

**118 - SPORTS ORIENTATION AND ITS INFLUENCES IN THE QUALITY OF LIFE**ANA CLAUDIA<sup>1</sup>, ANÍBAL MONTEIRO DE MAGALHAES NETO<sup>2</sup>, NAYARA COSTA ARAÚJO<sup>1</sup><sup>1</sup> Universidade Federal de Goiás, Jataí-GO, Brasil; <sup>2</sup> Universidade Federal de Mato Grosso, Barra do Garças-MT, Brasil.

doi:10.16887/89.a1.118

**BACKGROUND**

The orienteering sport can be defined with an individual sport that aims to walk walking, trotting or running a certain distance in varied and unknown terrain, with the help of a map and a compass. The individual must pass through certain points in the terrains, which are called control points, described in the map that is distributed to each participant at the start, whoever takes the course with the shortest time wins (ROOS et al., 2015).

The sport of orienteering can be practiced by all age groups. A study by Östlund-Lagerström et al. (2015) who evaluated a population of 136 Orienteering athletes aged 67 to 71 years, showed that the athletes evaluated reported significantly better health compared to the elderly who did not practiced this modality, evidencing that this sport can represent an ideal model in studies of healthy aging.

In addition, it is a sport that involves concentration, perception of details, spatial orientation and dynamic balance. In addition to not discriminating sex and age, it does not discriminate between social class and/or schooling. In addition to these advantages, the orienteering sport is an outdoor leisure activity and a multidisciplinary tool that integrates several aspects of human development, allowing the integration of physical, mental, emotional and social, bringing well-being and harmony of personality (BARTON et al., 2014).

This sport has been used, mainly in Europe, as a multidisciplinary educational tool, facilitating learning, besides contributing to the social interaction and improvement of the quality of life, favoring the reduction of depressive symptoms and anxiety, fully fulfilling the concept of Mental Health according to WHO (World Health Organization) (PASINI, 2004, 2007). Moreover, this sport is largely performed as a family sport, that is, the orientists usually have parents and / or children practicing orienteering and therefore, the sport is strongly associated with social commitments (ÖSTLUND-LAGERSTRÖM et al., 2015).

Studies show that for the maintenance of health and quality of life the frequent practice of physical activity is of fundamental importance. However, in the last decades, according to epidemiological studies, there has been a decrease in these activities, especially with increasing age, provoking the sedentarism that has been one of the causes of morbidity and mortality in the world (COSTA et al., 2015). Physical activity, because of its effects on the treatment and prevention of various pathologies, is an important public health tool. Regular practice of targeted physical activity is of fundamental importance for the improvement, maintenance and increase of health and quality of life. The sporting practices, in general, provide the individual with heterogeneous social interaction, improvement of physiological conditions, release of endorphins and catecholamines among others (MORAES, CORRÊA; COELHO, 2018).

Sports in open environments seek a healthy lifestyle linked to the natural environment, directly interfering with quality of life, well-being and autonomy to solve problems (BARTON et al., 2014). The pedestrian orienteering sport fits within these sports, generating in the individuals that begin in the modality, the phenomena described by the author above. It is an ecological sport by nature, practiced in natural environments, such as parks, reserves, forests, and even in urban environments (PASINI, 2004; 2007).

However, studies relating the sport Orientation and its contributions to the improvement of the quality of life of elderly practitioners are scarce (TORRES, 2010) and studies that relate the sport Orientation with the quality of life of its practitioners analyzing the physical, cognitive and biopsychosocial effects of its practitioners in different age groups are non-existent. In view of the above, the objective of this study was to verify if the practice of Sports Orientation improves the quality of life and cognitive, physical and social performance of university students who joined this sport to their routine of physical activities.

**METHODOLOGY**

To evaluate the quality of life of the study participants, the World Health Organization quality of life questionnaire was abbreviated and adapted to Portuguese and validated for the Brazilian population WHOQOL-BREF (WHOQOL GROUP, 1998). The WHOQOL-BREF module consists of 26 questions (being question number 1 and 2 about general quality of life), the answers follow a Likert scale (from 1 to 5, the higher the score the better the quality of life). Apart from these two questions (1 and 2), the instrument has 24 facets which comprise 4 domains that are: Physical, Psychological, Social Relations and the Environment (Table 1).

The domain related to Physical Health includes questions about the quality of sleep, energy, mobility, extent to which pain interferes with the performance of daily tasks, the need for medical treatment for activities of daily living, level of satisfaction with work capacity. Psychological mastery focuses on ability to concentrate, self-esteem, self-image, and spirituality (extensions of how they sense life and frequency of positive and negative feelings such as anxiety, depression, and bad mood). The domain of Social Relations includes questions related to satisfaction with personal relationships, social support systems and sexual satisfaction. The fourth domain, environmental, questions aspects related to safety, satisfaction of the domestic, physical and financial environment.

**Table 1 - WHOQOL-BREF Domains and Facets**

Domains	Facets
I – Physical	Pain and discomfort; energy and fatigue; sleep and rest; mobility; activities of daily life; dependence on medications or treatments; ability to work.
II – Psychological	Positive Feeling; thinking, learning, memory of concentration; self esteem; body image and appearance; negative feelings; spirituality / religion / personal beliefs.
III - Social Relations	Personal relationships; sexual activity; social support.
IV - Environment	Physical security and protection; environment in the home; financial resources; health and social care: availability and quality; opportunities to acquire new information and skills; participation in recreation / leisure opportunities; physical environment: pollution / noise / climate; transport.
V - General	Perception of quality of life; health satisfaction.

It was also applied an open questionnaire with specific questions related to the experience of the Orienteering sport and its influence in the daily life. For this study, 13 students with a mean age of ± 23 years, 8 male and 5 female, were all students belonging to the PIBID Project of Physical Education of the Federal University of Mato Grosso, Campus Araguaia, who practice sports at some time. All participants in this study individually signed the Informed Consent Term, after a brief explanation of the purpose of the research and application of the test. The project was approved by the Committee of Ethics in Research (CEP) with Human Beings of the Federal University of Mato Grosso-UFMT/CUA (Protocol No. 1,064,808).

Descriptive analyzes of the data were performed and the results were expressed using Mean and Standard Deviation. To validate the WHOQOL-BREF questionnaire, the Cronbach's loyalty coefficient was used using the integrated statistical package Sigma Plot / Stat 11 (Systat, CA, USA).

**RESULTS**

Through the use of the WHOQOL-BREF method, a study was carried out on the quality of life of students practicing Orienteering. According to the classification of the applied questionnaire, when the result of the mean of the participant is 1 to 2,9 he needs to improve, if he reaches mean of 3 to 3,9 is regular, 4 to 4,9 good and if mean 5 their quality of life is very good (Fleck et al., 2000). In this study, in the physical domain, the general mean of the participants was 3.8, in relation to the psychological domain the mean was 3.7, in the social relations domain the mean was 3.6 and in the of the environment, mean values were 3.2 (Table 2). In this way, the results found indicate that the quality of life of the students is classified as "regular".

**Table 2 - Mean and General Standard Deviation of the domains and facets of the WHOQOL-BREF questionnaire**

Domains	Physical	Psychological	Social Relations	Environment
Mean	3,8	3,7	3,6	3,2
DP	0,7	0,5	0,5	0,7

Regarding the perception of the quality of life of the students, the average was 4 and in what concerns their satisfaction with health an average of 4.1 was found (Table 3). These results classify the perception of quality of life and personal satisfaction with the health of students practicing orienteering as "good", indicating that those assessed have a good perception of quality of life and are satisfied with their health.

**Table 3 - Mean and Standard Deviation of the perception of the quality of life and satisfaction with the students' health.**

General	Perception of quality of life	Satisfaction with health
Mean	4	4,1
DP	0,7	0,8

In the second questionnaire applied to specific questions related to the experience of orienteering and its influence on their daily lives, many students affirmed that after the first practice of the sport they felt good physically and because of this, they began to practice sports as leisure and not as an obligation arising from the project underway, most of those evaluated claimed to have no knowledge of the sport prior to the implementation of the project in college and that due to this lack of information they faced some difficulties in learning the sport being necessary to take courses of basic sports initiation and technicians of the sport for a better understanding of the sport.

Some of the respondents stated in their responses that they liked the sport so much that they went to some Orienteering Championships in the region to compete. And they said they love the experience. We also found reports of students who said they improved their academic performance after practicing the sport due to constant cognitive stimulation that Orienteering requires. Regarding social performance, the students affirmed that they began to socialize more due to the coexistence with other practitioners of the sport that the competitions and training tracks in which they participated provided.

**DISCUSSIONS**

According to a bibliographical survey, research on Orienteering Sport is scarce worldwide, limiting itself to reports of projects related to the competitive, pedagogical, environmental and tourism aspects. There are even more scanty studies on the sport Orienteering and its contributions in the health of its practitioners (CBO, 2005). The fact that Orienteering has no age limits to start practicing makes it one of the only, if not the only, sport in which older people can compete on an equal footing, this and other factors contributed to the emergence of the first research on this theme.

A study by Torres (2010) showed that learning and practicing Orienteering was able to improve the quality of life and cognitive performance of the elderly participants compared to those who did not do any type of physical activity. Studies by Cintra et al. (2010) showed a significant improvement in the mental health of the elderly participants after the intervention with Orienteering, resulting in an increase in optimism, good mood and general well-being.

Some studies highlight the positive impact of regular physical activity on cognitive aspects, mental health, and overall well-being of the individual during the aging process (TALLAH et al., 2018; REBELO-MARQUES et al., 2018). In this way, it is perceived that the practice of physical activity results in an improvement in the quality of life, and its continuous practice in youth influences old age causing improvement in health and quality of life.

Although the focus of this study is not the effects of sports on the health of the elderly, only articles related to this subject have been found in the literature, which highlights a literary gap that needs to be filled. Studies that report the effects of sports Orienteering on the quality of life of its practitioners of general public, both in the competitive field and those who practice sport and leisure regardless of age, should be deepened for a better debate about the subject.

Orienteering involves multiple intelligences that are developed from the solution of problems that occur during the activity, favoring an improvement in the learning process, contributing to an improvement in individual skills and reducing the risk of cognitive decline in aging (PASINE, DANTAS, 2003; ÖSTLUND-LAGERSTRÖM et al., 2015). Its complexity stems from the athlete's need to navigate accurately, while solving problems with route decisions and distance calculations quickly. And it still has to deal with the issue of physical balance, moving in different types of terrain, which requires a lot of it (ECCLES; ARSAL, 2015).

In addition, orienteering sports offer many opportunities for socialization, a study by Östlund-Lagerström et al. (2015) found that senior orienteering athletes regard orienteering as a unique sport capable of promoting intergenerational social interaction because athletes between 4 and 90 years old tend to compete in the same events, they emphasize that the satisfaction of being able to share their sport with their relatives (spouse, children and grandchildren) brings joy and makes them feel young and share a connection with their co-competitors, no matter their age. This differentiates the orientation of other sports, such as cycling, which is usually performed individually or with friends and is not usually shared between generations of the family.

Growing in a supportive environment to sports and physical activity provides a basis for remaining active throughout life (ÖSTLUND-LAGERSTRÖM et al., 2015). Based on this assumption, it is observed that the healthy lifestyle of orienteering athletes is commonly founded during childhood. Thus, the importance of an early introduction of physical activity and health education can not be neglected in order to maintain a healthy lifestyle throughout life.

In addition, in the practice of this sport, the cognitive aspect of its practitioners is constantly used, associating the race with the fast decision making (MILLET et al., 2010; ROOS et al., 2015). This coincides with the fact that the practitioners of sport point out that they have improved both in their physical and cognitive aspects after they started practicing the sport.

In light of the results found in this study and in view of the characteristics of this sport, it can be a good model to be worked with children, since its capacity for improvement in motor and cognitive development can be used in Physical Education classes as an activity ludic-sport, contributing pedagogically to the teaching-learning process.

## CONCLUSIONS

The benefits inherent to the regular practice of physical activity in the third age have been object of study by numerous authors and research areas, and many have already stated that an active lifestyle promotes the maintenance of the functional capacity of these individuals for a longer period and, consequently maintains their quality of life. In this context, when considering the importance of physical activity in the third age, we have seen that this fact does not happen only in more mature people, the regular practice of physical activities bring benefits in general. And the sooner you start this practice the more positive results you get. The objective of this study was to verify if the practice of orienteering sports is able to improve the quality of life and the cognitive, physical and social performance of young university students. The results were positive, evidencing that the students practicing the sport have a quality of life considered regular and their perception and satisfaction with their good health.

Regarding the cognitive, physical and social performance, based on the answers of the applied questionnaire, the evaluated ones indicated that after their insertion in the sport all these aspects were better developed, indicating that the sport contributed to the improvement of the subjective perception of the students in these fields evaluated. However, as a study limitation, the quality of life questionnaire was applied to practitioners of orienteering sports only after a few years their insertion in the sport, not being able to evaluate their quality of life before and after the experience of the sport, taking into consideration that the majority of the assessed students had an active life, it may be that the data were influenced. It is important to emphasize that the second questionnaire applied was based on self-reported data and, therefore, depends on the honesty of the respondents, accurate understanding and interpretation of the questions asked. Therefore, it is believed that new studies should emerge addressing the subject matter in order to obtain more concise results.

## REFERENCES

ATALLAH, Nathalie et al. "How Healthy Lifestyle Factors at Midlife Relate to Healthy Aging" *Nutrients* v. 10, n.7, p. 854, 2018.

BARTON Jo; SANDERCOCK Gavin; PRETTY Jules; WOOD Carly. The effect of playground and nature-based playtime interventions on physical activity and self-esteem in UK school children, *International Journal of Environmental Health Research*, 2014.

CINTRA, et. al. Study of the contribution of sports orientation in the mental health of adults. *Rev. Of the Institute of Higher Education President Tancredo de Almeida Neves. Interdisciplinary Knowledge.* v.3, n.6, p.15-41, 2010.

CBO - Brazilian Confederation of Guidance. General Rules and Pedestrian Guidance. Santa Maria-RS-Brasil. 2005.

- COSTA, Lucas da Silva Vaz da et al. Comparative analysis of the quality of life, balance and muscular strength in elderly people practicing physical exercise and sedentary. Faculty of Law 8, no. 3, p. 61-179, 2015.
- ECCLES DW, ARSAL G. How do they make it look so easy? The expert orienteer's cognitive advantage. J Sports Sci. v.33, p. 609-615, 2015.
- FLECK MPA, LOUZADA S, XAVIER M, CHAMOVICH E, VIEIRA G, SANTOS L, PINZON V. Application of the Portuguese version of the abbreviated WHOQOL-bref quality of life assessment instrument. Journal of Public Health, v.34, n.2, p.178-183, 2000.
- MILLET, G et al. Changes in running pattern due to fatigue and cognitive load in orienteering. J of Sports Sci. V.27. P. 1-8, 2010.
- MORAES, Frederico Lemos Ribeiro de; CORRÊA Priscila; COELHO Wagner Santos. Assessment of the functional autonomy, physical abilities and quality of life of physically active and sedentary elderly. Brazilian Journal of Exercise Prescription and Physiology, São Paulo. v.12. n.74. p.297-307, 2018.
- ÖSTLUND-LAGERSTRÖM L; BLOMBERG, K; ALGILANI, S. et al. Senior orienteering athletes as a model of healthy aging: a mixed-approach approach. BMC Geriatrics. v.15, n.76, 2015.
- PASINI, C. G. D. Pedagogy, Technique and Tactics of Orienteering Race. Santiago: Point Copies, 2007.
- PASINI, C. G. D. Orientation Race: Sport and pedagogical tool for education. Three Hearts: Excelsior Graphics, 2004.
- PASINI, C. G. D., & DANTAS, M. Orientation Discipline and Physical Education Curriculum of Higher Education. A Necessary Inclusion. Vale Verde River University of Três Corações. 2003.
- REBELO-MARQUES, Alexandre et al. "Aging Hallmarks: The Benefits of Physical Exercise" Frontiers in endocrinology. v.9, p. 258, 2018.
- ROOS, L; TAUBE, W; ZUEST, P; CLÉNIN, G. Musculoskeletal Injuries and Training Patterns in Junior Elite Orienteering Athletes. BioMed Res Int. P. 259,531, 2015.
- TORRES, V. C. M. The effect of sports orientation on quality of life and cognitive performance at maturity. 2011.
- WHOQOL Group. Portuguese version of the quality of life assessment instruments. FAMED - Federal University of Rio Grande do Sul / HCPA, 1998.
- WHOQOL GROUP: The word Health Organization Quality of Life Assessment (WHOQOL): Position paper from the Health Organization. Soc. Sci. Med, v.41, n.10, p.1403-1409, 1995.

#### **SPORTS ORIENTATION AND ITS INFLUENCES IN THE QUALITY OF LIFE**

Orienteering is an individual sport that aims to travel a certain distance on varied and unknown terrain, with the aid of a map and a compass. The objective of this study was to verify if the practice of Sports Orienteering improves the quality of life and the cognitive, physical and social performance of university students who joined this sport to their routine of physical activities. For that, the WHOQOL-BREF questionnaire was applied to 13 university students to evaluate their quality of life, and a questionnaire with specific questions related to the experience of the sport and its influence on daily life. The results show that in the physical domain, the general mean of the participants was 3.8, in the psychological domain the mean was 3.7, in the social relations domain the mean was 3.6 and in the environmental domain obtained mean of 3.2. Regarding the perception of the quality of life of the students, the mean was 4 and, with regard to their satisfaction with health, an mean of 4.1 was found. The results show that students who practice sports have a quality of life considered regular and their perception and satisfaction with their good health. Regarding the cognitive, physical and social performance, based on the answers of the applied questionnaire, the evaluated ones indicated that after their insertion in the sport all these aspects were better developed, indicating that the sport contributed to the improvement of the subjective perception of the students in these fields evaluated.

**Keyword:** Physical Activity, Health, Healthy Aging.

#### **L'ORIENTATION SPORTIVE ET SES INFLUENCES SUR LA QUALITÉ DE VIE**

Le Orientation est un sport individuel qui vise à parcourir une certaine distance sur un terrain varié et inconnu, à l'aide d'une carte et d'un compas. L'objectif de cette étude était de vérifier si la pratique de l'orientation sportive améliore la qualité de la vie et les performances cognitives, physiques et sociales des étudiants universitaires qui ont rejoint ce sport dans leur routine d'activités physiques. Pour cela, le questionnaire WHOQOL-BREF a été appliqué à 13 étudiants universitaires afin d'évaluer leur qualité de vie, ainsi qu'un questionnaire comportant des questions spécifiques relatives à l'expérience du sport et à son influence sur la vie quotidienne. Les résultats montrent que dans le domaine physique, la moyenne générale des participants était de 3,8, dans le domaine psychologique de 3,7, dans le domaine des relations sociales de 3,6 et dans le domaine de l'environnement obtenu moyenne de 3,2. En ce qui concerne la perception de la qualité de vie des étudiants, la moyenne était de 4 et, en ce qui concerne leur satisfaction à l'égard de la santé, une moyenne de 4,1 a été trouvée. Les résultats montrent que les étudiants qui pratiquent un sport ont une qualité de vie considérée comme régulière ainsi que leur perception et leur satisfaction quant à leur bonne santé. Concernant les performances cognitives, physiques et sociales, sur la base des réponses du questionnaire appliqué, les évalués ont indiqué qu'après leur insertion dans le sport tous ces aspects étaient mieux développés, indiquant que le sport contribuait à améliorer la perception subjective des étudiants dans ces domaines évalués.

**Mots clés:** activité physique, santé, vieillissement en bonne santé.

#### **EL DEPORTE ORIENTACIÓN Y SUS INFLUENCIAS EN LA CALIDAD DE VIDA**

La orientación es un deporte individual que tiene como objetivo recorrer una determinada distancia en terreno variado y desconocido, con el auxilio de un mapa y una brújula. El objetivo de este estudio fue verificar si la práctica del deporte Orientación mejora la calidad de vida y el desempeño cognitivo, físico y social de universitarios que adhirieron ese deporte a su rutina de actividades físicas. Para ello, se aplicó el cuestionario WHOQOL-BREF en 13 universitarios para evaluar su calidad de vida, y un cuestionario con preguntas específicas relacionadas con la vivencia del deporte y su influencia en el cotidiano. Los resultados muestran que en el dominio físico, la media general de los participantes fue 3,8, en el dominio psicológico se encontró la media de 3,7, en el dominio de las relaciones sociales la media fue de 3,6 y en el dominio del medio ambiente obtuvo y el promedio de 3,2. En cuanto a la percepción de la calidad de vida de los estudiantes, la media fue de 4 y en lo que se refiere a su satisfacción con la salud se encontró un promedio de 4,1. Los resultados encontrados evidencian que los estudiantes practicantes del deporte tienen una calidad de vida considerada regular y su percepción y satisfacción con su buena salud. En cuanto al desempeño cognitivo, físico y social, con base en las respuestas del cuestionario aplicado, los evaluados apunta que después de su inserción en el deporte todos estos aspectos fueron mejor desarrollados, indicando que el deporte contribuyó a la mejora de la percepción subjetiva de los estudiantes en esos campos evaluado.

**Palabras clave:** Actividad física, salud, envejecimiento saludable.

**O ESPORTE ORIENTAÇÃO E SUAS INFLUÊNCIAS NA QUALIDADE DE VIDA**

A orientação é um esporte individual que tem como objetivo percorrer uma determinada distância em terreno variado e desconhecido, com o auxílio de um mapa e uma bússola. O objetivo deste estudo foi verificar se a prática do esporte Orientação melhora a qualidade de vida e o desempenho cognitivo, físicos e sociais de universitários que aderiram esse esporte a sua rotina de atividades físicas. Para isto, foi aplicado o questionário WHOQOL-BREF em 13 universitários para avaliar sua qualidade de vida, e um questionário com perguntas específicas relacionada a vivência do esporte e sua influência no cotidiano. Os resultados mostram que no domínio físico, a média geral dos participantes foi 3,8, no domínio psicológico encontrou-se a média de 3,7, no domínio das relações sociais a média foi de 3,6 e no domínio do meio ambiente obteve-se média de 3,2. Já em relação a percepção da qualidade de vida dos estudantes, a média foi de 4 e no que diz respeito a sua satisfação com a saúde foi encontrado uma média de 4,1. Os resultados encontrados evidenciam que os estudantes praticantes do esporte têm uma qualidade de vida considerada regular e sua percepção e satisfação com sua saúde boa. Em relação ao desempenho cognitivo, físico e social, com base nas respostas do questionário aplicado, os avaliados apontaram que após a sua inserção no esporte todos esses aspectos foram melhor desenvolvidos, indicando que o esporte contribuiu para a melhora da percepção subjetiva dos estudantes nesses campos avaliados.

**Palavras-chave:** Atividade Física, Saúde, Envelhecimento Saudável.