

Achievement goals in exercise and sport from the public health perspective

Motywacja osiągnięć w rekreacji i sporcie z perspektywy zdrowia publicznego

OLIWIA BECK^{1,2/}, EWELINA MONASTYRSKA^{1/}, MILENA WOJCIECHOWSKA^{1/}, JUSTYNA SZRAJDA^{1/}

^{1/} Katedra Zdrowia Publicznego, Wydział Nauk o Zdrowiu, Collegium Medicum im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

^{2/} Katedra i Klinika Geriatrii, Collegium Medicum im. Ludwika Rydygiera w Bydgoszczy, Uniwersytet Mikołaja Kopernika w Toruniu

Wstęp. Z perspektywy zdrowia publicznego, badania nad motywami uczestnictwa w rekreacji ruchowej są niezwykle ważne w celu projektowania skutecznych strategii mających na celu poprawę zdrowia populacji. Zwiększenie uczestnictwa społecznego w aktywności fizycznej staje się obecnie priorytetem dla ekspertów w dziedzinie zdrowia, pełniąc rolę zarówno profilaktyczną, jak i terapeutyczną w odniesieniu do głównych przyczyn chorobowości i śmiertelności współczesnych cywilizacji. Motywacja ma ogromny, bezpośredni wpływ nie tylko na podjęcie i kontynuację regularnej aktywności rekreacyjnej, ale również uczestnictwo w profesjonalnym procesie treningowym oraz implementację celów sportowych we współzawodnictwie.

Cele pracy. Próba znalezienia różnic w zakresie motywacji osiągnięć pomiędzy osobami ćwiczącymi rekreacyjnie, a zawodowymi sportowcami; dokonanie charakterystyki motywacji obu grup oraz zweryfikowanie hipotez mówiących o różnicach pomiędzy nimi.

Materiał i metoda. Zastosowano Kwestionariusz Percepcji Sukcesu (Roberts i Balague, 1998), który został wypełniony przez 30 osób ćwiczących rekreacyjnie w siłowni i 30 sportowców uprawiających podnoszenie ciężarów.

Wyniki. Żadna z hipotez dotyczących różnic pod względem motywacji osiągnięć pomiędzy grupami badawczymi nie została potwierdzona; uzyskano natomiast potwierdzenie jednej z hipotez dotyczących typu motywacji osiągnięć w grupie rekreacyjnej – przejawiała ona wyższy poziom orientacji na mistrzostwo, niż na współzawodniczenie.

Wnioski. Badanie podkreśla potrzebę dalszej oceny motywacji osiągnięć jako narzędzia projektowania strategii zdrowia publicznego.

Słowa kluczowe: zdrowie publiczne, motywacja osiągnięć, rekreacja ruchowa, psychologia sportu

Background. From the public health perspective, the research on motives of participation in recreational activities is important in order to design effective strategies to improve health of the population. Increasing the participation in physical activities becomes a priority for experts in the health and fitness field, both as a preventive measure, and as part of the treatment for major causes of morbidity and mortality in today's modern societies. Motivation has an enormous, direct influence on both undertaking and pursuing regular leisure activity, and professional training process with implementation of sport objectives in the course of competition.

Aim. An attempt to find differences in achievement motivation between recreational and professional athletes was subject of this study; to describe goal orientation types of recreational and professional athletes, and verify the hypotheses about the differences in goal orientation between the groups.

Material & method. The Perception of Success Questionnaire (Roberts and Balague, 1998) was administered to recreational athletes (n=30) and competitive weightlifters (n=30).

Results. No statistically significant differences ($p \leq 0.05$) between the groups were found. None of the hypotheses concerning differences in achievement motivation between them was supported. However, one of the hypotheses about the goal orientation in the recreational group was confirmed ($p = 0.05$): the recreational group was more task-oriented than ego-oriented.

Conclusions. The study underscores the need for further assessment of achievement motivation as a tool to design public health strategies.

Key words: public health, achievement motivation, recreation, sports psychology

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Adres do korespondencji / Address for correspondence

Mgr Oliwia Beck

Katedra Zdrowia Publicznego, Wydział Nauk o Zdrowiu

Collegium Medicum w Bydgoszczy, UMK w Toruniu

ul. Sandomierska 16, 85-830 Bydgoszcz

tel. 52 585 54 08, e-mail: Oliwia.beck@cm.umk.pl

List of abbreviations

POSQ – Perception of Success Questionnaire

E – Ego – involving goal orientation

T – Task – involving goal orientation

Introduction

The studies on motivation have become essential both from the perspective of population's health and professional sport. From the public health point of view, the research on motives of participation in recreational activities is important in order to design effective strate-

gies to improve health of the population. Increasing the participation in physical activities becomes a priority for experts in the health and fitness field, both as a preventive measure, and as part of the treatment for major causes of morbidity and mortality in today's modern societies (e.g. obesity, heart disease, diabetes, and osteoporosis). The reason for this interest is the fact that such conditions are largely the result of lifestyle-related actions, such as lack of physical activity [1]. The research studies confirm that motivation for participation in recreational physical activity is an important factor in regular, long-term participation in that activity [2].

Progress in professional sport once used to be achieved by perfecting the technique, equipment, selection system, training methods and conditions or simply increasing the training load. However, further improvement of these factors has reached the limit of human possibilities. Equaling the level of the physical, technical and tactical preparation of contemporary champions leads to the fact that in an uncompromising sports battle of equal competitors, the winner is the one with the optimum mental readiness [3]. Nowadays, in order to help athletes achieve their best, sports psychologists aim at supporting their mental reserves. Motivational processes constitute one of the major areas of their influence.

Therefore motivation, as a totality of processes organizing and directing the actions of a human nervous system, has an enormous direct influence on both the undertaking and pursuing of regular leisure activity, and professional training process with the implementation of sport objectives in the course of competition [4]. According to McClelland and Atkinson, the authors of the first but to this day the most influential achievement motivation theory [5], the achievement motive can be isolated and assessed in any group. The recent research into the motivation and achievement behavior has focused on achievement goals. Despite the fact that vast number of studies upon achievement goals have been executed in different settings – from academic [6-9] to recreation and sport [10, 11] – few were dedicated to the main issue of the undertaken research. Still little is known about the goal orientation characteristics that differentiate those who perform recreational and competitive sport activities.

Objective

The knowledge whether motives of taking part in regular, long-term recreational activities are different from participating in professional sport trainings, could be useful in order to design effective strategies of improving overall health of the population and have important implications for sports psychology. Therefore, the study attempts to find motivational differences between the people undertaking recreational and competitive type of an activity.

G. C. Roberts and G. Balague, the authors of the Perception of Success Questionnaire (POSQ) used in the study, identified two indicators with reference to motivation – “task” (T) and “ego” (E) orientations. The task orientation (T) defines success as achieving mastery – concentration on improving self skills, striving for perfection, overcoming difficulties and reaching a goal; thus, the demonstration of ability is self-referenced and success is realized when mastery is demonstrated. The ego-involving goal orientation (E), in turn, defines it as outperforming others, rivalry orientation, comparing with opponents and a positive assessment of own actions. The ego goal orientation, then, is the predisposition to evaluate success in terms of demonstrating a better ability than others, especially if little effort is expended [12].

According to Ashford [13], the prevalent inner motives of undertaking a recreational activity are: good physical health, mental wellbeing, improvement of the fitness level and independence – achieving personal challenges and acquiring a definite position – which all resemble task orientation. In turn, the motives of participation in sports activity, resemble ego orientation. They are: presenting own fitness, skills and competencies through comparison with others, concentrating on a task, improving own mastery, perfecting movement habits, and gaining social appreciation from the meaningful others – trainer, parents, spectators, colleagues, journalists, activists etc. [14]. All of these factors combine mutually, creating the final motivation, in which only the last stage is usually noticed – the most important factor underlying the person's actions. The assumed hypotheses were also accepted in regard with the basic factor differentiating sport and recreation – the rivalry. We expected that the rivalry accompanying the professionals would make them more willing to compare themselves with others (ego orientation), and that leisure athletes would rather be interested in improving own performance (task orientation) in regard to the lack of rivalry. Certain research studies that have sought to find a relationship between goal orientation and one's reason for playing a sport [15] justify these expectations. The authors of said studies have concluded that ego goal orientation is associated with a desire to achieve success or social status, while task goal orientation is related to motivations such as learning, enjoyment, the development of abilities or being in good physical form. All these findings account for theoretical justification for the assumed hypotheses:

- Goal orientation in professional athletes is more ego-involving (E) than task-involving (T).
- Goal orientation in recreational athletes is more task-involving (T) than ego-involving (E).
- A professional group is more ego-oriented (E) and less task-oriented (T) than the recreational group.

Material and method

The study sample included 60 adults, half of whom were competitive weightlifters, and half were clients of a local gym undertaking regular, amateur strength training. The groups were similar in age and training experience. The elite group ($n=30$) comprised of members aged 18-30 with mean age of 21.4 years and mean sports experience of 5.8 years. The recreational group members ($n=30$) were also aged 18-30 years with mean age of 23.2 and mean training experience of 5.3 years. Competitive athletes were recruited from the Civil-Military Weightlifting and Strength Sports Association "Zawisza" in Bydgoszcz. The sampling method we used assumed the participation of athletes aged 18-30 years with at least 3 years of regular training experience, and the will to take part in the study. The recreational gym with large number of clients enabled suitable age – and trainingwise choice of participants.

The respondents were asked to complete the short, pen-paper version of the Perception of Success Questionnaire. As previously mentioned, the POSQ is a method enabling the goal orientation assessment. It is a twelve-item instrument that comprises two groups of questions, which reflect two subscales – task (T) and ego (E) orientation. There are six items in each subscale. In this questionnaire, the stem item is "When playing my sport, I feel most successful when..." Typical items in the task-orientation (T) subscale include: "I work hard" (item 1) or "I master something I could not do before". Mean while, the ego-orientation (E) subscale comprises items such as "I am the best" or "I accomplish something others cannot do". There are five possible answers to choose from, rated on a five-point scale. The participants are asked to indicate how much they agree or disagree with each item providing a rating of 1 for "I strongly disagree", 2 for "disagree", 3 for "neither agree nor disagree", 4 for "agree", and 5 for "strongly disagree". The base for defining the goal orientation in terms of task or ego involvement is the raw score in each subscale (with the maximum of 30 points). The questionnaire is not timed. There is evidence of acceptable validity and reliability of the POSQ [16].

The questionnaire correlations to the initial, longer version were 0.98 alpha coefficient for task (T), a 0.97 for ego (E) orientation and a subsequent inter-correlation of 0.08. The internal consistency coefficient alphas of the short form were 0.82 for task and 0.87 for ego goal orientation. The test-retest (1 week) reliabilities were 0.80 and 0.78 for task and ego goal orientations respectively. To confirm the concurrent validity of the short form of the POSQ it was correlated with the Task and Ego Orientation in Sport Questionnaire. The ego orientation correlated 0.80 and the task orientation correlated 0.71 to the ego and task orientations of the Task and Ego Orientation

in Sport Questionnaire respectively. The psychometric properties of the short form of the POSQ are therefore strong. The construct validity has been demonstrated by correlative relationships between goal orientations and individuals' purposes of sports, causes of success, and satisfaction in sports and has been used with youth, adult, and elite athletes [13].

Results

The data were analyzed using adequate statistical tests. Overall characteristics of variables in each group were evaluated using mean (M) and standard deviation (table I). A Mann-Whitney U-test was used to evaluate the differences in goal orientation between the elite and recreational athletes as well as the within-group variances (table II). During the analysis the data were verified with respect to their conformance with hypothetical assumptions. The hypotheses were examined, discussed for their accuracy, coherence with background knowledge and explanatory power. Statistical significance was measured for all parameters. An alpha level of 0.05 was selected for all a-priori hypotheses. An alpha level of 0.10 was selected to interpret trend level effects. Table I shows overall characteristics of the variable intensity in both groups.

Table I. The POSQ raw score differences in both groups

Group/Factor	Task orientation	Ego orientation	Statistical significance level
Professional athletes	M=25.1 SD=3.13	M=24.3 SD=4.02	$p=0.385$
Recreational athletes	M=27.15 SD=2.2	M=23.8 SD=1.4	$p=0.05$

E – ego orientation, T – task orientation, M – mean, SD – standard deviation, p – statistical significance level

Professional athletes: The results indicate that the elite weightlifters can be classified as people presenting average level of both goal orientations. The two factors are similar in intensity, the differences between the task and ego orientation are not statistically significant in this group ($p=0.385$).

Recreational athletes: The recreational group can be classified as presenting a high level of task orientation and an average level of ego orientation. They are more task-oriented than ego-oriented, which is consistent with the assumed hypothetical predictions. The differences in this group are statistically significant ($p=0.05$).

Differences in goal orientations between the groups are shown in Table II.

Table II. Differences in goal orientations between the groups

Goal orientation /Results	Mann-Whitney U	Statistical significance level
Task orientation	U=15.3	$p=0.4096$
Ego orientation	U=13.9	$p=0.294$

U Mann-Whitney test result, p – statistical significance level

Task orientation: No statistically significant differences were found in task orientation between the elite and recreational athletes. The assumed hypothesis was not supported by the study results.

Ego orientation: No statistically significant differences were found in ego orientation between the elite and recreational athletes. The assumed hypothesis was not supported by the study results.

Discussion

In regard with the selected sampling method, the sample size and considering only one recreation and sports discipline in the undertaken study, the findings cannot be generalized to the entire population of elite sportsmen and gym clients. A group characteristics can be made though.

Despite the fact that no statistically significant differences were found between the groups, the highest and lowest scores retrieved during the study deserve particular attention. The highest and – according to the POSQ – high result was achieved in the task-involving goal orientation in the recreational group. The ego-involving goal orientation was of average intensity in this group.

The assumptions concerning achievement motivation (goal orientation) in each group separately were partly supported by the study. The study failed to support the hypotheses concerning differences between the groups.

The hypothesis predicting the task-involving goal orientation prevalence over the ego-involving goal ori-

entation in the recreational group was fully confirmed by the study. The findings indicate that in the elite athletes the similar levels of both goal orientations occur, whereas in the group comprised of gym clients – the task orientation level significantly differed from the ego orientation. It is possible that the rivalry, which was the partial reason for the hypotheses assumption, can be the explanation here. The individuals who exercise recreationally do not experience rivalry, and are therefore likely to focus more on the outcome of their actions, improving self-skills, and achieving perfection in their performance. Consequently, it is possible that they are less focused on competing and comparing themselves with others.

These findings are consistent with the formerly mentioned studies [16] concluding that the ego goal orientation is associated with a desire to achieve success, while the task goal orientation is related to motivations such as learning, enjoyment or being in a good physical form.

Conclusions

The study is another contribution to physical education and the sports psychology research concerning achievement motivation that might have implications for public health. The generalization of the findings is limited due to the sample size and the selected sampling method. However, the study highlights the need for further achievement motivation assessment as it can have important practical implications for both mental and physical sports training purposes, and improving the health of the population.

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