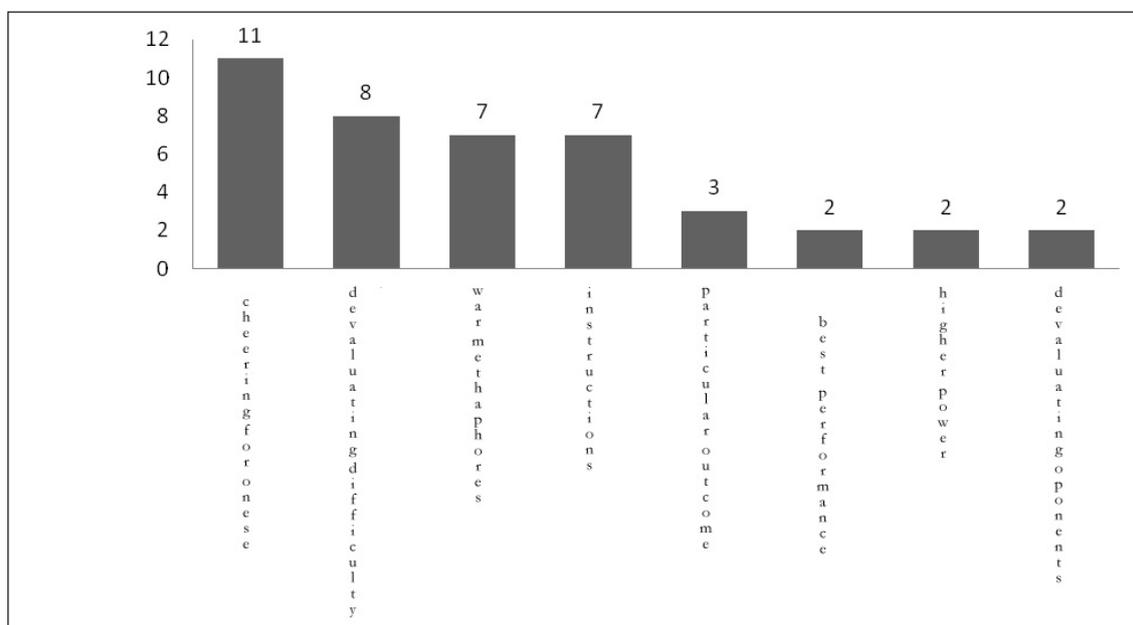


Table 5. The amount of the mantras with the particular content

An interesting observation is connected also with grammar – to be precise, the grammatical person. Some of the participants use the first person mantras ("I am...", "I will...") and some use the second person ("You are...", "You will..."). Interesting thing is also that in many cases these two forms were present in two different mantras of one participant. Due to the lack of time and resources, this topic was not further explored but deserves further inquiry.

For the question concerning the amount of mantras, the precise answer was obtained only from 9 participants. The average number equals 4.33 (from 1 to 15 mantras) but most participants said that they have "from one to a few" mantras and pointed out that in the situation of competitions they use only one of them. 5 participants were not able to answer how many mantras they have but

in every case it was more than one – the most frequent answer was "a few". The participants were often talking about the potential of mantra being depleted and, therefore, the necessity to change it from time to time.

The topic of choosing mantra to the actual use was also interesting. In many cases (9 answers) participants derive them from their feelings and needs at the spot ("it is just something I feel that I need to hear at the moment"). That was especially characteristic for the participants that have many mantras with different effects and content. Some of the participants were also talking about deriving their mantras from the opponent, preparation, weather, tactical and strategic aspects and other factors. 3 participants talked about spontaneous and not conscious decision ("it just comes to me at the moment", "it just pops to my head").

Conclusions and practical tips

The main issue is an attempt to differentiate pre-performance routines from sport mantras, understood as linguistic behaviours and repetitive use of language. The outcome of that was positive – the sport mantras was distinctively different technique for the interviewees. Also, in the light of the findings, the answer for the research question is positive. The sport mantras do have a different outcome for the performance and are used by athletes differently, so they should be treated separately from other forms of immediate preparation to start such as pre-performance routines or self-talk. The second one is more connected to the sport mantras because of the mutual linguistic character of this techniques but even this one is not the same – it lacks the element of repetitiveness.

Other, the most important conclusions that could be drawn from the study described above, are as following:

most sport mantras are prepared individually by the athlete;

- most athletes have multiple techniques for the immediate psychological preparation for the start. Mantras are – in many cases – one of the steps in this complex and sequential process;
- mantras are used by athletes not only before start (like routines) but also during the competition. It especially applies for the endurance type of sports;
- the important thing for athletes are also training mantras;
- the mantra technique has a tendency to spread on other types of activities for the person that started to use it in one area of life;
- in the process of educating athletes about the procedures of the immediate psychological preparation to start the important thing is to pass the knowledge about different techniques;
- many of the questioned athletes had not sufficient knowledge about psychological techniques of immediate start preparation which is a big role to play for both sport psychologists and coaches;
- on the other hand, the big self-awareness of the athletes and their knowledge about their needs could be observed. The problem is, probably, mostly the passing of the formal psychological knowledge to the athletes who already feel the need of developing their own ways of the start preparation.

The main outcome of this study is the new definition of the sport mantra. In the light of the findings the initial definition has to be changed for:

Sport mantra is a repetitive language element used by athlete in the procedure of the immediate preparation to the start or during the performance, a medium, individual for every athlete, for the content developed with an aim to enhance a performance and create a better outcome. A sport mantra can be in an explicit form, in form of internal speech, or in form of received content.

The practical conclusions of this study are directed mostly to persons who have a direct influence on athletes – like coaches or sport psychologists. The most important tip is to pay attention to the psychological education of athletes. Also it is vital that coaches pay attention to their own behaviour and words, because really often they become a mantra for their athletes (or at least an inspiration for one). The key note to take is also the fact that the most important in the influence of others for the process of developing sport mantras is to make the athlete aware of the existence of such a technique and to give the athlete some time to discover the best technique that suits him or her and check it out in a variety of situations and circumstances (Blecharz, 2006). Changing mantras during the athletic career is also important – the athlete should be informed about the possibility that one mantra may stop having any effects and could be the need to replace it by the new one. The above-mentioned effects are also applicable to all immediate ways of psychological preparation to start (Faggiani, McRobert, Knowles, 2012; Lidor, 2007). The athlete should be made aware of many possible techniques and have a possibility to test all of it and choose the most suitable one for the moment.

The important note is regarding the differences between routines and mantras. There is a lot of the evidence about teaching routines to the beginning athletes (see Lidor, Singer, 2000). Some authors strongly advice to do it early while others pay attention to the fact that it can interfere with developing automatism of the movement and correct technique of the sport performance. Some authors even advice not to teach routines until the athlete develops the suitable level of technical experience (Faggiani, McRobert, Knowles; 2012). The sport mantra could be an answer for this dilemma, providing the benefits of repetitiveness in the immediate preparation to the start without the need of developing another movement habit.

Research perspectives

Because the main goal of this study was to describe the phenomenon of the sport mantras, it is easy to highlight on this ground the possible future research possibilities.

First and the most important line of enquiry should be preceding the physiological study about the objective outcomes of using sport mantras on the physiological stress responses. The other topic may concern the difference between mantras and self-talk, in the similar way how the difference between mantras and routines was investigated in the study described above. It may be important mainly because of the phenomenon of the training mantras, which seems to have a lot in common with the instructional type of self-talk. Other topic that comes out from the finding of this study is the change in using mantra in time. The chronology was addressed briefly, but it was not showing any particular pattern of changes, so a more in-depth investigation would be valuable. Other aspects which would be worth further

exploration are connected to the language psychology. One of them is the use of war metaphors and vulgarisms and its connection to the gender of the user. In this study such topics appeared only in the answers of male participants who additionally did not want to talk about it a lot, so probably the further research regarding this matter should be conducted by a male researcher to make interviewees more comfortable. Other topic connected to this field of study is more in-depth look into the grammatical aspects of the sport mantras – some of the participants used the first-person mantras (“talking about oneself”), while others used second-person mantras (“talking to oneself”) which could also be connected with some interesting psychological differences. Other topic which comes out of this study and should be further developed is the issue of use of the music to the immediate psychological preparation to the competition. Research participants talked about it often – referring both to the musical and lyrical layer of such an influence. It is used by them to lower or increase the level of arousal, so this could be interesting topic connecting the fields of psychology, music, and linguistics.

References

- Beauchamp, P. H., Halliwell, W. R., Fournier, J. F., Koestner, R. (1996). Effects of cognitive-behavioral psychological skills training on the motivation, preparation and putting performance of novice golfers. *Sport Psychology*, 47, 85–93.
- Blecharz, J. (2006). Psychologia we współczesnym sporcie – punkt wyjścia i możliwości rozwoju. *Przegląd Psychologiczny*, 49/4, 445–462.
- Boutcher, S. H., Crews, D. J. (1987). The effect of a pre-shot attentional routine on a well-learned skill. *International Journal of Sport Psychology*, 18, 30–39.
- Boutcher, S. H., Zinsser, N. (1990). Cardiac deceleration of elite and beginning golfers during putting. *Journal of Sport and Exercise Psychology*, 12, 37–47.
- Crews, D. J., Boutcher, S. H. (1986). An exploratory observational behavior analysis of professional golfers during competition. *Journal of Sport Behavior*, 9, 51–58.
- Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.
- European Federation of Sport Psychology. (1995). *Position statement 1. Definition of sport psychology*. [On:] <http://www.fepsac.com/> (access: 18.04.2015).
- Faggiani, F., McRobert, A. P., Knowles, Z. (2012). Developing Pre-Performance Routines for Acrobatic Gymnastics: A Case Study With a Youth Tumbling Gymnast. *Science of Gymnastics Journal*, 4/2, 39–52.
- Gracz, J., Sankowski, T. (2007). *Psychologia aktywności sportowej*. Poznań: Akademia Wychowania Fizycznego im. E. Piaseckiego.
- Hackfort, D., Schwenkmezger, P. (1993). Anxiety. [In:] R. N. Singer, M. Murphey, L. K. Tennant (red.) *Handbook of Research on Sport Psychology*. New York: Macmillan.
- Hardy, J., Gammage, K., Hall, C. (2001). A Descriptive Study of Athlete Self-Talk. *The Sport Psychologist*, 2001/15, 306–318.
- Hanin, Y. (1986). State-trait anxiety research on sports in the USSR. [In:] C. Spielberger, R. Diaz-Guerrero (red.) *Cross-cultural anxiety*. Washington: Hemisphere.
- Jarvis, M., (2003). *Psychologia sportu*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Lidor, R. (2007). Preparatory Routines in Self-Paced Events: Do they benefit the skilled athletes? Can they help the Beginners? [In:] G. Tenenbaum i R. C. Eklund (red.), *Handbook of Sport Psychology. Third Edition*. (445–465). Hoboken: John Wiley & Sons, Inc.
- Lidor, R., Singer, R. N. (2000). Teaching Preperformance Routines to Beginners. *Journal of Physical Education, Recreation & Dance*, 71/7, 34–36.
- Łuszczynska, A. (2011). *Psychologia sportu i aktywności fizycznej. Zagadnienia kliniczne*. Warszawa: Wydawnictwo Naukowe PWN.
- Moran, A. P. (1996). Improving concentration in sport. I: Assumptions, exercises and techniques. [In:] *The psychology of concentration in sport performers: A cognitive analysis*. (167–200). Hove: Psychology Press.
- Morris, T., Spittle, M., Watt, A. P. (2005). *Imagery in sport*. Champaign, IL: Human Kinetics.
- Naglák, Z. (2005). *Nauczanie i uczenie się wielopodmiotowej gry z piłką. Kształcenie gracza na wstępnym etapie*. T. 1. Wrocław: AWF.
- Schmidt, R. A. (1975). A schema theory of discrete motor learning. *Psychological Review*, 82, 225–260.
- Shaw, D. (2002). Confidence and the pre-shot routine in golf: a case study. [In:] I. Cockerill (red.), *Solutions in Sport Psychology*. (108–120). London: Thomson.
- Tokarz, M. (2006). Wykład 7. Perswazja. [In:] M. Tokarz, *Argumentacja, perswazja, manipulacja. Wykłady z teorii komunikacji*. (191–218). Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Wjatkim, B. A. (1978). *Rol tempieramienia w sportywnej diejatielnosti*. Moskwa: Fizkultura i Sport.
- Wrisberg, C. A., Anshel, M. H. (1989). The effect of cognitive strategies on the free-throw shooting performance of young athletes. *Sport Psychologist*, 3, 95–104.
- Yerkes, R. M., Dodson, J. D. (1908). The relationship of strength and stimulus to rapidity of habit formation. *Journal of Comparative Neurology and Psychology*, 18, 459–82.

Priority of theoretical preparation for cyclic sports (on the material of examination of sportsmans and trainers)

Viktoria Bohuslavska

Vinnitsa State Mykhailo Kotsyubynskyi Padagogical University, Lviv State University of Physical Culture, Lviv, Ukraine

Summary

The article presents the results of a survey of qualified athletes and trainers for the priority of the use of various means of theoretical training in the process of multi-year sport improvement in cyclic sports. The survey was attended by 146 qualified athletes and 82 trainers from sports such as rowing, swimming, track and field (running and walking), and ski races. The following research methods were used in the work: theoretical analysis and generalization of literary sources, studying of documentary materials, analysis of personal data, methods of mathematical statistics. It has been established that the need to apply such theoretical training materials as collections of scientific articles, study aids, monographs, electronic and audio books, lectures, pedagogical testing, Internet search services increases with each subsequent stage of preparation of athletes. In contrast, the significance of the use of posters, drawings, brochures, animations, documentaries and feature films, games and practical events is reduced with increasing athletic athleticism. At the same time, the most effective means of theoretical training, the majority of respondents note the use of search services Internet and the latest technical means of training at all stages of training.

Keywords: theoretical training, means of theoretical training, cyclic sports

Introduction

The effectiveness of competitive activities depends not only on the level of physical, technical, tactical, psychological preparedness of athletes [9, 10], but also on a certain level of knowledge of the sport, which is achieved in the process of theoretical training [4, 8]. The theoretical training is a peculiar basis for all other parties of training, which is aimed at equipping an athlete with special knowledge for successful training and adventure activities [1, 2, 3].

At the same time ignoring theoretical training leads to the lack of understanding by the athlete of the essence of the tasks performed in the training sessions, which, in turn, generates passivity and leads to a mechanical repetition of the exercises. The lack of activity and creative approach of an athlete to the performance of training tasks violates the feedback in the «trainer-athlete» system, reduces the efficiency of occupations, which makes it impossible to achieve high sports results [1, 2, 9].

In recent years, many studies have been conducted on theoretical training in sports [5, 6, 7, 10]. At the same time, the problem of theoretical training of athletes, namely in cycling sports, was not given due attention.

Consequently, the relevance of this work determines the scientific and applied problem of theoretical training in cyclic sports, which is determined by the contradictions between: the evident need for theoretical preparation and the lack of a program-normative base and proper

scientific and methodological substantiation of the structure and content of theoretical training in cyclic sports.

The purpose of the study was to determine the priority of the means of theoretical training at various stages of multi-year sport improvement in cyclic sports.

Methods

In order to find out the opinions of sports experts, 146 qualified athletes (67 rowers, 29 swimmers, 28 athletes (running and walking), and 22 athletes specializing in ski races were interviewed) and 82 trainers from cyclic sports (21 trainer-rowing teacher, 14 ski races, 17 sports voyages and 30 athletics (running and walking)). The average age of the polled athletes was $22 \pm 0,47$ years, the duration of being in sports – $9,48 \pm 0,35$ years, the average age of the interviewed trainers was $49,46 \pm 1,46$, the length of coaching work $22,16 \pm 0,98$.

Respondents were asked to evaluate each of the offered theoretical training facilities for its expediency at different stages of athlete training, according to the following criteria: “not effective”, “low effective”, “effective”, means.

The following research methods were used in the work: theoretical analysis is very effective is and generalization of literary sources, studying of documentary materials, analysis of personal data, methods of mathematical statistics.

Results

As a result of the definition of athletes' opinions about the most effective means of theoretical training at various stages of many years of sports improvement, it was discovered that the study of collections of scientific articles, manuals and monographs, in order to obtain theoretical knowledge about the chosen sport, the majority of interviewed athletes consider it advisable from the stage of specialized basic training (SBT), in which the percentage of athletes who assessed the above means as «effective» reaches 45,21%, at the preparation stage to the highest achievements (PHA), this share is up to 54,11%, at the stage of maximum realization of individual capabilities (MRIO) – 47,95%, and at stages of preservation of the highest athletic skill and progressive reduction of achievements (MAR) – 39,04%. At the same time, it should be noted that at the stages of MRIO and MAR there was a significant increase (up to 29,45%

and 31,51% respectively) of joint attitudes among athletes who mark these funds as «very effective» (Fig. 1.A).

The use of reference books and encyclopedias in the first three stages of preparation, by the majority of the responded athletes, is 35,65% at the stage of initial training (IT), at the stage of preliminary basic training (PBT) 54,11%, and at the stage of specialized basic training 43,84% (SBT) is defined as «low effective». At the same time, at the next stages of preparation, the majority of respondents, which reaches 36,99% at the PHA stage, 39,04% at the MRIO stage and 37,67% at the stages of the MAR, such means are «effective».

With the development of information technology, e-books and audio books, which are versions of printed books, are becoming increasingly popular. Electronic books can be read, and audiobooks – listen on computers or special devices. According to the respondents, the effectiveness of the use of electronic and audio books is gradually increasing with increasing athletic skills. Thus,

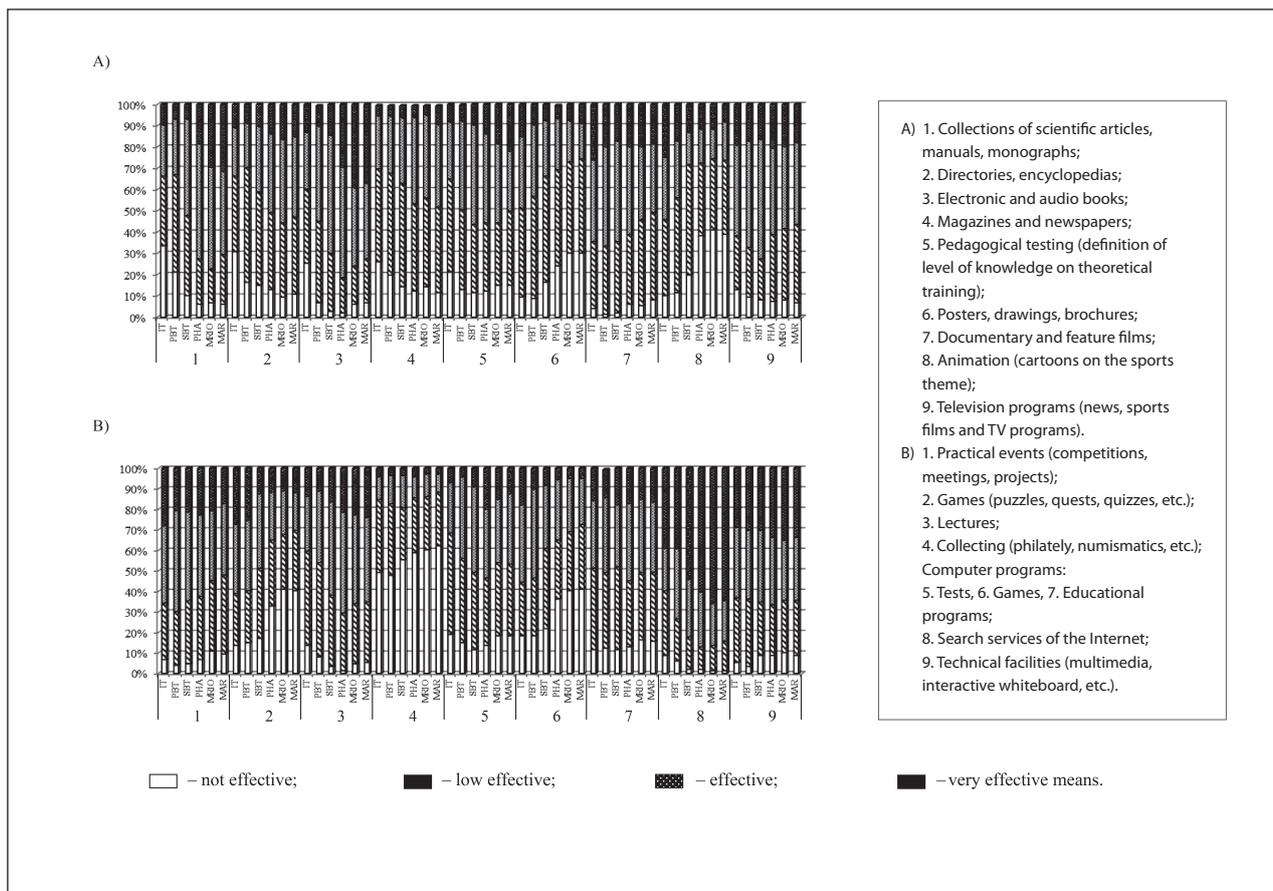


Fig. 1. Application's priority of means of theoretical training at different stages of multi-year sport improvement (on the material of the survey of athletes, n = 146)

IT – stage of initial training; PBT – stage of preliminary basic training; SBT – a stage of specialized basic training; PHA – stage of preparation for the highest achievements; MRIO – stage of maximum realization of individual opportunities; MAR – stages of maintaining the highest sporting skills and gradually reducing achievements.

at the IT stage, the majority of athletes (34,93%) identified the aforementioned means as «low effective», at the stages of the PBT, SBT and PHA respectively 44,52%, 55,48% and 52,05% of sportsmen consider them «effective», And in the last three stages of training almost the same number of athletes, which, in terms of percentages, make up 36,99% and 39,04% at the MRIO stage and 35,62% and 36,99% at the MAR stage, assessed the use of such means «effective» and «very effective».

In contrast, obtaining theoretical information from printed periodicals, such as magazines and newspapers at all stages of multi-year sport improvement, has been identified as «low effective» by the majority of interviewed athletes, whose numbers in the percentage ratio at the stage of the IT reaches 43,84%, at the stage of the PBT – 47,95%, at the stage of the SBT – 48,63%, at the stage of the PHA – 41,10%, at the stage of MRIO – 41,78%, at the stage of the MAR 40,41%.

The use of pedagogical testing not only to test the knowledge of athletes at different stages of preparation, but also as a means of theoretical training at the IT stage, the majority of athletes, which comprised 43,84%, were considered «low effective». At the same time, at the next stages of preparation, the athletes' opinions were divided into almost identical percentages between recognizing the use of such a tool as «effective» and «low effective». Thus, at the PBT stage, these shares make respectively 41,48% and 37,67%, at the SBT stage – 46,58% and 32,19%, at the stage of PHA – 41,78% and 32,19%, at the MRIO stage – 36,99% and 29,45%, at the stage of MAR – 28,08% and 34,93%. It should be noted that at the last stages of preparation (MAR) the percentage of common thoughts of athletes who evaluate pedagogical testing as a «very important» means of theoretical training reaches 21,92%. This can be explained by the ability of athletes who are involved in the final stages of preparing for the analysis of their own mistakes.

Significance of such means as posters, drawings, brochures in the transfer of theoretical knowledge to athletes at all stages of training by the majority of respondents, which at the stage of IT reached 41,78%, at the stage of the PBT – 47,95%, at the stage of the SBT – 50,0%, at the stage of PHA – 45,21%, at the stage of MRIO – 43,15%, at the stage of the MAR – 44,52%, were assessed as «low effective».

The following means of theoretical training, which were evaluated by athletes, were documentary and feature films. According to the majority of respondents, such means are «effective» at the stages of IT (38,36%), PBT (46,58%), SBT (47,26%), and PHA (41,10%). This result can be explained by the fact that sports films contain information that influences the formation of thoughts and attitudes (outlook) of young athletes, encourages them to go in to sports and to lead a healthy lifestyle. At the same time, with the growth of athletic skills, the effectiveness of the above mentioned means is reduced and at the stages of MRIO and MAR, the majority of interrogated athletes, which makes 40,41%, respectively, and 41,10% consider them as «low effective».

It was also predicted that the significance of animation as a means of theoretical training, the majority of polled athletes at the stages of IT (35,62%), PBT (44,52%), and SBT (52,05%) were determined at the level of «low effective» and at the stages of PHA (38,36%), MRIO (41,10%) and MAR (39,04%) – «not effective». Although, it should be noted that at the IT stage, significant percentage shares of athletes' general opinions were recorded, which testify that 29,45% of respondents consider this tool «effective» and 24,66% – «very effective». At the same time, at the subsequent stages of training, the number of respondents who insist on the effectiveness of the use of animation is significantly reduced. In our opinion, the use of cartoon films (cartoons) on sports subjects at the initial stage of training increases the interest of the younger generation of athletes and motivates them to entertain the sport, which is a prerequisite for successful training.

At all stages of the preparation, the majority of respondents viewing TV programs of sports and sports news, which at the stage of IT is 42,47%, at the PBT stage – 50,0%, at the SBT stage – 56,16%, at the PHA stage – 40,41%, at the MRIO stage – 38,36%, and at the stage of MAR – 38,36% assessed as an «effective» means of theoretical training. At the same time, it should be noted that the percentage of joint attitudes among athletes who consider such an «low effective» means to be significant and has a tendency to increase with increased athletic athletics. Thus, at the IT stage, it reaches 25,34%, at the PBT stage – 23,29%, at the SBT stage – 19,18%, at the PHA stage – 31,51%, at the stage of the MRIO – 33,56%, and at the stage MAR – 36,99%.

As seen from the figure 1.B, conducting practical events, including competitions and projects on sports topics, meetings with prominent athletes and coaches in the first stage of the process of multi-year improvement was recognized as «effective» by the majority of athletes, which in the percentage is at the stages of IT – 37,67%, PBT – 49,32%, SBT – 43,15%, PHA – 39,73%. In the second stage of the process of multi-year improvement, the expediency of conducting practical measures to transfer athletes to theoretical knowledge of the chosen sport is reduced and at the stage of the MRIO marked parity in its evaluation. That is, the «low effective» and «effective» way this tool considers the same percentage of responded athletes, which is 34,25%. At the same time, in the majority of athletes, the majority of athletes, at 38,36%, are «low effective», and 34,93% are considered to be «effective» at the stages of MAR.

The use of games (puzzles, quests, quizzes) during the theoretical training sessions at the IT and PBT stages by most athletes, which is 33,56% and 34,25% respectively, is rated as «effective». At the same time, at the IT stage there is a situation where significant, almost equivalent groups of athletes consider the use of the above mentioned means «low effective» (25,34%) and «very effective» (27,40%). A similar situation is observed at the stage of the PBT. The groups of athletes who evaluate this tool as «low effective» and «effective» are parity and amount

to 25,34%. At the stage of the SBT, two significant groups of respondents' general opinions were registered, among which 34,25% of the respondents prioritized the evaluation of games as «low effective» and 36,30% – as «effective» means of theoretical training. Beginning with PHA, we can state that a significant reduction in the need for the use of gaming means. Thus, 32,88% of respondents consider it «not effective», 32,19% – «low effective», 23,29% – «effective» and only 11,64% – «very effective». It is obvious that at the higher stages of preparation, the majority of respondents, who at the stage of MRIO is 41,10%, and in the stages of the MAR – 40,41%, indicate the «not effective» use of games to increase the theoretical preparedness of athletes.

Conducting open lectures, most athletes at the stages of IT (45,89%) and PBT (26,71%) define «low effective». At the next stages of preparation, a significant percentage of the athletes' general opinions were formed, indicating their effectiveness. Thus, at the stage of SBT, the proportion of athletes who marked the holding of open lectures with athletes was 45,21% as an «effective» means of preparation, at the stage of PHA – 39,73%, at the stage of MRIO – 34,25%, and at the stage of MAR – 34,25%.

Collecting as a purposeful collection of objects displaying visual information about sports events by the majority of athletes, which at different stages is: IT – 49,32%, PBT – 47,95%, SBT – 55,48%, PHA – 58,9%, MRIO – 60,27%, MAR – 62,33% was rated as «not effective» means of theoretical training. It should be noted that the number of athletes who are so believed to increase with each subsequent stage of preparation.

Evaluating the expediency of using computer testing, in order to increase the theoretical preparedness of athletes, allowed to allocate two significant percentages of respondents' general opinions at all stages of multi-year sport improvement. Thus, at the IT stage, the proportion of athletes who consider this tool «low effective» is 49,32% and «effective» – 24,66%, at the next stages of preparation these proportions reach 41,10% and 39,73% respectively (PBT), 37,67% and 41,78% (SBT), 32,88% and 33,56% (PHA), 35,62% and 30,82% (MRIO), 34,93% and 34,25% (MAR) respectively.

The use of computer games as a means of theoretical training in the opinion of most athletes is appropriate at the initial stages of preparation. Thus, 37,67% of respondents consider themselves at the stage of IT «effective», and 43,15% at the PBT stage. At the subsequent stages of preparation, there is a noticeable tendency to reduce the need for the use of such a remedy. It becomes noticeable already at the stage of the SBT, in which 39,04% of respondents indicated that the use of computer games to increase the theoretical fitness of athletes is «ineffective» and 30,82% «effective». In the second stage of the multi-year improvement process, the majority of respondents (PHA – 36,30%, MRIO – 40,41%, MAR – 41,10%) are not advised to use the above mentioned tool as «not effective». At the same time, the groups of athletes who consider the use of this medium in the stages of PHA, MRIO and MAR «low

effective» make 28,77%, 28,77%, 31,51%, and «effective» – 29,45%, 26,03%, 22,60%, which confirms the variation in the responses of athletes.

Regarding educational and educational programs that are available on the World Wide Web, at all stages of many years of sports improvement, athletes' opinions are divided into two significant proportions. Thus, the respondents who indicated that the given measure is «low effective» is 39,73% at the IT stage, 36,99% in the PBT, 40,41% in the SBT, 32,19% in the PHA, 32,88% in the MRIO, MAR – 33,56%, and the «effective» such tool is at the stage of the IT for 32,88%, the PBT – 36,30%, the SBT – 30,14%, the PHA – 37,67%, the MRIO – 35,62%, MAR – 34,25%.

The expediency of using the search services of the Internet, in order to obtain theoretical knowledge about the chosen sport, is estimated by most sportsmen as the «most effective» means at all stages of preparation. At the same time, it should be noted that with each subsequent stage of training, the number of athletes who evaluated the tool as «very effective» increases. Thus, at stages of IT and PBT it makes up 39,04%, at the SBT stage – 54,11%, PHA – 60,27%, MRIO – 65,75%, MAR – 64,38%.

Athletes' thoughts on the use of multimedia at different stages of training were divided into two almost parity percentages. Thus, at the IT stage, the percentage of athletes who consider the use of multimedia on lessons of theoretical training «low effective» is 31,51%, and the percentage of athletes who mark such means as «effective» reaches 34,25%. At the PBT stage, these proportions are respectively 32,88% and 33,56% respectively. Starting with the SBT, the need for the use of this tool is increasing and 34,93% of respondents estimate it as «effective» and 30,14% as «very effective» means. At the next stages of preparation, these shares respectively make up: at the stage of PHA – 32,88% and 33,56%, at the stage of MRIO – 29,34% and 34,93%, and at the stage of MAR – 30,82% and 33,56%.

As a result of a survey of trainers on the effectiveness of the use of various theoretical training tools, it has been established that the use of collections of scientific articles, manuals and monographs, with the aim of obtaining theoretical knowledge about the chosen sport, considers that the majority of interviewed sports experts are not effective at the stages of initial training (IT) (70,73%) and preliminary basic training (PBT) (42,68%) and low effective at the stage of specialized basic training (SBT) (48,78%), which can be explained by low level of assimilation I have information on the above mentioned sources athletes, whose age corresponds stages IT – SBT (Fig. 2.A). In the further stages of preparation, the need for the application of these facilities increases. This is indicated by an increase in the percentage of respondents who consider them to be «effective» and «very effective». Thus, at the stage of preparation for the highest achievements (PHA), they reach, respectively, 42,68% and 23,17%, at the stage of maximum realization of individual opportunities (MRIO) – by 39,02% each, at the

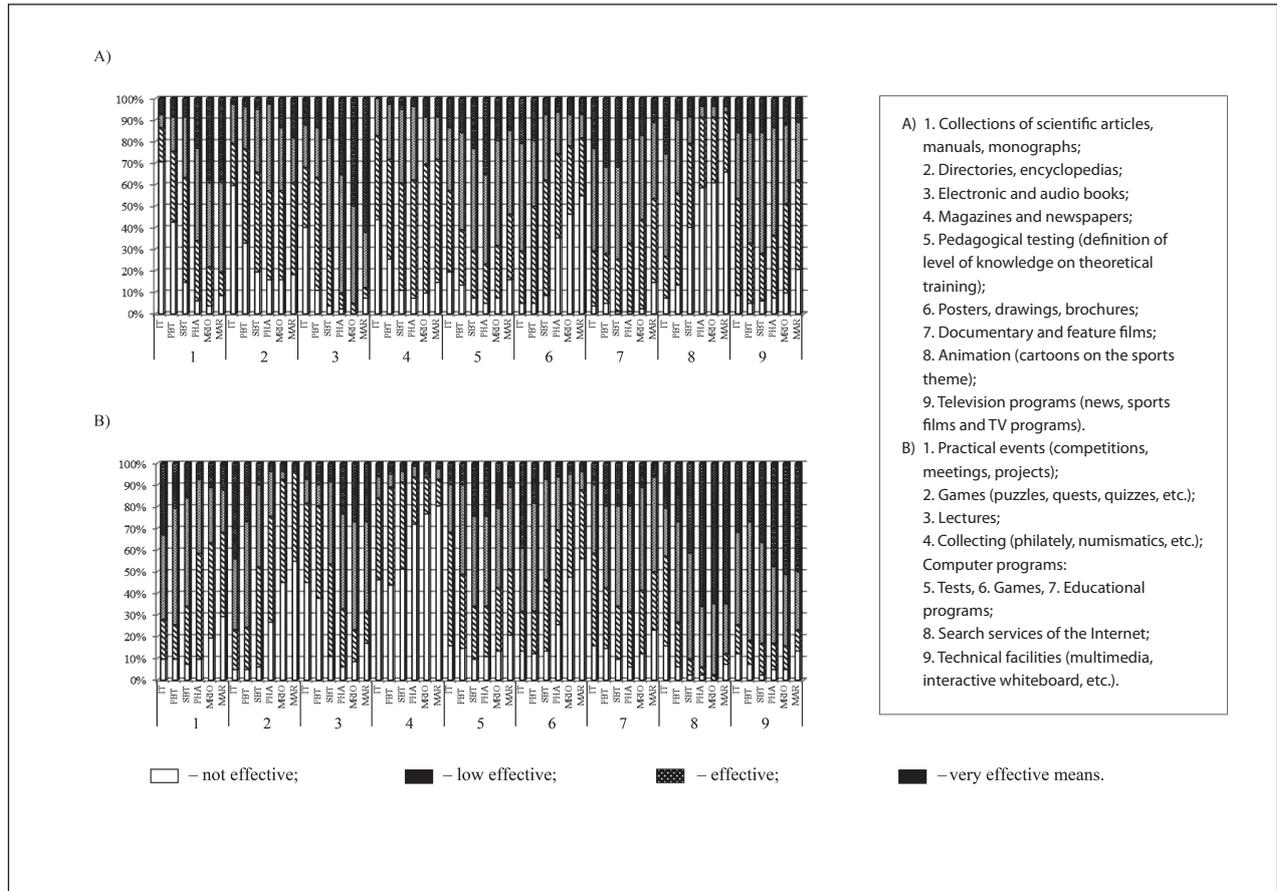


Fig. 2. Application's priority of means of theoretical training at various stages of many years of sport improvement (on the material of the survey, trainers n = 82)

IT – stage of initial training; PBT – stage of preliminary basic training; SBT – a stage of specialized basic training; PHA – stage of preparation for the highest achievements; MRIO – stage of maximum realization of individual opportunities; MAR – stages of maintaining the highest sporting skills and gradually reducing achievements.

stages of maintaining the highest sporting skills and the progressive reduction of achievements (MAR) – 41,46% and 39,02%.

The use of reference books and encyclopedias, in theoretical training of athletes, is considered by most trainers as «low effective» at all stages of the preparation of athletes, except for the first (IT), in which 59,76% of respondents insist on «not effective» their application. Starting from the stage of the BPP «little effective», the above means consider – 43,90%; at the stage of the SBP – 46,34%, at the stages of PHA and MRIO – by 41,46%, at the stages of MAR – 42,68% recovery. It should be noted that significant percentage of the general opinions of experts point to the «effectiveness» of the use of directories and encyclopedias at the stages of SPB (29,27%), PHA (40,24%), MRIO (29,27%), although at the last stages of preparation (MAR), the need for such funds is decreasing again (20,73). The importance of using electronic and audiobooks in the theoretical training of athletes in cyclic sports increases from stage to stage. So, if at the IT stage, the majority

of respondents (40,24%) point out their application as «not effective», and at the stage of the PBT (52,44%) – as «low effective», at the stages of SPB and PHA the majority of sports specialists (51,22% and 54,88% respectively) define them as «effective» means of preparation. The need to use electronic and audiobooks, while preparing for the second stage of the multi-year improvement process, is growing and at the stages of MRIO and MAR they are considered by «effective» means respectively 45,12% and 25,61% of respondents, and «very effective» – 50,00% and 62,20%.

Such a choice of specialists can be explained by the age-old peculiarities of perception and awareness of the information received, using all of the above-mentioned means.

According to most of the trainers, receiving theoretical information from periodical popular science literature, namely magazines and newspapers, is «ineffective» at the first stage of preparation (43,90%) and «low effective» at all other stages of preparation. That is, the per-

centage of respondents who hold such an opinion at the PBT stage is 46,34%, at the SBT stage – 50,00%, at the PHA stage – 54,88%, at the MRIO stage – 59,76%, at the MAR stage – 57,32%.

Pedagogical testing as a means of theoretical training, the majority of respondents consider «effective» from the stage of the PBT. In percentage terms, the number of specialists who support this opinion at different stages of preparation is: 45,12% (PBT), 47,56% (SBT), 41,46% (PHA), 48,78% (MRIO), 39,02% (MAR).

The use of posters, drawings and brochures as a means of theoretical training was considered «effective» only at the first stage of preparation (50,00%); at the subsequent stages of preparation, their significance is reduced and at the stages of the PBT, SBT, and PHA the majority of specialists (45,12%, 53,66% and 39,02% respectively), they mark their «low effective», and during the preparation of the second stage of the process of multi-year improvement, they were considered «not effective», at the stage of the MRIO – 46,34%, and on 54,88% of the respondents were satisfied with the MAR stage.

According to most of the interviewed trainers, the view of documentary and feature films on sports topics is «effective» and «very effective» when preparing for the first stage of the multi-year improvement process. This is indicated by significant percentages of respondents' general opinions, which at the stage of IT are respectively 47,56% and 23,17%, at the PBT stage – 40,24% and 31,71%, at the SBT stage – 42,68% and 31,71%, at the stage of PHA – 48,78% and 18,29%. In contrast, during the preparation of the second stage of the process of multi-year improvement, the significance of the above-mentioned means is reduced also at the stages of MRIO and MAR, the majority of respondents, which respectively makes 41,46% and 39,02% consider it «low effective».

At the same time, the review of cartoon films on sport as a means of transferring knowledge of the chosen sport found most of the trainers to be «effective» (47,56%) and «very effective» (25,61%) only at the initial stage of training (IT). At the subsequent stages of preparation, the need for animation in the theoretical training of athletes is reduced, and from the stage of the SBT and to the stages of MAR, the number of respondents who consider this tool «ineffective» increases from 40,24% to 65,85%. Such a low demand for animation, as a means of transferring theoretical knowledge to athletes, at most stages of preparation is common, both for sports professionals and for high-class athletes who took part in the survey.

The opinions of experts regarding the next theoretical preparation tool, which is the review of sports television programs and sports news, were divided into two significant percentages. Thus, at the stage of IT 45,12% of respondents consider the above indicated means «low effective», and 30,49% – «effective». At PBT, SBT, and PHA stages, the majority of respondents (51,22%, 56,10% and 50,00% respectively) define television as an «effective» means, while somewhat lower percentage of respondents (28,05%, 21,95% and 29,27%) note it as «low effective» means. At the stages of MRIO and MAR,

the percentage of common opinion among specialists who consider such a means of transferring knowledge to be «low effective» is 41,46%, while «effective» 36,59% and 26,83% respectively.

As seen from the figure 2.B, conducting practical events, including competitions and projects on sports topics, meetings with prominent athletes and trainers in the first three stages of training, the majority of trainers, which at the stage of IT was 39,02%, PBT – 53,66%, SBT – 50,00%, are estimated as an «effective» means of theoretical training of athletes. At the same time, starting from the next stage of preparation, the significance of such a remedy is reduced and by the majority of respondents, who at the stage of PHA make up 48,78%, at the stage of MRIO – 43,90% and in the stage of MAR – 39,02%, it is noted as «low effective» means.

The use of games (puzzles, quests, quizzes), with the purpose of transferring theoretical knowledge to athletes, at the stages of the IT and the PBT, consider significant groups of respondents as «very effective» (respectively, 43,90% and 26,83%) and «effective» means (respectively 32,93% and 48,78% respectively). At the same time, according to most experts, the efficiency of information transmission by means of gaming at the stages of the SBT (46,34%) and the PHA (48,78%) is reduced to the assessment of «low effective», while in the stages of MRIO (45,12%) and MAR (54,88%) – to the rating «not effective».

According to trainers, holding open lectures with athletes at the stages of IT and PBT is inappropriate. This is indicated by a significant percentage of the general attitudes of athletes who insist on «not effective» (45,12% and 37,80%) and «low effective» (36,59% and 42,68%) of such a tool. At the next stages of training, the significance of the above means increases. Thus, at the stage of the SBT, two significant groups of athletes were formed that consider it «low effective» (42,68%) and «effective» (37,80%). At the same time, the majority of respondents in the PHA, MRIO and MAR stages, which respectively make up 43,90%, 50,00% and 41,46%, evaluate it as an «effective» means of preparation.

The ability to use collectibles as a means of theoretical training, sports experts rated skepticism. Thus, at the IT stage, the proportion of respondents who emphasize the «ineffectiveness» of such a tool is 46,34%, and – to the «low efficiency» 37,80%; at the PBT stage, these shares reach 43,90% and 45,12%, respectively; at the SBT stage – 51,22% and 40,24%; at the stage of PHA – 71,95% and 21,95%; MRIO – 76,83 and 17,02%; MAR – 80,49% and 12,20%.

In opinion of the majority of trainers (52,44%), the use of computer testing as a means of theoretical training of athletes, at the stage of IT is «low effective». At the same time, at the next stages of preparation, the significance of this tool increases, and at the stages of PBT, SBT and PHA, the percentage of respondents who mark its «effective» reaches 41,46%, while in the stages of MRIO and MAR – 36,59% and 37,80% in accordance.

The use of computer games, in order to increase the

theoretical level of athletes' training, at the IT stage, a significant number of trainers rated «very effective» (39,02%) and «effective» (29,27%). In the subsequent stages of preparation, the need for the use of this tool is gradually reduced. Thus, at the stages of PBT and SBT, the majority of respondents, which was 50,00% and 46,34% respectively, noted it as an «effective» means of preparation. At the stages of PHA, MRIO and MAR, the significance of this tool is reduced to an «low effective» (43,90%, 34,15% and 31,71% respectively) and «in-effective» (respectively 25,61%, 47,56% and 56,10%) means of theoretical training of athletes.

Computer educational and educational programs, the majority of sports experts rated as «effective» means of theoretical training at all stages of many years of sports improvement of athletes besides the first. Thus, at the PBT stage, the highest percentage of total attitudes among the athletes is 37,80%, at the SBT stage – 46,34%, during the PHA stage – 48,78%, at the stage of the MRIO – 47,56%, and at the stages of the MAR – 43,90%.

Internet search services (google.com, bing.com, yahoo.com, shukalka.com.ua, meta.ua, guugle.com.ua, etc.) allow athletes and their coaches to independently find the necessary information from the selected species sport. Therefore, the need for their use, according to trainers, is increasing with each subsequent stage of training. Thus, at the IT stage, the majority of respondents (42,68%) consider such a tool «low effective». At the same time, in the stages of the PBT and the SBT, its significance rises to an «effective» score, indicated by 46,34% and 48,78% of respondents respectively. Starting from the PHA stage and the MAR stages, the majority of respondents (65,85%, 64,63% and 64,63% respectively) point to Internet search services as a «very effective» tool for theoretical training of athletes.

The use of technical means of training (multimedia), aimed at transferring theoretical knowledge to athletes, is determined by the majority of trainers as «effective» and «very effective» at all stages of preparation. Thus, at the IT stage, such percentages of respondents' general opinions reach 42,68% and 31,71% respectively; at the PBT stage – 54,88% and 25,61%; at the stage of the SBT – 46,34% and 36,59%; PHA – 35,73% and 47,56%; MRIO – 32,93% and 51,22%; MAR – 26,83% and 50,00%.

Discussion

Comparing the responses of high-class athletes and trainers, it can be noted that when assessing the theoretical preparation of their thoughts on the most effective and least informative means of theoretical training coincide. Both coaches and athletes, the most effective means of theoretical training, note the use of Internet search services and the latest technical means of training, and the least-demanded means – collectibles. There is also a general increase for both coaches and athletes, with each sub-

sequent stage of preparation of athletes, the need for the use of collections of scientific articles, manuals, monographs, electronic and audio books, pedagogical testing and testing with the help of computer programs, lectures, Internet search services, as well as the reduction of the significance of the use of posters, drawings, brochures, animations, documentaries and feature films, games (including computer) and practical measures from the IT stage to the MAR stage.

At the same time, the informative nature of watching television shows, according to trainers and athletes, reaches its maximum level at the stages of the PBT and the SBT.

Different from the thoughts of coaches and athletes, it should be noted the need for the use of such means of theoretical training as directories and encyclopedias, as well as printed periodicals (magazines and newspapers). So, according to the interviewed athletes, the priority in the application of the above means increases with each subsequent stage of preparation. In contrast, the majority of interviewed trainers point out that while preparing for the second stage of the multi-year improvement process, it's informativeness decreases. In addition, trainers attach greater importance to improving the theoretical fitness of athletes through the use of computer training and education programs than qualified athletes who took part in the survey.

Conclusion

As a result of the survey, it was found that, among qualified athletes and among trainers, most respondents insist on the importance of using the latest information technologies to increase the theoretical fitness of athletes at all stages of preparation.

The need to use such theoretical training tools as collections of scientific articles, manuals, monographs, electronic and audio books, lectures, pedagogical testing (including testing with computer programs), Internet search services increase with each subsequent stage training of athletes. By contrast, the significance of the use of posters, drawings, brochures, animations, documentaries and feature films, games (including computer) and practical measures is reduced with the increase of sportsmanship of athletes.

References

- Bohuslavskaya V. [2016] *The contents of the athletes theoretical training in swimming*. Physical Culture, Sport and Health of the Nation: a collection of scientific works. Issue 2. Ukraine: Vinnitsa State Pedagogical University named after Mikhail Kotsiubynsky; Zhytomyr State University named after Ivan Franko, Zhytomyr. pp.119–123.
- Briskin Yu., Pityn M., Bohuslavskaya V. [2016] *Issues of the theoretical training in sport*. Physical Culture, Sport and Health of the Nation: Sb. sciences works. Issue 1. Ukraine: Vinnitsa

- State Pedagogical University named after Mikhail Kotsiubynsky; Zhytomyr State University named after Ivan Franko, Vinnytsia, pp. 257–261.
- Briskin Yu., Pityn M., Bohuslavska V. [2017] *The content of the poll of specialists on the problem of theoretical training in cyclic sports*. Physical Culture and Sports: Experience and Prospects: Materials of the International Scientific and Practical Conference. Ukraine: Chernivtsi, Chernivtsi National University. Y.Fedkovich, pp. 12–14.
- Briskin Yu., Pityn M., Zadorozhna O., Smyrnovskyy S., Semeryak Z. [2014] *Technical devices of improvement the technical, tactical and theoretical training of fencers*. Journal of Physical Education and Sport (JPES), 14(3), pp.337–341.
- Bohuslavska V., Furman Yu., Pityn M., Galan Y., Nakonechnyi I. [2017] *Improvement of the physical preparedness of canoe oarsmen by applying different modes of training loads*. Journal of Physical Education and Sport (JPES), 17 (2), pp.797–803. DOI:10.7752/jpes.2017.02121
- Gorshova I., Bohuslavska V., Furman Yu., Galan Y., Nakonechnyi I., Pityn M. [2017] *Improvement of adolescents adaptation to the adverse meteorological situation by means of physical education*. Journal of Physical Education and Sport (JPES), 17 (2) pp. 892–898. DOI:10.7752/jpes.2017.02136
- Hruzevych I., Bohuslavska V., Kropta R., Galan Y., Nakonechnyi I., Pityn M. [2017] *The effectiveness of the endogenous-hypoxic breathing in the physical training of skilled swimmers*. Journal of Physical Education and Sport (JPES), 17 (3), pp. 1009–1016. DOI:10.7752/jpes.2017.s3155
- Pityn M., Briskin Yu., Zadorozhna O. *Features of theoretical training in combative sports* [2013] Journal of Physical Education and Sport (JPES), 13 (2), pp. 195–198.
- Pityn M. [2015] *Theoretical training in sport*: monograph. Ukraine: Lviv, Lviv State University of Physical Culture, 372 p.
- Platonov V.N. [2015] *Olympic Athletes Training System. General theory and it's practical applications*: a textbook [for trainers]: in 2 books. Ukraine: Kiev, Olympic literature. Kn. 1, 680 p.

Role of family in child preparation to participate in physical activity in free time

Eligiusz Madejski¹, Grażyna Kosiba², Roger Madejski³

¹ Academy of Physical Education, Cracow, Poland

² Academy of Physical Education, Cracow, Poland

³ Academy of Physical Education, Cracow, Poland

Summary

Purpose: The purpose of the study was to determine the relation between parents' physical activity and a child's physical activity in leisure time and to identify the extent parents engage in physical education of their children. **Methods:** The research was conducted among randomly selected parents of children aged 7-10 years living in Cracow. The study involved 334 parents (children aged 7-8 years), 365 (children aged 8-9 years) and 317 (children aged 9-10 years). The diagnostic survey method was used in the study, and the basic technique was a questionnaire. The questionnaire was designed to evaluate the level of parents' physical activity, their children's physical activity, and parents' interest in their children's physical education. The SPSS 21 (IBM Corp., 2012), chi-square significance test and Spearman rho correlation analysis were used for the statistical analysis of the data. **Results:** The results have shown that the level of parents' engagement in the physical activity of children at a school age (85.1%) was very low. The parents' physical activity was clearly affected by their education and socio-economic status. The findings have also indicated that the highest number of children aged 7-10 (39.8%) pursue physical activity at an average level. The highest level of physical activity was detected in a small group of children (4.1%) and low and very low in 34.7% of participants. The level of parents' interest in the physical activity of children was mostly moderate (45.4%). However, a considerable number of parents (41.4%) exhibited a low level of interest. **Conclusion:** The level of physical activity of parents and their children in leisure time is low. It was found that a child's depends on family socio-economic status, parents' educational background, their physical activity and engagement in physical education of a child.

Keywords: physical activity, parents, children

Introduction

Parents through constant contact with their child and their position have unique influence on their physical fitness, motor skills, or pro-health behaviors. The effectiveness of parental work in this regard is not solely determined by a long-term contact with a child and parents' authority, but also by child's own attitude and behavior [1]. It is the norms and patterns of behavior in the family that shape a child's tendency to perform certain social roles, including habits related to their body, health or physical fitness, [2]. A personal example which stems from parents has strong effects on children to participate in physical activity. The fact that parents practice certain sports and exercise regularly can impress children [1], but also motivate them to imitate such behaviors. Research has repeatedly confirmed that parents' pro-health behaviors are closely correlated with the behavior of their children [3-7]. Studies conducted in Brazil, for example, have shown a strong relation between the physical activity of fathers and sons, as well as between mothers and daughters. The more active fathers and mothers are, the more

active sons and daughters are [8]. A family socio-economic status is also vital to physical activity. Studies in England have confirmed that children who are raised in families with a lower socio-economic status have less opportunity to practice different forms of physical activity, as they often live in neighborhoods with poorly equipped playgrounds and sport facilities [9].

Parents also play a central role in shaping children's positive attitudes toward physical activity [10]. Imitation of such behavior is recognized in the socio-cognitive theory as one of the most important mechanisms of social influence on children and adolescents' behavior and attitudes [11].

A joint physical activity of parents and children can have many advantages. A parent can help a child when they experience difficulty in performing the tasks, control their behavior, or provide guidance. A systematic child-to-parent contact creates a positive image of oneself and the world, but also helps to develop general interests. What is more, a family shapes the view of human values and needs, including motoric needs, and the habits acquired at home become most prevailing. Another advantage of a joint family involvement in phys-

ical activity is the possibility to form a child's awareness. It concerns the meaning of sports activity in life, and it develops under the influence of knowledge and experience acquired in the family environment. However, Przewęda [12] asserts that a family home is not always an educational environment, which awakens and addresses a child's motoric needs. Parents may not be properly prepared to run a thoughtful physical activity with a child.

It is therefore necessary to find optimal and effective solutions that parents could apply into a preparation of a child to participate in physical education.

The purpose of the study was to determine the relationship between parents' physical activity and a child's physical activity in the free time and to identify the extent parents were engaged/interested in the physical education of their children. Furthermore, the study was also intended to provide answers to three specific questions:

1. What is the level of parents and their children's physical activity in free time?
2. To what extent does children's physical activity depend on parents' level of physical activity, education, socioeconomic status, and engagement in the physical activity of their own children?
3. Does child's age differentiate the variables tested?

Material and methods

The research was conducted on randomly selected parents of children aged 7-10 years living in Cracow. Since the age range of children includes early school education, the randomization was drawn up on the basis of the list of primary schools, which was obtained from the Department of Education of the City of Cracow. Based on the assumptions of the research project, sport and integration schools were excluded from the design, due to the

differences in functioning of the children and their families in the area of physical activity. 19 schools (20%) out of total 91 were selected randomly, and next 65 classes (40%) were randomly drawn (40%). The schools were located in 14 (78%), out of the total 18, districts of Cracow. After selection of schools and classes, the permission to conduct the study was obtained from the Department of Education. In one case the class resigned from participation in the study, and the number of classes was reduced to 64.

Based on the data provided by schools, the parents received a letter which contained information about the purpose of the study, the consent form to participate in the study, and the questionnaire for the parents, as well as a return envelope. The content analysis of the returned envelopes showed that in 319 (22.9%) cases, the consent to participate in the study was not obtained, and 57 (4.1%) questionnaires contained incomplete data or incorrect data, thus were excluded from the further analysis.

So, in total 334 parents (children 7-8 years old), 365 (children aged 8-9 years) and 317 (9-10 year olds) participated in the study.

As far as educational background of participants is concerned (Table 1), it was found that the majority of the respondents had completed secondary education (44.1% of mothers and 33.9% of fathers). Almost one third of all fathers had completed a vocational education and mothers possessed a Master degree. In the group of parents with a higher vocational education, there were slightly more mothers (5%) than fathers (3.5%).

Over a half of participants (66.7% mothers, 62.9% fathers) were between 31 and 40 years old (Table 2). 15% of mothers and 6.8% of fathers were below 30 years old. Among parents at the age between 41 and 50, there were almost 10% more fathers than mothers. The mean age for mothers was 36 years old and the fathers 38 years old.

Table 1. Parents' educational background

| Parent | Education | | | | | | | | | | Total | |
|--------|------------|-----|------------|------|-----------|------|-------------------|-----|---------------|------|-------|-----|
| | Elementary | | Vocational | | Secondary | | Higher vocational | | Higher Master | | | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Mother | 21 | 2,1 | 195 | 19,2 | 448 | 44,1 | 51 | 5,0 | 301 | 29,6 | 1016 | 100 |
| Father | 53 | 5,2 | 308 | 30,3 | 344 | 33,9 | 36 | 3,5 | 275 | 27,1 | 1016 | 100 |

Table 2. Parents' age

| Parent | Age | | | | | | | | Total | |
|--------|--------------|------|-----------|------|-----------|------|------------|-----|-------|-----|
| | Under 30 y/o | | 31-40 y/o | | 41-50 y/o | | Over 51y/o | | | |
| | N | % | N | % | N | % | N | % | N | % |
| Mother | 152 | 15,0 | 678 | 66,7 | 180 | 17,7 | 6 | 0,6 | 1016 | 100 |
| Father | 69 | 6,8 | 639 | 62,9 | 279 | 27,5 | 29 | 2,8 | 1016 | 100 |

The survey method was used in the study, and the questionnaire was designed to assess the level of parents' physical activity, children's physical activity, and parents' interest in children's physical education. The questionnaire was tested in the pilot study on 50 respondents in order to verify the typological representativeness of the group in terms of age, gender and educational background to the relevant sample. The pilot study was conducted in the early education grades (I-III) during teacher-parent meetings on 15 parents from grade I (15 parents), grade II (18) and grade III (17). This group participated only in the pilot study.

The purpose of the pilot study was to verify whether the questionnaire was properly constructed, respondents understand all questions and instructions, and no answers were missing (suggested by participants). According to the basic methodological assumptions, pilot studies are often carried out for a newly constructed research tools, particularly in case of qualitative data.

The questionnaire consisted of three parts. The first part concerned parents' physical activity. The physical activity level of parents comprised: past and present sport activity, all-year-long and seasonal physical activity, morning exercise, relaxation exercises after mental or physical work and in stressful situations, as well as the frequency of activities (number of days per week) and volume of activities (number of hours per week). The questionnaire consisted of closed questions in this part, and the respondents selected one or two options on a scale. Often, the questions were accompanied by additional questions to complement the participants' answers. Almost all closed questions were scored. Each respondent could score: 1 point for "yes" answer to the questions 1, 2, 4, 5, 6; from 1-5 points for answering questions 3A and 3B; 2 points for "every day" and "always" and 1 point for "sometimes" to the questions 4A, 5A, 6A; 2 points for "all year" and 1 point for "seasonally" to the question 3. Additionally, a respondent could choose both answers to question 3, and thus gain a total of 3 points, because besides all-year-long physical activity, some of them also practised seasonal sports. A total of all points for each mother and father ranged from 0-24, accounting for five score ranges: very low under 5 points, low 5-9 points, medium 10-14 points, high 15-19 points, very high 20-24 points. The sum of mother and father's points accounted for the level of physical activity of both parents. Thus, the following ranges were chosen for both parents: very low, under 10 points, low 10-19 points, average 20-29 points, high 30-39 points, very high 40-48 points.

The second part of the questionnaire concerned children's physical activity. The level of physical activity of children was determined using frequency (number of days per week) and volume (hours per week) of organized and non-organized physical activities in leisure time. The questionnaire consisted of closed and semi-open questions in this part. The respondents selected one option of a close questions on the scale. Two questions were accompanied by additional questions to complement a re-

spondents' answer. Participants selected one or two options on the scale to semi-open questions and could add other answer in the free space provided. The questions 8 and 9B referred to the third part of the questionnaire. Their presence is justified by a close relation to content of the questions in this place, but the score was calculated in the third part of the questionnaire. The following scores were given to the closed questions. 1 point for "yes" answer to questions 7 and 9; from 1-4 points to the question 7C; from 1-5 points to questions 7D and 9D; 1-6 points to the question 9C. In total, the student could score from 0-22 points accounting for five score ranges: very low under 4 points, low 4-8 points, medium 9-13 points, high 14-18 points, and very high 19-22 points.

The third part of the questionnaire concerned parents' interest in the physical education of their own child. The assessment of the level of interest included: parental care for a child participating in organized physical activities, a joint participation with a child in a non-organized activity during leisure time, contact with a physical education teacher, and interest in the level of physical activities at school. Closed questions prevailed in the third part. The following scores were given to the following answers: 1 point for "yes" answer to questions 11, 12, 13, 14; for question 11A: 1 point for answer "once a year", 2 points for "twice a year", 4 points for "at every opportunity"; for questions 8 and 9B (the second part of the questionnaire) 1 point for answer "father" and 1 point for answer "mother." In total the score ranged from 0-12 points. There was one additional, open question, in which parents were asked to justify the answer. In this case a classification was performed according to a previously prepared key. The range of variables, i.e. the distance between the minimum and maximum scores was lower, therefore to examine the level of parental interest in the physical education of their children, the following three intervals were defined: low under 5 points, average 5-8 points and high 9-12 points. The scores for scales in each part of the questionnaire were discrete. The ranges adopted for the analyses were presented in integers.

The questionnaire contained instruction which informed about the purpose of the research and how the results would be used. The respondents were asked for honesty and reliability when filling the questionnaire. The participants also provided demographic data such as age (parent and child), gender of a child and the grade (I-III) at school, parents' educational background, type of work, and the number of dependants (children).

The socio-economic status of the family was determined on the basis of: Parent education: elementary or unfinished elementary – 1 point, vocational – 2 points, secondary – 3 points, incomplete higher – 4 points, higher – 5 points.; Type of work: not working – 1 point, pensioner – 2 points, blue-collar worker – 3 points, white-collar worker – 4 points; numbers of dependants: three and more – 1 point, two – 2 points, one – 3 points. The maximum score for both parents (21 points) was used to define five ranges of socio-economic status of the family: very low under 4 points, low

5-8 points, average 9-13 points, high 14-17 points, and very high 18-21 points.

The SPSS 21 program (IBM Corp., 2012) was used for the statistical analysis. The qualitative data (nominal variables) was presented by means of numerical data and percentages. *Chi*-square tests were applied to analyze the relations between qualitative data (nominal variables), whereas nonparametric correlation *r_{ho}* Spearman was used to scrutinize the correlation between the estimated variables (ordinal variables – age of students) with quantitative variables or estimated variable. Correlations statistically significant $p < 0.05$ were marked by one star and $p < 0.01$ by two stars.

Results

Parents' physical activity

The results have shown that the level of participation in physical activity of younger children's parents in majority (85.1%) was very low. The difference between the level of physical activity of fathers and mothers was not statistically significant.

However, the educational background of parents clearly differentiated their level of physical activity (Table 4 and 5). The highest percentage of the lowest level of physical activity was found among parents (both mothers and fathers) with a primary and vocational education, while the lowest in fathers with higher Master education (66.9%) and mothers with higher vocational education (76.5%). A very high level of physical activity was declared by only 2 fathers with a Master degree. In this case, Spearman's correlation coefficient was statistically significant at $p < 0.001$. Thus, the higher education level, the higher the level of participation of parents in physical activity.

Parents' level of physical activity depends on their socio-economic status (Table 6). The results have shown a positive correlation between these variables, at a statistically significant level $p < 0.001$. In general the parents did not exhibit a very high level of physical activity, and a high level was declared only by two persons. On the other hand, an average level of physical was declared by parents with a very high socio-economic status, and a very low level was most common in parents with an average socio-economic status.

Physical activity of a child in free time

The data obtained in the study showed (Table 7) that the highest number of children aged 7-10 (39.8%) participate in physical activity at an average level. A very high level of physical activity concerned only 4.1% of the respondents, while a low and very low was found in 34.7% of the girls and boys. In each age group, the values differed in degrees. In a very high level of activity,

8-9 year olds obtained the best results. However, in a very low level of activity the most numerous group were children between 9-10 years old. The relation between the age and the level of physical activity of the children was not statistically significant.

According to parents, children mostly ride bicycles in their free time (74%), play with other children on the playground (71.3%) and play ball (48%). However, quite a large group of respondents watch TV (40.4%), and play computer games (38.7%). Only every third participant reads books in their leisure time. The other forms of spending leisure time comprised: playing at home with siblings, walking, roller skating, corrective gymnastics, drawing, modeling, DIY, listening to music, playing instruments, participating in scout groups, solving crosswords and puzzles. The results showed that the interest in computer games increases proportionally to age, and the relationship was found to statistically significant (Table 8).

Parents interest in the physical education of children

The preparation of a child for future participation in physical culture is considered to be one of the duties of the family environment. According to research (Table 9), the level of parental interest in the physical education of their children was moderate. Although, quite a large group (41.4%) of parents fell within the low range of interest. A positive correlation was found between the age of the child and the level of parental interest in the physical education ($p < 0.05$). The older the child was, the higher parent's interest in child's physical education was.

The indicator of parents' interest in the physical education of their children is a joint participation various forms of physical activity in leisure time. However, the results obtained in the study did not confirm it, as every second child usually spent their free time together with peers (Table 10). A similar amount of fathers (38.5%) and mothers (38.1%) participated in physical activity with children in leisure time. The older the children, the more time they spent with peers, and the less the parents. The correlations were found to be statistically significant ($p < 0.01$).

Parents (or other family members) were also engaged in child's participation in an organized physical activity. It involved organization of activities for a child and providing appropriate care. Based on data obtained from the study (Table 11), it is found that mothers (33.7%) most often took care of a child participating in an organized activity, followed by fathers (18%). Mothers were more likely to look after the girls, and fathers and other caregiver (e.g. babysitter, neighbor, cousin) took care of the boys more often. The child's age also differentiated the results. The older the child was, the more frequently the mother provided care than father and other people.

The aim of this study was also to determine the extent parents were interested in physical education of their child. The interest in the child's development in the area

Table 3. Level of parents' participation in physical activity

| Level of participation in physical activity | Father | | Mother | | Total | |
|---|--------|------|--------|------|-------|------|
| | N | % | N | % | N | % |
| Very low | 840 | 82,7 | 885 | 87,1 | 865 | 85,1 |
| Low | 102 | 10,0 | 82 | 8,1 | 127 | 12,5 |
| Average | 59 | 5,8 | 42 | 4,1 | 22 | 2,2 |
| High | 13 | 1,3 | 7 | 0,7 | 2 | 0,2 |
| Very high | 2 | 0,2 | 0 | 0,0 | 0 | 0,0 |
| Total | 1016 | 100 | 1016 | 100 | 1016 | 100 |

Correlation: $\chi^2(4) = 7,05; p = 0,133$

Table 4. Level of father's participation in physical activity in relation to education

| Level of participation in physical activity | Education | | | | | | | | | | Total | |
|---|------------|------|------------|------|-----------|------|-------------------|------|--------|------|-------|------|
| | Elementary | | Vocational | | Secondary | | Higher Vocational | | Higher | | | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Very low | 51 | 96,2 | 283 | 91,9 | 293 | 85,2 | 29 | 80,6 | 184 | 66,9 | 840 | 82,7 |
| Low | 2 | 3,8 | 17 | 5,5 | 22 | 6,4 | 4 | 11,1 | 57 | 20,8 | 102 | 10,0 |
| Average | 0 | 0,0 | 7 | 2,3 | 23 | 6,7 | 2 | 5,5 | 27 | 9,8 | 59 | 5,8 |
| High | 0 | 0,0 | 1 | 0,3 | 6 | 1,7 | 1 | 2,8 | 5 | 1,8 | 13 | 1,3 |
| Very high | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 2 | 0,7 | 2 | 0,2 |
| Total | 53 | 100 | 308 | 100 | 344 | 100 | 36 | 100 | 275 | 100 | 1016 | 100 |

Correlation: r_{ho} Spearman = 0,26; $p < 0,001$

Table 5. Level of mother's participation in physical activity in relation to education

| Level of participation in physical activity | Education | | | | | | | | | | Total | |
|---|------------|------|------------|------|-----------|------|-------------------|------|--------|------|-------|------|
| | Elementary | | Vocational | | Secondary | | Higher vocational | | Higher | | | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Very low | 20 | 95,2 | 186 | 95,4 | 403 | 89,9 | 39 | 76,5 | 237 | 78,7 | 885 | 87,1 |
| Low | 0 | 0,0 | 5 | 2,5 | 27 | 6,0 | 7 | 13,7 | 43 | 14,3 | 82 | 8,1 |
| Average | 1 | 4,8 | 4 | 2,1 | 16 | 3,6 | 4 | 7,8 | 17 | 5,7 | 42 | 4,1 |
| High | 0 | 0,0 | 0 | 0,0 | 2 | 0,5 | 1 | 2,0 | 4 | 1,3 | 7 | 0,7 |
| Very high | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 |
| Total | 21 | 100 | 195 | 100 | 448 | 100 | 51 | 100 | 301 | 100 | 1016 | 100 |

Correlation: r_{ho} Spearman = 0,19; $p < 0,001$

Table 6. Socio-economic status of parents in relation to the level of physical activity

| Parents' socio-economic status | Parents' level of physical activity | | | | | | | | | | Total | |
|--------------------------------|-------------------------------------|------|-----|------|---------|------|------|------|-----------|-----|-------|------|
| | Very low | | Low | | Average | | High | | Very high | | | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Very low | 1 | 0,1 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 1 | 0,1 |
| Low | 28 | 3,3 | 3 | 1,9 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 31 | 3,1 |
| Average | 327 | 39,1 | 19 | 12,3 | 1 | 4,5 | 1 | 50,0 | 0 | 0,0 | 348 | 34,2 |
| High | 304 | 36,3 | 56 | 36,1 | 10 | 45,5 | 0 | 0,0 | 0 | 0,0 | 370 | 36,4 |
| Very high | 177 | 21,2 | 77 | 49,7 | 11 | 50,0 | 1 | 50,0 | 0 | 0,0 | 266 | 26,2 |
| Total | 837 | 100 | 155 | 100 | 22 | 100 | 2 | 100 | 0 | 0,0 | 1016 | 100 |

Correlation: $\chi^2(12) = 82,40; p < 0,001; r_{ho}$ Spearman: 0,21; $p < 0,001$

Table 7. Level of children's activity in relation to age

| Level of physical activity | Child's age | | | | | | Total | |
|----------------------------|-------------|------|---------|------|----------|------|-------|------|
| | 7-8 y/o | | 8-9 y/o | | 9-10 y/o | | | |
| | N | % | N | % | N | % | N | % |
| Very low | 60 | 17,9 | 56 | 15,3 | 63 | 19,9 | 179 | 17,6 |
| Low | 62 | 18,6 | 59 | 16,2 | 53 | 16,7 | 174 | 17,1 |
| Average | 129 | 38,6 | 158 | 43,3 | 117 | 36,9 | 404 | 39,8 |
| High | 74 | 22,2 | 71 | 19,4 | 72 | 22,7 | 217 | 21,4 |
| Very high | 9 | 2,7 | 21 | 5,8 | 12 | 3,8 | 42 | 4,1 |
| Total | 334 | 100 | 365 | 100 | 317 | 100 | 1016 | 100 |

Correlation: $chr^2(8) = 9,62; p = 0,293$

Table 8. Forms of spending leisure time by children according to parents in relation to age

| Forms of spending leisure time | Child's age | | | | | | Total | | Correlation r_{bo} Spearman |
|--------------------------------|-------------|------|---------|------|----------|------|-------|------|-------------------------------|
| | 7-8 y/o | | 8-9 y/o | | 9-10 y/o | | | | |
| | N | % | N | % | N | % | N | % | |
| Riding bike | 256 | 76,7 | 259 | 70,9 | 237 | 74,8 | 752 | 74,0 | -0,02 |
| Playground | 253 | 75,8 | 233 | 63,8 | 238 | 75,1 | 724 | 71,3 | -0,01 |
| Playing ball | 152 | 45,5 | 163 | 44,7 | 173 | 54,6 | 488 | 48,0 | 0,07** |
| Watching TV | 138 | 41,3 | 144 | 39,5 | 128 | 40,4 | 410 | 40,4 | -0,01 |
| Computer games | 114 | 34,1 | 136 | 37,3 | 143 | 45,1 | 393 | 38,7 | 0,09** |
| Reading books | 102 | 30,5 | 122 | 33,4 | 99 | 31,2 | 323 | 31,8 | 0,01 |
| Other | 52 | 15,6 | 57 | 15,6 | 44 | 13,9 | 153 | 15,1 | -0,02 |

** : $p < 0,01$

Note: Interest does not add up to 100, because the respondents could provide more than one answer

Table 9. Level of parents' interest in physical education of children in relation to child's age

| Level of parents' interest in physical education of children | Child's age | | | | | | Total | | Correlation r_{bo} Spearman |
|--|-------------|------|---------|------|----------|------|-------|------|-------------------------------|
| | 7-8 y/o | | 8-9 y/o | | 9-10 y/o | | | | |
| | N | % | N | % | N | % | N | % | |
| Low | 156 | 46,7 | 151 | 41,4 | 114 | 35,9 | 421 | 41,4 | 0,08* |
| Average | 143 | 42,8 | 159 | 43,5 | 159 | 50,2 | 461 | 45,4 | |
| High | 35 | 10,5 | 55 | 15,1 | 44 | 13,9 | 134 | 13,2 | |
| Total | 334 | 100 | 365 | 100 | 317 | 100 | 1016 | 100 | |

* : $p < 0,05$

Table 10. People accompanying a child in non-organized physical activity in relation to child's age

| People accompanying child in non-organized physical activity | Child's age | | | | | | Total | | Correlation r_{bo} Spearman |
|--|-------------|------|---------|------|----------|------|-------|------|-------------------------------|
| | 7-8 y/o | | 8-9 y/o | | 9-10 y/o | | | | |
| | N | % | N | % | N | % | N | % | |
| Father | 145 | 43,4 | 149 | 40,8 | 97 | 30,6 | 391 | 38,5 | -0,10** |
| Mother | 149 | 44,6 | 139 | 38,1 | 99 | 31,2 | 387 | 38,1 | -0,11** |
| Other family member | 67 | 20,1 | 71 | 19,5 | 56 | 17,7 | 194 | 19,1 | -0,02 |
| Peers | 163 | 48,8 | 192 | 52,6 | 189 | 59,6 | 544 | 53,5 | 0,09** |

** : $p < 0,01$

Table 11. Child's caregivers in organized physical activities in relation to child's age

| Child's caregivers in organized physical activities | Child's age | | | | | | Total | | Correlation <i>r_{bo}</i> Spearman |
|---|-------------|------|---------|------|----------|------|-------|------|---|
| | 7-8 y/o | | 8-9 y/o | | 9-10 y/o | | | | |
| | N | % | N | % | N | % | N | % | |
| Father | 64 | 19,2 | 69 | 18,9 | 50 | 15,8 | 183 | 18,0 | -0,03 |
| Mother | 101 | 30,2 | 129 | 35,3 | 112 | 35,3 | 342 | 33,7 | 0,04 |
| Other family member | 40 | 11,9 | 50 | 13,7 | 37 | 11,7 | 127 | 12,5 | 0,00 |
| Other people | 14 | 4,2 | 12 | 3,3 | 8 | 2,5 | 34 | 3,4 | -0,04 |

of physical education demonstrates parents' understanding of the child's needs, and provides parents with an opportunity to help child in case of experiencing difficult moments. At this level of child development, parents' interest in such an important area of education should involve constant cooperation with the school and the teacher. However, not all parents saw this need.

As shown in Table 12, only one third of parents talked to the teacher about their child's physical education. Only one out of five parents engaged in such conversation at every opportunity. It is interesting to note that as the age of the child increased, the number of parents concerned with their child's progress in physical education increased, too. The number of parents who contacted a teacher twice a year also increased. However, these correlations were not statistically significant.

The data presented in the Table 13 indicates that a significant number of the parents (72.3%) was interested in the level of physical activity provided in early school education. Although, it was found that the older the child was, the parents' interest in child's physical education slightly decreased. No statistically significant correlations were detected.

Family determinants of children's physical activity

The research also sought to clarify whether and to what extent the physical activity of children depended on the parents' level of physical activity, their education and socio-economic status, as well as and the level of interest in the child's physical education.

The statistical analysis of the results obtained in the study showed that the level of physical activity of parents, both fathers and mothers, positively correlated with the level of child's physical activity (Table 14). A very low level of child's physical activity corresponded to a very low level of parents' physical activity. Conversely, in case of children with a very high level of physical activity, the number of parents with a very low level of activity gradually decreased.

A positive correlation was found (Spearman *r_{bo}* correlation analysis) between a parent education and a child's physical activity level. The higher the educational background of both parents, the higher was the level

of a child's physical activity (Table 15). It can be noted that among children with very low activity levels, only 16.8% of fathers and 18.9% of mothers had Master degree. In the group of children with a very high activity level, 50.0% of fathers and 47.6% of mothers had Master degree. However, *chi*-square analysis showed statistically significant correlation for fathers, but not for mothers.

Spearman *r_{bo}* correlation analysis also showed a significant positive correlation between parents' socio-economic status and the level of child's physical activity. In the group of children with a very low physical activity, the number of parents with a very high level of socio-economic status was only 18.4%, whereas in the group of children with a very high level of physical activity, the number of parents increased to 42.8% (Table 16).

A strong positive correlation was found between the level of parents' interest in the child's physical education and the level of physical activity of the child ($p < 0.001$). A very low level of physical activity of the child corresponded to a low level of parental interest in child's physical education. On the other hand, in the group of children with a very high level of physical activity, parents' interest in physical education was high or at least average.

Discussion

The study showed that the level of parents' participation in the physical activity of children aged 7-10 years was very low. Similar results yielded Drygas et al. [13] research, which showed no physical activity at all in 70% of men and women. However, the number of active fathers in current study was significantly higher than in Zarow et al. [14], which revealed that only 4.2% of men declared regular physical activity. The amount of exercising fathers and mothers in the current study was also higher as compared to Charzewski's study [15], where in the group of 35-year-olds only 8% of men, and 7% women declared an active participation in sports, and among 50-year-olds 5% of men and 3,5% of women remained active. In American research conducted on parents of children in grades 1-4, showed any participation in physical activity among 48% of fathers and 42.1% of mothers [16].

Table 12. Frequency of parents' contact with teacher concerning child's physical education, motoric fitness and in relation to child's age

| Frequency of parents' contact with teacher | Child's age | | | | | | Total | | Correlation <i>r_{bo}</i> Spearman |
|--|-------------|------|---------|------|---------|------|-------|------|--|
| | 7-8 y/o | | 8-9 y/o | | 9-10y/o | | N | % | |
| | N | % | N | % | N | % | | | |
| Yes | 101 | 30,2 | 127 | 34,8 | 116 | 36,6 | 344 | 33,8 | 0,05 |
| Once a year | 8 | 2,4 | 25 | 6,9 | 16 | 5,1 | 49 | 4,8 | 0,05 |
| Twice a year | 29 | 8,7 | 34 | 9,3 | 39 | 12,3 | 102 | 10,0 | 0,05 |
| At every opportunity | 64 | 19,1 | 68 | 18,6 | 61 | 19,2 | 193 | 19,0 | 0,00 |

Table 13. Parent's interest in the level of physical activities in grades I-III of primary school, in relation to child's age

| Parents' interest in level of physical activity in lower grades | Child's age | | | | | | Total | | Correlation <i>r_{bo}</i> Spearman |
|---|-------------|------|---------|------|----------|------|-------|------|--|
| | 7-8 y/o | | 8-9 y/o | | 9-10 y/o | | N | % | |
| | N | % | N | % | N | % | | | |
| Yes | 249 | 74,6 | 268 | 73,4 | 217 | 68,5 | 734 | 72,3 | -0,05 |
| No opinion | 68 | 20,3 | 73 | 20,0 | 85 | 26,8 | 226 | 22,2 | 0,06 |
| No | 17 | 5,1 | 24 | 6,6 | 15 | 4,7 | 56 | 5,5 | -0,01 |

Table 14. Parents' level of physical activity in relation to child's level of physical activity of the child

| Parents' level of physical activity | | Child's level of physical activity | | | | | | | | | | Total | |
|-------------------------------------|--------|------------------------------------|------|-----|------|---------|------|------|------|-----------|------|-------|------|
| | | Very low | | Low | | Average | | High | | Very high | | N | % |
| | | N | % | N | % | N | % | N | % | N | % | | |
| Very low | Father | 156 | 87,1 | 140 | 80,5 | 328 | 81,2 | 167 | 77,0 | 27 | 64,3 | 818 | 80,5 |
| | Mother | 160 | 89,4 | 142 | 81,6 | 341 | 84,4 | 169 | 77,9 | 24 | 57,1 | 836 | 82,3 |
| Low | Father | 12 | 6,7 | 27 | 15,5 | 46 | 11,4 | 30 | 13,8 | 9 | 21,4 | 124 | 12,2 |
| | Mother | 16 | 8,9 | 22 | 12,6 | 44 | 10,9 | 36 | 16,6 | 13 | 30,9 | 131 | 12,9 |
| Average | Father | 8 | 4,5 | 6 | 3,4 | 22 | 5,4 | 17 | 7,8 | 6 | 14,3 | 59 | 5,8 |
| | Mother | 3 | 1,7 | 9 | 5,2 | 16 | 4,0 | 11 | 5,0 | 3 | 7,2 | 42 | 4,1 |
| High | Father | 3 | 1,7 | 1 | 0,6 | 7 | 1,7 | 2 | 0,9 | 0 | 0,0 | 13 | 1,3 |
| | Mother | 0 | 0,0 | 1 | 0,6 | 3 | 0,7 | 1 | 0,5 | 2 | 4,8 | 7 | 0,7 |
| Very high | Father | 0 | 0,0 | 0 | 0,0 | 1 | 0,3 | 1 | 0,5 | 0 | 0,0 | 2 | 0,2 |
| | Mother | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 |

Father: $\chi^2(16) = 25,28; p = 0,065; r_{bo}$ Spearman: 0,10; $p = 0,002$

Mother: $\chi^2(16) = 37,46; p < 0,001; r_{bo}$ Spearman: 0,12; $p < 0,001$

Table 15. Parent education and a child's level of physical activity

| Parent education | | Child's level of physical activity | | | | | | | | | | Total | |
|-------------------|--------|------------------------------------|------|-----|------|---------|------|------|------|-----------|------|-------|------|
| | | Very low | | Low | | Average | | High | | Very high | | N | % |
| | | N | % | N | % | N | % | N | % | N | % | | |
| Elementary | Father | 10 | 5,6 | 13 | 7,5 | 22 | 5,5 | 7 | 3,2 | 1 | 2,4 | 53 | 5,2 |
| | Mother | 5 | 2,8 | 2 | 1,2 | 10 | 2,5 | 4 | 1,8 | 0 | 0,0 | 21 | 2,1 |
| Vocational | Father | 64 | 35,7 | 40 | 23,0 | 127 | 31,4 | 67 | 30,9 | 10 | 23,8 | 308 | 30,3 |
| | Mother | 37 | 20,7 | 31 | 17,8 | 78 | 19,3 | 42 | 19,4 | 7 | 16,7 | 195 | 19,2 |
| Secondary | Father | 67 | 37,4 | 64 | 36,8 | 137 | 33,9 | 66 | 30,4 | 10 | 23,8 | 344 | 33,9 |
| | Mother | 95 | 53,1 | 78 | 44,8 | 172 | 42,6 | 92 | 42,4 | 11 | 26,2 | 448 | 44,1 |
| Higher Vocational | Father | 8 | 4,5 | 7 | 4,0 | 13 | 3,2 | 8 | 3,7 | 0 | 0,0 | 36 | 3,5 |
| | Mother | 8 | 4,5 | 8 | 4,6 | 20 | 4,9 | 11 | 5,1 | 4 | 9,5 | 51 | 5,0 |
| Higher Master | Father | 30 | 16,8 | 50 | 28,7 | 105 | 26,0 | 69 | 31,8 | 21 | 50,0 | 275 | 27,1 |
| | Mother | 34 | 18,9 | 55 | 31,6 | 124 | 30,7 | 68 | 31,3 | 20 | 47,6 | 301 | 29,6 |

Father: $\chi^2(16) = 32,31; p = 0,009; r_{bo}$ Spearman: 0,09; $p = 0,004$

Mother: $\chi^2(16) = 23,52; p = 0,100; r_{bo}$ Spearman: 0,08; $p = 0,012$

Table 16. Parents' socio-economic status and child's level of physical activity

| Parents' socio-economic status | Child's level of activity | | | | | | | | | | Total | |
|--------------------------------|---------------------------|------|-----|------|---------|------|------|------|-----------|------|-------|------|
| | Very low | | Low | | Average | | High | | Very high | | | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Very low | 1 | 0,6 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 0 | 0,0 | 1 | 0,1 |
| Low | 6 | 3,3 | 5 | 2,9 | 15 | 3,7 | 4 | 1,8 | 1 | 2,4 | 31 | 3,1 |
| Average | 71 | 39,7 | 55 | 31,6 | 141 | 34,9 | 74 | 34,1 | 7 | 16,7 | 348 | 34,2 |
| High | 68 | 38,0 | 64 | 36,8 | 142 | 35,2 | 80 | 36,9 | 16 | 38,1 | 370 | 36,4 |
| Very high | 33 | 18,4 | 50 | 28,7 | 106 | 26,2 | 59 | 27,2 | 18 | 42,8 | 266 | 26,2 |
| Total | 179 | 100 | 174 | 100 | 404 | 100 | 217 | 100 | 42 | 100 | 1016 | 100 |

Correlation: $\chi^2(16) = 21,58; p = 0,157$; *rbo* Spearman: 0,10; $p = 0,002$

Table 17. Level of parents' interest in the child's physical education and the level of physical activity of the child

| Level of parents' interest in child's physical education | Child's level of physical education | | | | | | | | | | Total | |
|--|-------------------------------------|------|-----|------|---------|------|------|------|-----------|------|-------|------|
| | Very low | | Low | | Average | | High | | Very high | | | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Low | 129 | 72,1 | 74 | 42,5 | 161 | 39,9 | 51 | 23,5 | 6 | 14,3 | 421 | 41,4 |
| Average | 45 | 25,1 | 87 | 50,0 | 192 | 47,5 | 118 | 54,4 | 19 | 45,2 | 461 | 45,4 |
| High | 5 | 2,8 | 13 | 7,5 | 51 | 12,6 | 48 | 22,1 | 17 | 40,5 | 134 | 13,2 |
| Total | 179 | 100 | 174 | 100 | 404 | 100 | 217 | 100 | 42 | 100 | 1016 | 100 |

Correlation: $\chi^2(8) = 142,31; p < 0,001$; *rbo* Spearman: 0,34; $p < 0,001$

Parental involvement in physical activity, besides the socio-economic status, also depended on the education. A strong correlation was found between these variables. The higher the level of parents' education, the higher the number of parents engaged in pursuing physical activity during leisure time. The studies also confirm this finding [6, 14, 17, 18, 19, 20].

Parents, through personal patterns, contribute to the physical, mental and social development of the child. Therefore, a joint participation with a child in various forms of physical activity can play an important role in child's development. It is also an indicator of parents' interest in the physical education of their child. Unfortunately, only about 40% of fathers and mothers show the interest. According to Dabrowska [21], the majority of fathers (80%) do not participate in physical activity together with their children, even though the fathers are usually supposed to play a greater role in initiating various forms of physical activity. Most of the respondents (about 60%) surveyed by Dabrowska [21] seldom or very seldom spent their free time with their children. Other research revealed that the lack of physical activity was caused by a rather unusual parents' point of view, who thought that children can meet their activity needs on their own (70%) [22]. Accordingly, the current study showed that children tend to spend more leisure time with their peers than with parents. It might have positive outcomes as the peer group strongly affects the shape of individual attitudes toward physical activity, and there-

by the members of the group quickly acquire accepted patterns and values [23]. Nonetheless, the benefits of such processes do not release parents from the obligation to spend leisure time with their child.

The study revealed that, apart from physical activity, children spend a lot of time playing computer games, and watching television. Similar behaviors in children have been confirmed by other authors [1, 24]. The cause of this negative phenomenon should be sought in the family environment, due to the fact that it is the family who is responsible for the organization and quality of child's free time [22, 25]. Parents should be aware that a prolonged TV exposition can adversely affect the physical fitness of children [26]. Unfortunately, children often imitate behavior of parents or other family members, who do not always organize their own leisure in accordance with expected standards. For instance, the research showed that the main form of relaxation for adults (including parents) was watching television [15, 21]. Interestingly, children, whose parents are better educated, tend to spend less time in front of TV [27]. This also corresponds with a socio-economic status of the family. American and Canadian studies have shown that children from lower socio-economic families are likely to watch more television [28, 29].

According to Karczewska [25], leisure time of children should be supervised and controlled by family, school and out-of-school centers. It is also advisable to encourage children to spend leisure time actively, most preferably in the open air [30, 31, 32].

The current study revealed, that parents exhibit an average level of interest in the physical education of their own children, and as the child ages, this interest gradually decreases. It also concerns parental interest in the level physical activity at school. Similar results were found by Sulisz [33]. Nevertheless, the findings of both studies should be treated rather declaratively. The current study and Sulisz [33] showed that only one out of three parents communicated with the physical education teacher, and only such behavior can be considered as a real sign of parent's interest in the level of physical education at school. In the study Sulisz [33], the highest number of parents (about 35%) contacted teachers four to five times during the school year, and about one third of them expressed their views on the physical education at parent-teacher meetings of pupils in grades I-III. On the other hand, study conducted by Szychowska [34] showed that parents of low achievers were particularly reluctant to contact school. Conversely, parents of high achievers cooperated more frequently with school.

The results of the study have revealed that child's physical activity depends on the parents' level of physical activity, their educational background, socio-economic status and interest in the child's physical education. The results have confirmed that as parents' education decreases, the level of child's physical activity decreases as well. Other studies have also identified the relation between parents' physical activity [7, 8, 35-37], their education [2, 19, 27, 38] and the level of child's physical activity. Although, some of American studies have demonstrated that children of parents with higher education are less active, as they have more parental control and more restrictions, e.g. while riding a bike. The same study also revealed that children who had siblings were more physically active, especially during leisure time at the weekends [39]. The safety of the children is an important issue for many families. This was demonstrated by studies of parents living in poorer areas of England. Although, parents appreciate the benefits of physical activity on the development of the child, they limit child's activity e.g. riding a bike, for the safety reasons [40].

According to research by Staworzynska-Grzadziel [41] conducted on parents of last junior grade students, parents with a secondary and higher education showed a greater commitment to the development of the child and the quality of the education, than parents with only a primary education. Przeweda [12] noted that so-called cultural elite, well-off families, living in big cities, engage more into a lifelong physical education of a child, initiate sports interest and prepare for leisure recreation.

It is worth noting that experiences acquired in family environment resulting from series of events, situations, and relations between individual family members, are important in the process of shaping child's personality, and expected outcomes depend on the level of interest in child's problems and the way of solving them. Research also confirms that the higher the social and professional status of parents, the greater is the acceleration of child's development [42]. The opportunities for children to acquire

diverse motor experiences also grow accordingly. Furthermore, physically active children have less concentration problems [43, 44, 45] and are better at learning [46, 47].

Conclusions

Based on the data obtained from the study, the following conclusions were formulated:

1. Both parents show low level of participation in physical activity, and the activity depends on their education and socio-economic status. Also the physical activity of children, both organized and unorganized, is low.
2. The statistical analysis showed that the activity of the child depends on the socio-economic status of the family, parents' education, parent's leisure physical activity and interest in the physical education of children. Positive statistically significant relations were found between variables.
3. Child's age differentiated the variables in terms of the level of physical activity and forms of spending leisure time, as well as the level of parental interest in the physical education of children, parents and other persons' engagement in organized and non-organized physical activity of children, and frequency of parents' contact with teacher concerning physical education at school.

The study, in particular, has revealed how important it is for a family to participate in child's preparation for an autonomous, conscious and rewarding physical activity during leisure time. It has been found that a child's physical activity not only depends on the right attitude, but also parental awareness and many other factors. Research has shown that most parents do not show interest in cooperation with teachers, for example, in the area of child physical education. In consequence, lack of such communication may negatively affect child's physical activity in the future. The results have also indicated that schools and teachers share the duty to undertake initiatives in order to shape a pro-health awareness in parents, for example, by systematic education.

References

- Sulisz S. Obraz integracji oddziaływań edukacyjnych w zakresie wychowania fizycznego w świetle wypowiedzi uczniów kończących nauczenie początkowe. *Wychowanie Fizyczne i Sport*, 2000, 4, 71-83.
- Mynarski W., Rozpara M., Królikowska B., Puciato D., Graczykowska B. Jakościowe i ilościowe aspekty aktywności fizycznej. *Oficyna Wydawnicza Politechniki Opolskiej, Studia i monografie*, 313, Opole, 2012.
- Klesges R.C., Eck L.H., Hanson C.L., Haddock C.K., Klesges L.M. Effects of obesity, social interactions and physical environment on physical activity In preschoolers. *Health Psychology*, 1990, 9, 435-449.
- Freedson P.S., Evenson E. Familial aggregation in physical activity. *Res Q Exerc Sport*, 1991, 62, 384-389.

- Moore L.L., Lombardi D.A., White M.J., Campbell J.L., Oliveria S.A., Ellison R.C. Influence of parents physical activity levels on activity levels of young children. *Journal of Pediatrics*, 1991, 118, 215-219.
- Drabik J. Promocja aktywności fizycznej (wprowadzenie do problematyki). Cz. III. Wydawnictwo AWF, Gdańsk, 1997.
- Mc David L., Cox A.E., Amorose A.J. The relative roles of physical education teachers and parents in adolescents' leisure-time physical activity motivation and behavior. *Psychology of Sport and Exercise*, 2012, 13, 99-107.
- Cheng L.A., Mendonca G., Cazusa de Farias J. Júnior, 2014. Physical activity in adolescents: analysis of the social influence of parents and friends. *Journal de Pediatria*, 2014, 90 (1), 35-41.
- Dagkas S., Quarmby T. Young People's Embodiment of Physical Activity: The Role of the 'Pedagogized' Family. *Sociology of Sport Journal*, 2012, 29, 210-226.
- Beets M.W., Cardinal B.J., Alderman B. L. Parental social support and the physical activity-related behaviors of youth: A review. *Health Education & Behavior*, 2010, 37(5), 621-644.
- Sas-Nowosielski K. Determinanty wolnoczasowej aktywności fizycznej młodzieży i ich implikacje dla procesu wychowania do uczestnictwa w kulturze fizycznej. Wydawnictwo AWF, Katowice, 2009.
- Przewęda R. Szkolna edukacja fizyczna w kształtowaniu pozytywnego zdrowia społeczeństwa. W: *Edukacja fizyczna w szkole*. Red. T. Maszczak. Wydawnictwo AWF, Warszawa, 2007, 36-51.
- Drygas W., Bielecki W., Puška P. Ocena aktywności fizycznej mieszkańców sześciu krajów europejskich. Projekt „Bridging East – West Health Gap”. *Medycyna Sportowa*, 2002, 18 (5), 169-174.
- Żarów R. i wsp. Aktywność fizyczna dorosłych mężczyzn (komunikat z badań). *Annales Universitatis Mariae Curie-Skłodowska, Vol. LVIII, SUPPL. XIII, Lublin - Polonia*, 2003, 538-542.
- Charzewski J. Aktywność sportowa Polaków. Wydawnictwo ESTRELLA Sp. z o.o., Warszawa, 1997.
- Taylor W.C., Baranowski T. & Sallis J.F. Family determinants of childhood physical activity: A social-cognitive model. In: R.K. Dishman (Ed.), *Advances in Exercise Adherence*. Champaign, IL: Human Kinetics, 1994, 319-342.
- Dishman R.K. & Sallis J.F. Determinants and interventions for physical activity and exercise. In: *Physical Activity, Fitness, and Health*. Eds. C. Bouchard, R.J. Shephard, & T. Stephens. International Proceedings and Consensus Statement. Champaign, IL: Human Kinetics, 1994, 214-238.
- Margerts B.M., Rogers E., Widhal K., de Winter A.M.R., Zunft H.J. Relationship between attitudes to health, body weight and physical activity and level of physical activity in a nationally representative sample in the European Union. *Public Health Nutrition*, 1999, 2 (1a), 97-103.
- Ferreira I., van der Horst K., Wendel-Vos W., Kremers S., van Lenthe F. J., Brug J. Environmental correlates of physical activity in youth—a review and update. *Obesity Reviews*, 2006, 8 (2), 129-154.
- Foster Ch., Hillsdon M., Jones A., Grundy C., Wilkinson P., White M. Objective Measures of the Environment and Physical Activity—Results of the Environment and Physical Activity Study in English Adults. *Journal of Physical Activity and Health*, 2009, 6 (Supp 1), 70-80.
- Dąbrowska A. Rodzina środowiskiem wychowawczym do aktywności ruchowej. W: *Zdrowie – Ruch – Fair Play*. Red. Z. Żukowska, R. Żukowski. Wydawnictwo AWF, Warszawa, 2001, 138-141.
- Fąk T., Kaik-Woźniak A., Głonek J. Wychowanie do czasu wolnego na etapie edukacji zintegrowanej w opinii rodziców. W: *Dydaktyka wychowania fizycznego w świetle współczesnych potrzeb edukacyjnych*. Red. R. Bartoszewicz, T. Koszczyk, A. Nowak. Wydawnictwo Wrocławskie Towarzystwo Naukowe, Wrocław, 2005, 103-112.
- Osiński W. *Antropomotoryka*. Wydawnictwo AWF, Poznań, 2003.
- Drost M. Czas wolny, czas stracony. *Życie Szkoły*, 2007, 4, 5-9.
- Karczewska J. Czas wolny a bezpieczeństwo dziecka. *Nauczanie Początkowe*, R. XXXII, 2008/2009, 1, 7-14.
- Kretschmer J., Wirszing D. Motorische Leistungsfähigkeit von Grundschulkindern – Fragen, Ergebnisse, Folgerungen. *Sportunterricht*, 2008, 57 (10), 320-326.
- Finger J.D., Mensink G.B.M., Banzer W., Lampert T., Tylleskär T. Physical activity, aerobic fitness and parental socio-economic position among adolescents: the German Health Interview and Examination Survey for Children and Adolescents 2003–2006 (KiGGS). *International Journal of Behavioral Nutrition and Physical Activity*, 2014, 11-43.
- Tandon P.S., Zhou C., Sallis J.F., Cain K.L., Frank L.D., Saelens B.E. Home environment relationships with children's physical activity, sedentary time, and screen time by socioeconomic status. *International Journal of Behavioral Nutrition and Physical Activity*, 2012, 9-88.
- Carson V., Rosu A., Janssen I. A cross-sectional study of the environment, physical activity, and screen time among young children and their parents. *BMC Public Health*, 2014, 14-61.
- López Sánchez, G. F., Ahmed, D., & Díaz Suárez, A. Level of habitual physical activity among 13-year-old adolescents from Spain and India. A cross-cultural study. *SPORT TK: Revista EuroAmericana de Ciencias del Deporte*, 2017, 6 (1), 67-74.
- López Sánchez, G.F., Ahmed, D., Borrego Balsalobre, F.J., López Sánchez, L., & Díaz Suárez, A. Level of habitual physical activity in 8-9 years old schoolchildren from Spain and India. *MHSalud: Revista en Ciencias del Movimiento Humano y Salud*, 2016, 12 (2), 1-10. Doi: 10.15359/mhs.12-23.
- López Sánchez, G. F., González Víllora, S., & Díaz Suárez, A. Level of habitual physical activity in children and adolescents from the Region of Murcia (Spain). *SpringerPlus*, 2016, 5:386, 1-6. Doi: 10.1186/s40064-016-2033-8.
- Sulisz S. Wychowanie fizyczne w edukacji wczesnoszkolnej. Studium teoretyczno-praktyczne. *Studia i Monografie*, 69, AWF, Warszawa, 1997.
- Szychowska M. Stosunek rodziców do szkoły a osiągnięcia edukacyjne ich dzieci. *Wychowanie na co dzień*, 1999, 10-11, 29-31.
- Griffith J.R., Clasey J.L., King J.T., Gantz S., Kryscio R.J., Bada H.S. Role of parents in determining children's physical activity. *World Journal of Pediatrics*, 2007, 3 (4), 265-270.

- Hennessy E., Hughes S.O., Goldberg J.P., Hyatt R.R., Economos Ch.D. Parent-child interactions and objectively measured child physical activity: a cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, 2010, 7, 71.
- Solomon-Moore E., Sebire S.J., Thompson J.L., Zahra J., Lawlor D.A., Jago D.A. Are parents' motivations to exercise and intention to engage in regular family-based activity associated with both adult and child physical activity?. *BMJ Open Sport & Exercise Medicine*, 2017, 1-11.
- Hinkley T., Crawford D., Salmon J., Okely A.D., Hesketh K. Preschool children and physical activity. A review of correlates. *American Journal of Preventive Medicine*, 2008, 34 (5), 435-441.
- Mc Minn A.M., Griffin S.J., Jones A.P., Van Sluijs E.M.F. Family and home influences on children's after-school and weekend physical activity. *Eur J Public Health*, 2013, 23 (5), 805-810.
- Eyre E.L.J., Duncan M.J., Birch S.L., Cox V.M. Low socio-economic environmental determinants of children's physical activity in Coventry, UK: A Qualitative study in parents. *Preventive Medicine Reports*, 2014, 1, 32-42.
- Staworzyńska-Grządziel M. Znajomość pojęć szkolnych – programowych przez uczniów klas III z przedmiotów sprawnościowych (Stan – Poziom – Uwarunkowania – Wyniki badań). *Nauczyciel i Szkoła*, 1997, 2 (3), 36-50.
- Gołąb S. (Red.). Biologiczne i społeczne uwarunkowania zmienności przebiegu rozwoju fizycznego dzieci i młodzieży z Nowej Huty (wyniki badań ciągłych). Wydawnictwo Monograficzne AWF, Kraków, 53, 1993.
- Budde, H., Voelcker-Rehage, C., Pietrabyk-Kendziorra, S., Ribeiro, P., Tidow, G. Acute coordinative exercise improves attentional performance in adolescents. *Neuroscience Letters*, 2008, 441, 219-223.
- Lecheler J. Trägt das veränderte Bewegungsverhalten von Kindern und Jugendlichen zur Entstehung chronischer Krankheiten bei? *Deutsche Zeitschrift für Sportmedizin*, 2008, 59 (10), 241-242.
- López Sánchez, G.F., López Sánchez, L., & Díaz Suárez, A. Trastorno por déficit de atención con hiperactividad (TDAH) y actividad física. *EmásF: Revista Digital de Educación Física*, 2015, 32, 53-65.
- Lopes L., Santos R., Pereira B., Lopes V.P. Associations between gross Motor Coordination and Academic Achievement in elementary school children. *Human Movement Science*, 2013, 32 (1), 9-20.
- López Sánchez, G.F., López Sánchez, L., & Díaz Suárez, A. Effects of a physical activity program on the general dynamic and segmentary coordination of children with ADHD. *Journal of Sport and Health Research*, 2016, 8 (2), 115-128.

Political determinants of the participation of the Romanian representation in the XXIII Olympic Games in Los Angeles in 1984

Michał Artur Słoniewski

Szkoła Główna Turystyki i Rekreacji w Warszawie

Summary

The fact that Romania did not obey the decision of the party authorities of the Soviet Union and other socialist countries has until today caused many controversial opinions and speculations. This fact is often quoted, also in academic discussions, as an example of unique heroism and independence of the Romanian authorities from the Soviet political domination. It is known that the sole decision-maker in this case was Romania's famous "red dictator", Nicolae Ceaușescu. His long-year rule led the Romanian society to extreme poverty, even for the standards of the socialist countries. However, this did not stop him from conducting a relatively independent and expensive foreign policy and presenting himself as a leader of international importance. For a long time presidents and prime ministers of Western countries confirmed his belief, sparing no praises or various honours, hoping for a political schism among the countries of the Warsaw Pact. For many years it allowed Ceaușescu to achieve his propaganda objectives in the international arena.

The situation was similar with the participation of the representation of Romania in the XXIII Olympic Games in Los Angeles. However, it was only a short-term episode in the political confrontation between the East and the West. Also in this case Ceaușescu received substantial financial support from the United States, IOC and the Olympic Organising Committee (LAOOC). However, he was not to enjoy this success for long. After a few more years of his dictatorship-like rule he was sentenced to death by a court decision and executed by a firing squad together with his wife Elena.

Keywords: Ceaușescu, Olympic Games, Romania, Los Angeles, United States, IOC, Soviet Union

Introduction

The fact that the Polish Olympic representation did not participate in the XXIII Olympic Games in Los Angeles in 1984 constitutes until this day a sore wound in the history of the Polish Olympic movement. The reasons for the political authorities of the Polish Peoples' Republic taking such a decision, which was then formally sanctioned by the board of the Polish Olympic Committee, have been quite thoroughly described in Polish academic literature and memoirs (Roman 1994, p. 47-49; Olszański 2004, p. 159-160; Miklas 2012, p. 52; Pasko 2012, p. 418-420; Słoniewski 2016, p. 266-271). However, relatively few important documents from that period have been preserved. It is probable that they had never even been prepared. Luckily, the minutes from the meeting of the board of the Polish Olympic Committee from 19th May 1984, when the decision was made not to send the Polish team to Los Angeles, have been discovered after many years. The authorities of the Polish Olympic Committee have until today not declared the decision from back then as wrong and so very unfair towards both the sportsmen and sport fans. Such a declaration was requested by, among others, Józef Lipiec already in 1989 (Zbiór 1989, p. 22).

From time to time the recurring doubts are voiced in the Polish sports circles – was the Polish Olympic Committee's decision really inevitable or could the party, state and Olympic Committee authorities have followed Romania's example and mustered up the courage to send the Polish representation to the Olympic Games despite the negative stance of the USSR authorities and other socialist countries? In order to answer such questions it is necessary to analyse the factors that influenced the internal and foreign policies in Romania at the beginning of 1980s, which were different from Poland. The unique and long-lasting – even for the realities of the Eastern bloc after World War II – career of Nicolae Ceaușescu has been the subject of academic research and many interesting publications (Pacepa 1990; Burakowski 2008; Klein 2013; Arendt 2014; Kunze 2016).

The attitude of the west towards the dictatorship of Nicolae Ceaușescu

Nicolae Ceaușescu became the general secretary of the Romanian Communist Party already in 1965, at the age of 47. From the moment of his election he consistently

strove towards achieving absolute power. Although he did not have higher education, he especially enjoyed foreign policy, creating his own image as a statesman of international importance. The interest of numerous politicians from the Western states strengthened him in that purpose. Many of them perceived him as the only leader of a socialist state who was sometimes able to disagree with the official position of the USSR authorities.

Already in 1967 the governments of Romania and the Federal Republic of Germany established diplomatic relations. In the same year Romania, as the only country of the Warsaw Pact, did not condemn Israel for the so-called Six-Day War with the Arab states. However, this decision had its financial background. Romania was generously rewarded by Israel, having received payments for agreeing to allow the members of the Romanian Jewish community to leave the country. A year later the Romanian army did not participate in the invasion of the Warsaw Pact troops on Czechoslovakia, and Ceaușescu himself openly condemned this intervention. He was not a supporter of the Czechoslovakian reforms, but he believed that the socialist states should have the right to decide about their own development (Węgs, Ladrech 2008, p. 343). Some authors suggest even that the behaviour of the secretary general of the Romanian Communist Party regarding the Czechoslovakian issue had been contrived in advance with the authorities in Kremlin (Kunze, op.cit., p.190-191). In his foreign policy Ceaușescu paid special attention to maintaining good contacts with the US administration. This sentiment was reciprocated, as the White House hoped to break up the unity of the satellites of the Soviet Union. Romania's exceptionally friendly relations with the United States hoisted Ceaușescu to the position of a leader of international importance. It is therefore no wonder that he attempted to play the role of an intermediary in ending the Vietnam War. On their part, the Americans promised to extend the most favoured nation clause towards Romania (which they in fact did in 1975). The relations with the People's Republic of China constituted another field of cooperation between these two countries. Unlike Romania, neither of the nuclear superpowers could at that time say they had good relations with China. The shrewd Nicolae Ceaușescu promised to help the Americans in this matter. He made his promise during an official visit paid by Richard Nixon, president of the United States, in 1969 in Bucharest. From that moment onward the general secretary of the Romanian Communist Party could consider himself a player of global politics (Ibid, p. 196). The USSR party authorities, despite the external pretence of Ceaușescu's insubordination, did not show too much concern about such an attitude of their ally. They even expressed quiet acceptance of this specific Romanian external politics, as they fully controlled it in the strategic aspects, and treated the megalomaniac and nationalistic style of Ceaușescu's government as a kind of political extravagance. Also, they knew perfectly well that the Romanian leader, trained in Moscow, was a typical Stalinist satrap and his country was completely dependent on the deliveries from and economic cooperation with the USSR.

The internal politics in Romania was to a large extent influenced by the visits Nicolae Ceaușescu had paid to the PRC and DPRK at the beginning of the 1970s. The Romanian leader was fascinated with the governing style of Mao Zedong and Kim Il-sung. Under their influence Ceaușescu strengthened the cult of the leader in his country even more, and when it comes to ideology he used more elements of Marxism, nationalism and chauvinism. In internal politics he carried out staff cleansings and a cultural revolution. He strengthened the oppression apparatus and various forms of repression towards the society. However, these actions did not discourage the United States from continuing their preferential treatment of Romania in their politics towards other Socialist states. In 1972 Romania, as the only country of the Eastern bloc, enjoying the support of the White House, could join the World Bank and the International Monetary Fund. Also, its trade exchange with the Western countries and Iran increased. The world offered Ceaușescu many proofs of its appreciation and international recognition: Pope Paul VI welcomed him at an audience in Vatican in 1973; the UN Secretary-General Kurt Waldheim came to visit Bucharest; Ceaușescu and his wife Elena were given red carpet treatment in Washington and Bonn. Apart from holding talks at the White House, the Romanian head of state also addressed both houses of the American Congress. It is therefore no wonder that Ceaușescu, revelling in his international position and his close contacts with the leaders of the most important countries in the world, even expected to be given the Nobel Peace Prize. At that time he even dared to voice a bold – and for the USSR quite heretical – suggestion of simultaneously dissolving the Warsaw Pact and NATO. However, even this thesis of the Romanian leader was received by the Russians with a surprising calmness, as if Kremlin had come to terms with Ceaușescu's excessive ambitions in international politics. At the same time, he was not very highly valued in Moscow (ibid, p. 240-241). Even more so as he allowed himself to criticise the Soviet army that entered Afghanistan in 1979. Soon the personality cult of "the Genius of the Carpathians" and his wife Elena reached an almost grotesque scale with its dire consequences for the standard of living of the Romanian society. The violations of human rights were accompanied by wrong investments, acute supply shortages and the quickly growing national debt.

The growing problems of the Romanian society stood in clear contrast with the huge fortune of the Ceaușescu clan and their love for lavish lifestyle and luxury. The Romanian dictator, like Stalin – whom he had always admired – was a megalomaniac and had an obsession about achieving his goals irrespective of the human costs (Calvacoressi 2002, p. 340). Nevertheless, the Western countries did not reduce their contacts with the Romanian president. At the end of the 1970s, when the bilateral relations between the nuclear superpowers reached the lowest level, Nicolae Ceaușescu and his wife Elena paid an official visit to Jimmy Carter, while the French president Valéry Giscard d'Estaing and German chancellor Helmut Schmidt visited Bucharest. During his visit in London Queen Elisabeth II welcomed

Ceaușescu among the nobility by granting him the title of the Knight of the Grand Cross of the Order of Bath (Kunze, op. cit., p. 294-295). At that time the general secretary of the Romanian Communist Party strengthened the friendly relations with Muammar Gaddafi, Reza Shah Pahlavi from Iran, dictators from the countries of the Sub-Saharan Africa, and above all with the leaders of the PRC and DPRK.

Ceaușescu, drunk on all these international successes and at the same time conducting a destructive economic and social policy, was the reason why the Romanian government had to declare the state bankrupt in 1982 and conduct debt conversion. In response, the Western countries refused to grant the loans they had previously promised to Romania. As a consequence, Ceaușescu ordered a faster repayment of the entire Romanian foreign debt without taking any new loans (ibid, p. 320-321). This caused serious financial consequences for the already poor Romanian society. Romanians found themselves in a dramatic financial situation, worse than in any of the other socialist states in Europe. The last years of Ceaușescu's dictatorship constituted a period of his complete alienation and growing international isolation of Romania. In 1988 the country lost the most favoured nation clause in its trade relations with the United States. A year later Romania was on the verge of economic and social collapse. This in turn caused riots and mass protests. The dictator, attempting to save his regime, ordered the police to shoot at the protesters in Timisoara. 97 people died (Gaddis 2007, p. 287). Nicolae and Elena Ceaușescu were soon arrested and after a short trial executed on 25th December 1989.

The importance of sport in internal and international politics of the Romanian Socialist Republic

The model of managing physical fitness in Romania, including professional sports, did not differ much from similar solutions and standards adopted in other socialist countries in Europe (Lipoński 2016, p. 25). The National Council for Physical Education was established in 1967. The Council and its regional branches functioned basing on the law from 28th December 1967 adopted by the Great National Assembly of the Socialist Republic of Romania. The main aim of this organisation was to promote the development of physical education among children and youth as well as the recreational and professional sports. The latter task was mainly the responsibility of sports clubs (Jaworski 1985, p. 27-31).

The entire organisation of sports and physical education in Romania was, like in other socialist states, subordinate to programmes and national institutions controlled by the Romanian Communist Party (Riordan 1978, p. 5). The successes of Romanian sportsmen, including those participating in the Olympic Games, were supposed to play a special role in strengthening the international position of Romania and personally of President Nicolae Ceaușescu.

Even though the Romanian Olympic Committee was established as early as in 1914 (as the 20th committee in the IOC history), Romanians did not achieve any significant international results in the interwar period. During this entire time they only won one silver medal in 1936 and one bronze Olympic medal in 1924. After World War II Romania's position in the summer Olympic disciplines improved steadily, starting already from the XV Olympic Games in Helsinki in 1952 (Vinokur 1988, p. 52-55). Taking into account the relatively small population of the country (approx. 20-23 million citizens) and the modest financial capacities, the sports achievements were considerable especially in artistic gymnastics, rowing, athletics, canoeing, wrestling, shooting and fencing.

Already during the XXI Olympic Games in Montreal in 1976 Romanian sportsmen won 27 medals and thus achieved the sixth place in the unofficial classification. The 15-year-old gymnast Nadia Comaneci, who won five medals including three gold ones, became a national heroine (Porada *bdw.*, p. 166-167). The Romanian Olympic representation continued their success also four years later during the XXII Olympic Games in Moscow by winning 25 medals, including six golds. The representation achieved the highest rank in the Olympic rivalry during the XXIII Olympic Games in Los Angeles in 1984. Romanian sportsmen won 53 medals altogether, including 20 gold ones! They won the third place in the unofficial ranking, placing right behind the United States and the Federal Republic of Germany. They achieved such a success partly thanks to the absence of the other representations of socialist states during those Olympic Games. Another Romanian gymnast, Ecaterina Szabo, who won five medals, including four gold ones, became another star of those Olympic Games.

Romania's exceptional sport achievements during the summer Olympic Games continued practically until the fall of Ceaușescu's dictatorship. The Olympic Games in Seoul in 1988 brought another 24 medals, seven of them gold. This placed Romania on the 10th position in the unofficial ranking. The enormous Olympic successes of Romanian sportsmen during the long period of the rule of the Romanian Communist Party and Ceaușescu family could be seen as a unique phenomenon, incompatible with the economic position of the country. This could explain the special "care" the party and state authorities extended towards professional sports as well as the propaganda meaning they attached to them internationally. Romania's Olympic successes were to strengthen the position and role of Nicolae Ceaușescu in global politics (Vinokur, op. cit., p. 54-55).

The political circumstances of sending the Romanian Olympic representation to the XXIII Olympic Games in Los Angeles

The participation of the Olympic representation of the Soviet Union in the Games in Los Angeles in 1984, after

the well-known boycott of the Moscow Olympic Games four years earlier by the United States and many other countries, remained uncertain during the entire period preceding the Olympics. One could hear opinions, also among the members of the IOC management, that the probability of a Soviet “revenge” for the “humiliation” the organisers of the 1980 Olympic Games experienced because of the US administration had to be taken into account. The leaders of the Soviet Union made their decision in this matter dependent to a large extent on the current state of the geopolitical relations, especially the bilateral relations with the United States. And those, after Ronald Reagan had assumed the office, were very bad indeed. The new president had declared confrontation with the Soviet “evil empire” on all possible fields to be the main objective of his foreign policy. In the military area he realised the project of the Strategic Defense Initiative (SDI), which gained media popularity under the name “star wars”.

The years 1983-1984 brought about a particular increase of international tension between the two nuclear superpowers. It was accompanied by the growing armed conflicts in the Middle East and Central Africa (Lebanon, Grenada, Nicaragua). In September 1983 a Soviet fighter shot down a Korean Air passenger plane over Sakhalin. 269 passengers died in this tragic event. The incident was widely condemned across the world and gave a pretext to carry out a social campaign in the United States against the participation of the Olympians from the Soviet Union in the Olympic Games in Los Angeles. The US decision to dislocate new missiles in Western Europe caused the American-Soviet negotiations regarding the reduction of strategic arms (START) to be ceased indefinitely at the end of 1983 (Słoniewski, *op. cit.*, p. 219). The deterioration of the bilateral relations was also influenced by the death of the General Secretary of the Central Committee of the CPSU, Yuri Andropov, in February 1984 and the election of Konstantin Chernenko as his successor. In those circumstances it was the foreign minister Andrei Gromyko – who already hated the Americans – who was the sole decision-maker when it came to the foreign policy of the USSR (*ibid.*, p. 222-223). At that time the relations with the United States became a priority for Nicolae Ceaușescu in terms of Romanian foreign policy. For the White House Romania could become a factor that could undermine the unity of the Warsaw Pact, especially in the face of the upcoming date of signing a new agreement prolonging the functioning of the pact in 1985. It was because of these reasons that the American government prolonged Romania's most favoured nation clause in 1983, despite the ever more numerous signals from the American diplomats about the violations of human rights in Romania (Burakowski, *op. cit.*, p. 286). The visit by Vice-president George Bush, who previously served as chief of the CIA, in Bucharest in September 1983 confirmed the good bilateral relations. 1984 witnessed the highest turnover in the foreign trade between the two countries. Furthermore, preparations began for the official visit by the president of

the Socialist Republic of Romania in the United States planned for 1985 (however, the visit never happened).

The ever friendlier relations between Romania and the US had to result in the new tensions between Bucharest and Moscow. They were aggravated even more by Ceaușescu's megalomaniac behaviour in the international arena, such as for example the address he had sent to both leaders of the nuclear superpowers regarding the mutual withdrawal from the concept of deploying mid-range missiles in Europe and freezing their arms budgets or his demonstrative refusal to meet the commander-in-chief of the Warsaw Pact army, Marshal Viktor Kulikov, during his visit in Bucharest. Nicolae Ceaușescu also refused to send his representative to the Moscow consultations of the central committee secretaries for ideological and foreign issues in December 1983. At that point the USSR leaders seem to have come to terms with the fact that Ceaușescu tried to conduct the politics of independent yet insignificant power within the Warsaw Pact and boycotted some of Moscow's actions (*ibid.*, p. 288). The weakening of Romania's relations with the USSR was accompanied by Bucharest maintaining good relations with the PRC and its leaders. It happened in the time of the ever more strained relations between Moscow and Beijing and the simultaneous improvement of the latter's relations with Washington. Such international implications had to have a bearing on the decisions regarding the participation of the Romanian sportsmen at the XXIII Olympic Games in Los Angeles. Once again, Olympic sports were appropriated by politicians and their actions. The final decision about the participation of the remaining representations of socialist states in the Olympic Games depended on the will of the Political Office of the Central Committee of the CPSU. An appropriate resolution was passed in Moscow on 5th May 1984; basing on this act the Olympic Committee of the Soviet Union decided – only three days later – not to send its team to Los Angeles. The violation of the Olympic Charter by the hosts of the Games was quoted as a justification for this decision, including the need to provide safety to the Soviet sportsmen, trainers and activists (Landry, Yerlés 1996, p. 118-120; Senn 1999, p. 196-202; Słoniewski, *op. cit.*, p. 248-258).

However, the real reasons were completely different than those presented by the Soviet Olympic Committee in the statement. They were of geopolitical nature and resulted from the ever more strained relations between the two nuclear superpowers. Sport became once again an instrument in the global politics. Once the decision was taken, the Soviet side had to convince the authorities of the other socialist states as quickly as possible to share its position and force their national Olympic committees to make similar decisions regarding not sending their sportsmen to the Olympic Games in Los Angeles. Achieving unity of positions among all socialist states would have certainly strengthened the decision's international overtone and would have constituted a significant weakening of the importance of the upcoming Olympic Games. For this purpose the representatives of the communist and workers'

parties as well as the heads of the sports committees from the socialist states were invited to a special meeting in Moscow on 10th-11th May. Twelve delegations participated in the consultations, including a three-person delegation of the Romanian Communist Party. It was headed by Julian Plosztaru, member of the Central Committee of the RCP and at the same time deputy head of the Central Committee RCP Department. The delegations participating in the consultations quite unanimously declared their understanding and support for the position of the Soviet Olympic Committee and informed that they would not send their own representations to the Olympic Games in Los Angeles either. Only the representative of the Romanian Communist Party declared that his mandate was limited only to hearing out the positions of the other delegations and reporting on them to the leaders of the Romanian Communist Party for them to make the final decision (Słoniewski, op. cit. p. 259-260). Undoubtedly, it was only a tactical subterfuge, as a couple of days earlier during Juan Antonio Samaranch's visit in Bucharest Nicolae Ceaușescu had already confirmed the participation of Romania in all events organised by the IOC. This statement allowed the spokesman of the Romanian embassy in Vienna to declare as early as on 9th May, i.e. before the party consultations in Moscow, that Romania would be participating in the XXIII Olympic Games, although the final decision was to be made by the President after his return from the trip to Pakistan (Hill 1992, p. 181). At that time the authorities of the United States, the Olympic Organising Committee (LAOOC) as well as the IOC did everything in their power to undermine the meaning of the decision of the Eastern bloc about not participating in the Olympic Games by making sure Romania would take part in the event.

Alexandru Siperco, a Romanian national, held an important position among the IOC members, being one of the longest-serving – since 1955 – members of this body. He was a peer of the IOC president Juan Antonio Samaranch (both were born in 1920) as well as one of his deputies and closest co-workers. Speaking six foreign languages, he held responsible positions in Romania's state apparatus dealing with sport issues as early as the 1940s and 1950s. Between 1952 and 1959 he served as the President of the Romanian Olympic Committee (Biographies 1997, p. 4). His full sports biography was published some years after his death in 1998 (Ionescu 2012). He had certainly had an important influence on the decisions made by the IOC President. However, it does not seem like he had had a similar role in relation to the Romanian president. "The Genius of the Carpathians" knew best what he had to do and he needed no special advisors. It was confirmed, for instance, by a small detail from the statement by Juan Antonio Samaranch himself, who, when recalling his visit to the Romanian leader, emphasised that his Romanian deputy at the IOC waited outside as he was not invited to take part in the meeting (Miller 1992, p. 90).

A special meeting of the deputy heads of the sports organisations of the socialist countries took place on 16th

May 1984 in Sophia and was devoted mainly to the organisation of the "Friendship-84" competition as a form of compensation to the sportsmen who did not participate in the Olympic Games in Los Angeles. The representatives of Romania once again did not express their opinion nor did they inform the other participants about the decision regarding the upcoming Olympic Games. Another round of consultations of this kind, yet this time with the participation of the President of the IOC, took place in Prague on 24th-25th May 1984. It was precisely during that meeting that the head of the Romanian delegation officially confirmed the participation of the Romanian representation in the XXIII Olympic Games. Romanian sportsmen followed the example of their Chinese colleagues who submitted their participation already on 12th May, for the first time in 32 years. The Olympic Games in Los Angeles broke an absolute record in terms of participation. The unity of the socialist states in that matter was thus successfully broken. The decision of the Romanian authorities significantly weakened the argumentation position of the remaining socialist countries towards their own sports circles. It also undermined the credibility of the alleged rationale for the refusal to participate in the Olympic Games due to security reasons. It openly discredited the decision of the other states of the Eastern bloc. The leaders of those countries did not conceal their anger and deep disappointment with the decision and stance of Nicolae Ceaușescu (D'Agati 2013, p. 137-138).

The XXIII Olympic Games took place from 28th July until 12th August 1984. 6735 sportsmen from 140 countries participated in the event and the Romanian participation received an especially warm welcome already during the opening ceremony (Minkiewicz 1993, p. 204). The fact that other socialist states did not participate in the event had significantly lowered the level of rivalry and had an impact on the results in many disciplines. The hosts achieved a great success by winning a record number of 147 medals, including 83 gold ones. But the greatest beneficiary of the Games was precisely the small (127 sportsmen) representation of Romania, as their sportsmen had stood on the top place on the podium 20 times. The Romanian Olympic team received far-reaching help from the IOC and LAOOC both before and during the Olympic Games. The Organisational Committee treated the Romanian representation at all times as guests of special importance. No other Olympic team received such comprehensive assistance. It was even made sure that the Romanians could follow a TV transmission of the Olympics (Ueberroth 1986, p. 292). Still on 29th May President Samaranch sent a four-person delegation to Bucharest in order to agree the details of the transmission (Reich 1986, p. 229). The Romanians also received a significant reimbursement of their participation costs. Both the IOC and LAOOC granted them one third of the incurred costs i.e. 60,000 USD each (Hill, op. cit., p. 181).

The IOC also awarded Nicolae Ceaușescu with the Olympic Order, which was generally criticised not only

in the sports circles. Juan Antonio Samaranch explained later that the Order was awarded not as an acknowledgment of Ceaușescu's internal politics in Romania, but for breaking the boycott action undertaken by the communist countries, which was extremely important for the future of the Olympic Games (Miller, *op. cit.*, p. 90). However, the fact of participating in the Games and the benefits – both in terms of sports results and image boost – constituted only a short-lived success. They could not change the situation of the country that was plunging into deep and constant social and economic crisis. Also the decisions of the remaining socialist states which, unlike Romania, refused to participate in those Olympic Games, did not bring any signs of success. Quite on the contrary, the absence of their representations during the event in Los Angeles brought deep disappointment and regret not only in sports circles, but above all in the entire societies. Contrary to the expectations no medals were won; at the same time, this decision allowed the American sportsmen to achieve great successes in the field their Soviet counterparts considered to be their own domain. Apart from that the organisational and sports success of the Olympic Games strengthened the position of Ronald Reagan and contributed to his re-election as US President. In today's Russian Federation it was admitted after many years that the decision not to participate in the Olympic Games was a mistake (Прокуменщиков 2004, p. 221; Штейнбах 2015, p. 248). It was for these reasons that no one spoke of further non-participation of the teams from the Soviet Union and other European socialist countries in the Olympic Games in Seoul in 1988 – the last Olympics in the world divided between two opposing poles.

Conclusion

The decision of the political authorities of Romania, or rather the individual decision of its “red dictator” Nicolae Ceaușescu, to send the national representation to the XXIII Olympic Games in Los Angeles despite the unified position of the USSR and other socialist states had several reasons. First of all, Nicolae Ceaușescu had for years tried to conduct a foreign policy which would be independent from the Soviet Union. He often gave expression to this wish through surprising statements and non-standard actions. It is therefore no wonder that for years he had enjoyed the support and recognition in the eyes of the American administration, which in turn hoped for creating a split among the member states of the Warsaw Pact. Such an eventuality, however, could have only had a symbolic meaning, as neither the Romanian army nor the country's economic potential had any greater meaning in the context of a potential military confrontation. It is worth noting that Romania was the only country among the socialist states in Europe where the USSR army did not have any military bases. The support of the West for Ceaușescu's regime and the lavish honours that were bestowed upon him personally

only caused an enormous increase of his megalomania, leading to his auto-creation as a politician of global significance. This “transformation” took place during the times of the particularly terrorising actions carried out by the infamous political police – Securitate, persecution of national minorities as well as general poverty of the larger part of the Romanian society. It was not the European standards, but the ones applied by Mao Zedong in PRC or Kim Il-sung in North Korea that constituted the examples to follow for the Romanian authorities when it came to internal politics.

In taking the decision about the participation in the Olympic Games in Los Angeles Nicolae Ceaușescu saw a chance of additionally strengthening his international prestige. The Olympic successes of the Romanian representation were to confirm the effectiveness of his internal politics and bring financial benefits such as, above all, the United States extending the most favoured country clause and the West granting possible further loans. Ceaușescu was known for his slyness and greed, when it came to even the smallest financial gains, so he did not reject the somewhat humiliating reimbursement of the costs – 120,000 USD from the IOC and LAOOC for the participation of the Romanian sportsmen in the Olympics. The decisions made by Romania – to participate in the Olympic Games – and by the Soviet Union and other socialist states – forbidding their sportsmen from going to Los Angeles – in the end brought neither side any success, because – as the history of the Olympic movement has proven – the boycott of the Olympic Games, regardless of the reasons, has never brought any measurable benefits to the boycotting side. The organisers, so the LAOOC and, personally, Ronald Regan – who managed to demonstrate to the American society the energy and potential of his country thanks to the unbelievable successes of his Olympic sportsmen – turned out to be the main beneficiaries of the Olympic Games in Los Angeles. Soon after that Regan was re-elected as the president of the United States. Paradoxically, the Russians who perceived him as their arch enemy helped him immensely in achieving this goal.

As for the answer to the important question – could Poland or any other socialist country in Europe have followed Romania's example and taken part in the Olympics of 1984? – there is only one reply. Taking into account the geopolitical situation and the complete, unconditional dependence of the party and state authorities of those countries from the USSR it would have been practically impossible. Even if we assume that the Polish Olympic Committee or any of the other national committees decided to vote on a motion to participate in the Los Angeles Olympics, it would have been annulled under any pretext or the board would have been exchanged in a flash to vote on the decision again, this time in line with the will of the political authorities. The sport of that time acted according to the existing possibilities, limits and, not so rarely, simple extortions.

This was the reality of those times and any other hypothetical solution options find no justification.

References

- Arendt H., 2014, *Korzenie totalitaryzmu*, translated by D. Grinberg, M. Szawiel, Warszawa: Świat Książki
- Biographies des membres du Comité International Olympique. Biographies of the members of the International Olympic Committee*, 1997, Lousanne: CIO/IOC
- Burakowski A., 2008, *Geniusz Karpat. Dyktatura Nicolae Ceaușescu 1965-1989*, Warszawa: Instytut Studiów Politycznych PAN i Wydawnictwo TRIO
- Calvocoressi P., 2002, *Polityka międzynarodowa 1945-2000*, translated from English by: W. Bolimowska-Garwacka, H. Burcka, S. Głabiński, J. Gołębiewski, Warszawa: Książka i Wiedza
- D'Agati P. A., 2013, *The Cold War and the 1984 Olympic Games. A Soviet – American Surrogate War*, New York: Polgrave MacMillan
- Gaddis J., 2007, *Zimna wojna. Historia podzielonego świata*, translated by B. Pietrzyk, Kraków: Znak
- Hill C., 1992, *Olympic politics*, Manchester: Manchester University Press
- Ionescu S., 2012, *A Romanian within in IOC: Alexandru Sipercu, Romania and the Olympic Movement*, „The International Journal of the History of Sport”, Volume 29
- Klein S., 2013, *Najgroźniejsi dyktatorzy*, translated by J. Sawicka, Warszawa: Muza
- Kunze T., 2016, *Ceaușescu. Piekło na ziemi*, translated by J. Czudec, Warszawa: Prószyński i S-ka
- Landry F., M. Yérlés, 1996, *The International Olympic Committee – One hundred years, The Idea – The Presidents – The Achievements 1894-1994*, Volume III, Lousanne: International Olympic Committee
- Lipoński W., 2016, *The Truth of Sport. A Monograph of Selected Issues*, Szczecin: Wydawnictwo Naukowe Uniwersytetu Szczecińskiego
- Miklas K., 2012, *Dwie strony mikrofonu. Opowieści sportowego komentatora spoza telewizyjnego kadru*, Łódź: JK
- Miller D., 1992, *Olympic Revolution, The Olympic Biography of Juan Antonio Samaranch*, London: Pavilion Books Limited
- Minkiewicz W., 1993, *Olimpijska gorączka*, Warszawa, Wyd. II zmienione: Polska Oficyna Wydawnicza „BGW”
- Olimpijskie wyzwania. Z dr Włodzimierzem Reczkiem rozmawia Andrzej Roman*, 1994, Warszawa: Agencja „Przegląd Sportowy”
- Olszański T., 2004, *Osobista historia olimpiad*, Warszawa: Studio EMKA
- Pacepa I., 1990, *Czerwone horyzonty, prawdziwa historia zbrodni, życia i upadku Nicolae Ceaușescu*, translated by M. Fabianowska, Warszawa: Litera
- Pasko A., 2012, *Sport wyczynowy w polityce państwa 1944-1989*, Kraków: Avalon
- Porada Z., bdw., *Starożytne i nowożytne igrzyska olimpijskie*, Kraków: Krajowa Agencja Wydawnicza
- Прозуменщиков М.Ю., 2004, *Большой спорт и большая политика*, Москва: Российская политическая энциклопедия
- Reich K., 1986, *Making it happen, Peter Ueberroth and the 1984 Olympics*, Santa Barbara: Capra Press
- Riordan J., 1978, *Sport under Communism*, London: C. Hurst & Co.
- Senn A., 1999, *Power, Politics and the Olympic Games*, Champaign: Human Kinetics
- Słoniewski M., 2016, *Bojkot igrzysk olimpijskich jako instrument polityki międzynarodowej w latach 1976-1988*, Warszawa: Max
- Штейнбах В., 2015, *Оборотная сторона олимпийской медали*, Москва, Спорт
- Ueberroth P. with R. Lewin and A. Quinn, 1985, *Made in America. His own story*, London: The Kingswood Press
- Węgs R., Ladrach R., 2008, *Europa po 1945 roku*, translated from English by R. Dymek, Warszawa: Książka i Wiedza
- Vinokur M. B., 1988, *More than a game. Sports and politics*, New York: Greenwood Press
- Zarys organizacji kultury fizycznej w wybranych krajach Europy, pod redakcją naukową Z. Jaworskiego*, 1985, Warszawa: AWF w Warszawie
- Zbiór materiałów i dokumentów (do użytku wewnętrznego). Walne Zgromadzenie Polskiego Komitetu Olimpijskiego 31 marca 1989 r.*: PKOl

Report from participation in the 14th World Congress of the International Society of Sport Psychology on 10–14 June 2017 in Seville

Assoc. Prof. Jan Blecharz, Ph.D., *professor extraordinarius*

Kraków, 19 Jul. 2017

Faculty of Psychology – INS (Institute of Applied Sciences)

The International Society of Sport Psychology is one of the largest and oldest associations of this type in the world. The conferences organized every four years always assemble scientists and practitioners from around the world who deal with both sports psychology as well as related fields, such as health psychology. Submissions and presentations always go through a precise review system. This year, among the reviewers, there were two people from Poland: Prof. Małgorzata Siekańska and Prof. Jan Blecharz – both from the Psychology Department of the University of Physical Education in Kraków.

The basis for my trip to the Congress in Seville was reception of the presentation (in poster form) titled: **Who suffers more from sport pain – men or women?**. This was a presentation of research results obtained within the framework of the project “Efficiency of strategies, coping with sports-related pain and pain experience, sports performance within the context of targeted actions”, Project No.: 109/BS/INS/2016. Furthermore, as part of the international symposium titled: **Evidencing principles of positive sport through theoretical insights, practical applications, and empirical evaluations**, I held a lecture titled: **Conditions supporting high achievement during the specialization and expert stages: positive sport perspective**. The symposium was led by Prof. Artur Poczwardowski from Denver University (USA).

Participants of the Congress had the possibility to engage in various symposia, listen to very valuable lectures and become acquainted with numerous poster presentations. It was an excellent chance to learn about the latest research results in the field of sport psychology, as well as the most important research issues and methods used. I was particularly interested in the following symposia: **Refining the delivery of imagery interventions** (lead by Prof. Tony Morris from Victoria University in Melbourne), **Personality – trait – like individual differences and psychophysiology** (held by Sylvain Laqborde, German Sport University in Cologne) and **The use of high-technologies in research and for performance enhancement** (by Prof. Gershon Tenenbaum, Florida State University). In my opinion, among the plenary lectures, particular attention should be paid to: **Are psychological theories used to predict physical activity and guide physical behavior change interventions any good?**, Yuji Yamamoto – **Understanding complex human behavior from a dynamical system perspective** and Gloria Balague – **Periodization of psychological skills in sport**.

The Congress was also an opportunity to establish new scientific acquaintances. In my case, this was preliminary contact with Prof. Maurizio Bertollo from the University of G. d'Annunzio of Chieti-Pescara. The Professor is a well-known psychophysiologicalist of sport. He expressed willingness to visit our university with lectures.



Studies in Sport Humanities – digitalizacja – zadanie finansowane w ramach umowy 544/P-DUN/2017 ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę

e-ISSN 2450-9515