Original Article

doi: 10.16926/par.2019.07.21

Three component model of meaningfulness of life of male and female university students regarding their sport activity

Pavel Smela[ABCDE], Petra Pacesova[ABD], Stanislav Kracek[B]

Comenius University, Faculty of Physical Education and Sports, Bratislava, Slovakia

Authors' Contribution: A – Study Design, B – Data Collection, C – Statistical Analysis, D – Manuscript Preparation, E – Funds Collection

Abstract

The aim of the study is to expand knowledge in meaningfulness of life of athlete and non-athlete college students at universities in Bratislava and identify differences in its dimensions: affective, motivation and cognitive. The research sample comprised of 198 undergraduates (males: n=90, 20.68±1.56 years of age; female: n=108, 20.74±1.16 years of age). The respondents were divided into 2 groups according to their sports activities: college students who do not take active part in any sports activities (non-athlete respondents), and college students who are engaged regularly (at least twice a week) in sport activities. The questionnaire The Scale of Life Meaningfulness was used as a research tool. The results revealed significant differences in total score of meaningfulness of life by male (U=383.0, p=0.001, r=0.52) and also female (U=687.5, p=0.001, r=0.45). According to three-component model we have found out the significant differences between athlete and non-athlete college students in affective dimension (male: p=0.025, female: p=0.007) and motivation dimension (male: p=0.001, female: p=0.001). There were no significant differences in cognitive dimension (male: p=0.062, female: p=0.127). According to our results which testified the fact that sport activity is one of the determinants for increased meaningfulness of life of undergraduates.

Keywords: sources of meaning in life, athletes and non-athletes, flow, well-being

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Address for correspondence: Pavel Šmela – Comenius University, Faculty of Physical Education and Sports, Bratislava, Slovakia, , email: pavel.smela86@gmail.com

Recevied: 13.12.2018; Accepted: 21.02.2019; Published online: 4.09.2019

Cite this article as: Smela P, Pacesova P, Stanislav Kracek S. Three Component Model of Meaningfulness of Life of Male and Female University Students regarding their Sport Activity. Physical Activity Review 2019; 7: 175-181. doi: 10.16926/par.2019.07.21

INTRODUCTION

Responses to existential questions form the basis of deliberation about the meaning of life. It is the desire for existential knowledge that leads one to re-evaluate existing values and goals and to an awareness of the direction of one's own life. The subjective experiencing of security and safety arising from the anticipation that life is moving in the right direction, is a confirmation of the meaningfulness of experienced facts. By gradually composing facts into an understandable whole, a structure, according to which we can act and take a standpoint, an individual acquires ideas about the meaning in life and moves towards experiencing life as meaningful [1]. The authors of this study [2] consider life to be meaningful at the moment when meaning, a goal and coherence go beyond chaos. This concept of the meaningfulness of life is complemented by the study by Martela and Steger [3], which maps different understandings of meaning in life; they state that an individual needs to do three things to live a meaningful life: to comprehend the world around him, to find direction in his/her actions and to find value in his/her life. Deliberations about what can be the source of meaning in life are related to the content aspect of meaning. We can include everything that various people consider to be their meaning in life and what fulfils their need for meaning, in the specific activities, beliefs, values and goals they find meaning in life [1].

The results of this study [1] show a significantly positive relationship between meaningfulness and the flow state. In relation to meaningfulness in life, Csikszentmihalyi [4], the author of the *flow* phenomenon, places emphasis on the quality of life. Flow is the state in which people are so engaged in a certain an activity that nothing else seems to be important. This experience on its own is so joyful that people try to achieve it, even at a great price, only for the joy it brings. The state of flow is closely connected with human happiness. Why do we do what we do? Because it brings us joy and pleasure. An individual who feels happy usually does not ask about meaning. Meaning flows directly from a specific activity. In a wider context Csikszentmihalyi [4] considers this type of experience a form of energy which can enrich our life, make it more intensive and more meaningful. To give something sense or meaning means bringing order to the content of our mind by incorporating our actions in a unified flow.

In the conclusion of his research [5,6] comparing the flow state in physical and mental activities, he states that flow is especially relevant in physical activities. Csikszentmihalyi [7] talks about the unused potential of the flow state. People today are aware of the significance of health and physical fitness, however a vast area with the potential for joy is usually neglected.

The flow phenomenon is frequently related to sports performance [8-11]. The research of Hirao et al. [12] confirmed the positive relation between the flow state and mental health. By ensuring conditions for everyday experiencing of the flow state, we can affect the quality of life [13,27,28]. The authors Steger [14] and Heintzelman and King [15] also consider the degree of meaningfulness in life as a distinctive factor affecting well-being and health. In relation to that, adolescents regularly engaged in sport activities showed reduced incidence of mental health problems [16]. The higher the frequency of physical activity by adolescents negatively correlates with the incidence of depression and anxiety symptoms [17-18]. The studies showed that subjective wellbeing is understood as the evaluation of the cognitive and affective dimensions of life and is also considered to be a component that positively affects the mental health of an individual [19], which is connected with the regular physical activity of adolescents [20].

The aim of the study is to expand knowledge in meaningfulness of life of athlete and non-athlete college students at universities in Bratislava and identify differences in its dimensions: affective, motivation and cognitive. Since the flow state positively correlates with the degree of meaningfulness of life [1], based on the aforementioned concepts and studies we assume that athletically engaged university students achieve a significantly higher level of meaningfulness of life in comparison with non-athletically engaged university students.

METHODS

Participants

The research sample comprised of 198 undergraduates (males: n=90, 20.68±1.56 years of age; female: n=108, 20.74±1.16 years of age). The respondents were divided into 2 groups according to their sports activities: college students who do not take active part in any sports activities (non-athlete respondents, male: n=39, female: n=48), and college students who are engaged regularly (at least twice a week) in sport activities (athletes, male: n=51, female: n=60). College students were from three faculties of Comenius University in Bratislava (the Faculty of Law, the Faculty of Natural Sciences and the Faculty of Physical Education and Sports) and from the University of Economics in Bratislava. This study was approved in advance by Ethics committee of Faculty of Physical Education and Sport, Comenius University. Each participant voluntarily provided written informed consent before participating.

Measures

A standardized questionnaire The Scale of Life Meaningfulness created by Halama [21] was used as a research tool. The questionnaire contained 18 items, in which the respondents evaluated their level of consent to each statement on the Likert scale. The questionnaire consisted of three scales:

1. Affective dimension – the implementation of a goal is connected with positive experiencing, while obstacles which make progressing on the path towards the goal impossible are connected with negative experiencing. A strongly developed affective component can be identified through various positive emotions and feelings related to life such as happiness, optimism and satisfaction. On the other hand, a weakly developed affective component is manifested by experiencing dissatisfaction, unhappiness, depression, sadness as well as anxiety and pessimism.

2. Motivation dimension – includes the goals, values and activities which an individual considers to be valuable and important and investing energy and time in their implementation. A developed motivational component is characterized by the presence of various values and goals, a high degree of commitment to and the effort to fulfil them as well as the ability to strive for goals despite obstacles and failures. An insufficiently developed motivational component results in the absence of goals in life, a lack of activities, boredom, apathy and hopelessness related to the possible achievement of a goal.

3. Cognitive dimension – designates the cognitive framework which contains beliefs, values and assumptions related to oneself, the world and one's own life. A high degree of meaning in life, an awareness of the coherence and order in life as well as the awareness of a final goal and one's own mission in life are indicators of a developed cognitive component of meaning in life. On the contrary, experiences of the chaos and purposelessness of one's own life are manifestations of existential emptiness and the failure to satisfy the need for meaningfulness in life [22].

Procedures

The data was collected from February to April 2018 at Comenius University in Bratislava and the University of Economics in Bratislava. All three authors of this study participated in the data collection and were instructed regarding the rules concerning the distribution of the research instrument and subsequent data collection. The questionnaire was distributed in paper form and respondents were instructed on how to complete it and informed of the classification of survey questions related to sporting activity.

Statistics

The data were processed statistically. The Kolmogorov-Smirnov test was used to evaluate data normality and Mann Whitney test was used to test significance of the differences between independent selections. The significance level was set at $\alpha \leq 0.05$, $\alpha \leq 0.01$ and $\alpha \leq 0.001$. The rate of dependence (effect size) between the two groups of features was conveyed by means of the coefficient r ($r>0.90$ - very large effect size, r=0.70-0.90 - large effect size, r = 0.50-0.70 - medium effect size, r=0.30-0.50 - small effect size, $r<0.29$ - very small effect size) [23].

RESULTS

The highest meaningfulness of life scores among all groups were achieved by male athletes (76.09±3.64 of a point). A significant difference was recorded in comparison with male non-athletes (72.97±2.08 of a point) and with large effect size (U=383.00, p=0.001, r=0.52). The scores regarding individual dimensions of the meaningfulness of life with male athletes and non-athletes presented higher score among student athletes. In the affective dimension male non-athletes achieved a score of 25.80±0.92 of a point and male athletes 26.00±1.21 of a point. The difference is significant (U=719.50, p=0.025, r=0.24) corresponding to very small effect size. Also, in the motivational dimension male athletes achieved a higher score (26.12±1.49 of a point) in comparison with male non-athletes (23.68±0.87 of a point). This difference has statistical significance (U=117.00, p=0.001, r=0.76) corresponding to a very large effect size. Even in the cognitive dimension we recorded a higher score among male athletes (23.96±1.53 of a point) in comparison with male non-athletes (23.48±1.71 of a point), although this difference is not significant (U=766.00, p=0.062, r=0.20) with very small effect size.

In the overall meaningfulness of life score we recorded a higher score among female athletes (72.33±3.25 of a point) in comparison with female non-athletes (69.41±3.49 of a point). This difference is significant (U=687.50, p=0.001, r=0.45) with medium effect size. Just as in the case of men, we recorded differences in individual dimensions of meaningfulness of life between athletes and non-athletes. In the affective dimension female athletes achieved a score of 25.00±1.48 of a point while female non-athletes scored 24.32±1.51 of a point. The difference of medium values is statistically significant (U=1017.50, p=0.007, r=0.26) with very small effect size. Just as with men, we recorded the greatest difference in the motivational dimension between female athletes and non-athletes. The difference in the medium values of female athletes (24.11±1.63 of a point) and non-athletes (22.23±1.28 of a point) in the motivational dimension is statistically significant (U=443.00, p=0.001, r=0.60) with medium effect size. The cognitive dimension score among female athletes was 23.21±1.48 of a point and 22.86±1.64 of a point among female non-athletes. The difference of medium values in the cognitive dimension between female athletes and female non-athletes is statistically insignificant (U=1206.00, p=0.127, r=0.15) which corresponds with a very small effect size.

DISCUSSION

The results of the study present a significantly higher meaningfulness of life score among university student athletes in comparison with non-athletes. Our findings are also supported by the results of the study [24]. We believe that this phenomenon was caused by the flow phenomenon which athletes experience when engaging in sport activities [8]. Flow in connection with engagement in sporting activity is experienced by over 80% of people [25]. The results of the study demonstrate a significantly positive correlation of the flow state and meaningfulness of life [1]. The research of Shernoff, Knauth and Makris [26] shows a higher degree of flow with active athletes in comparison with non-athletes. The flow state is found among recreational and elite athletes, however in each group it has its characteristic features which arise from the requirements for a given level of the activity. In order to project the flow state in the overall quality of life the regular repetition of this state is necessary [13,27,28].

As we have already mentioned, the degree of meaningfulness of life is determined by flow state experiencing [1]. The flow state is frequently related to sporting activity [5,6,8-11]. The degree of sporting activity positively correlates with the degree of well-being [29]. The degree of subjective well-being, which is connected with the affective dimension, is related to satisfaction with life, which affects one's mental health [30]. Satisfaction with life may also contribute to the prevention of mental illness such as depression, whereas several studies present an inverse relationship between both variables [31,32]. A number of studies [33,34] present evidence concerning the connection between sporting activity and satisfaction with life, and that satisfaction with life grows with the growth of the sporting activity.

Thus, we see that meaningfulness of life as an apparently philosophical question of the perception of life also has an impact on human health, specifically its mental aspect. As a result, we must take meaningfulness of life as a broad concept affecting not only the three dimensional area of life composed of cognitive, motivation and affective components [35], but also as an area of life affected by experiencing sporting activity as having an impact on the area of human health. Sporting activity is a determinant affecting not only the meaningfulness of life, the intensity and frequency of the flow state experience and satisfaction with life; it also affects the overall quality of life [36].

In comparison with the study of meaningfulness of life by Campbell [24], who also carried out his research on a sample of a university student population, we reached identical results. The highest meaningfulness of life scores were achieved by respondents who spent their leisure time by engaging in physical and sport activities. When comparing the overall meaningfulness of life score with the research [37], we also found higher medium values of the overall score in comparison with university students and secondary school students. This may be caused by the fact that the overall degree of meaningfulness among secondary school students is perceived through the satisfaction which they derived from experiences, optimism (affective dimension) and with university students it is rather through organization in life and life philosophy (cognitive dimension). This can be a consequence of the further maturing of the personality and differences in how these two groups look at their lives, at the present and future or what they consider to be important in their lives. However, the results of the research by Campbell [24] show a decrease in the meaningfulness of life with the age of the respondents who spend their leisure time actively.

Meaningfulness of life is one of the basic preconditions for satisfaction with one's life. This satisfaction comes from an individual's actual awareness of the meaning in life. Since the period of adolescence is connected with the passage through various phases such as: searching for oneself, one's place in this world, values, love, it is in this period when the importance of sporting activity and its related benefits grows in terms of social, physical, emotional and health [38-41].

CONCLUSION

University student athletes experience significantly higher levels of meaningfulness of life in comparison with non-athletes. According to the three-component model, male and female athletes have statistically higher scores in the affective and motivational dimensions in comparison with male and female non-athletes. However, the small sample size of respondents from only two universities and the non-longitudinal design of the study are limits which prevent a generalization of the results.

ACKNOWLEDGEMENTS

This paper was supported by the grant project VEGA No. 1/0726/17, "Sports motivational profile for different groups of population and the influence of various sport activity to improve the subjective dimension of quality of life".

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