

Capacity for work and quality of life in Crossfit
Capacidade para o trabalho e qualidade de vida no *Crossfit*
Capacidad para el trabajo y calidad de vida en *Crossfit*

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This is a cross-sectional study, carried out in 2019, aimed at evaluating the capacity for work and the quality of life of crossfit trainers. It used a questionnaire on sociodemographic and occupational characteristics; the WHOQOL-Bref to evaluate quality of life, and the Work Capacity Index. Data was analyzed using descriptive statistics and the Mann-Whitney U test, as well as Spearman's correlation. 13 workers participated in the research. Seven were male, the mean age was 29.92 ± 5.39 , and the mean result of the WCI was 42.92 ± 7.27 . Regarding their quality of life, the domain in which participants had their best score was the general one, followed by the psychological and physical ones. The only positive association of the capacity for work was with the physical and psychological domains. Results indicate a good capacity for work and a good quality of life.

Descriptors: Quality of life; Work capacity evaluation; Occupational health; Exercise.

Este é um estudo transversal, realizado em 2019, com o objetivo de avaliar a capacidade para o trabalho e a qualidade de vida de treinadores de *crossfit*. Utilizou-se um questionário sobre características sociodemográficas e ocupacionais; WHOQOL-*bref* para avaliação de qualidade de vida e do Índice de Capacidade para o Trabalho. Para análise dos dados empregou-se estatística descritiva, teste Mann-Whitney e correlação de Spearman. Pesquisou-se 13 profissionais, sendo sete homens, com idade média de $29,92 \pm 5,39$ anos. O valor médio do ICT foi de $42,92 \pm 7,27$. Quanto à qualidade de vida, o domínio no qual os profissionais apresentaram melhor escore foi o geral, seguido pelo psicológico e o físico. A capacidade para o trabalho apresentou associação positiva apenas com os domínios físico e psicológico. Os resultados indicam boa capacidade para o trabalho e boa qualidade de vida.

Descritores: Qualidade de vida; Avaliação da capacidade de trabalho; Saúde do trabalhador; Exercício.

Este es un estudio transversal, realizado en 2019, con el objetivo de evaluar la capacidad para el trabajo y la calidad de vida de entrenadores de *crossfit*. Se utilizó un cuestionario sobre características sociodemográficas y ocupacionales; WHOQOL-*bref* para evaluación de calidad de vida y el Índice de Capacidad para el Trabajo. Para el análisis de los datos se empleó estadística descriptiva, *test* Mann-Whitney y correlación de Spearman. Se investigaron 13 profesionales, siendo siete hombres, con edad promedio de $29,92 \pm 5,39$ años. El valor promedio del ICT fue de $42,92 \pm 7,27$. En cuanto a la calidad de vida, el dominio en el cual los profesionales presentaron mejor puntuación fue el general, seguido por el psicológico y el físico. La capacidad para el trabajo presentó asociación positiva sólo con los dominios físico y psicológico. Los resultados indican buena capacidad para el trabajo y buena calidad de vida.

Descritores: Calidad de vida; Evaluación de capacidad de trabajo; Salud laboral; Ejercicio.

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INTRODUCTION

Gyms have undergone many changes through their years as centers for the practice of exercises and spaces for body culture, and as a result, the demand for professionals who are qualified to act in them has increased increasing^{1,2}.

The routine of these professionals include a large workload and intense physical efforts, which can interfere in the perception of quality of life (QoL) and in the satisfaction with the professional environment³. The QoL is also associated with the Capacity for Work (CW), which can be defined as "how well the worker is or will be in the present or in the near future and how well will the worker can execute their job, considering its demands, the worker's health situation, and their physical and mental capacities"⁴, and, therefore, having a perception about this variable is very important.

The low CW in the sports setting makes it an environment that can trigger symptoms of stress in trainers as a result of the interaction of this professional with personal (psychic and somatic processes) and environmental factors (physical, professional, somatic, and sociocultural environments)⁵⁻⁷. Trainers can experience high levels of stress in the workplace, which can prejudice their productivity and health and is associated with high recovery times and propensity for diseases⁸. It should be highlighted that these professionals duplicate their physical efforts, since they need to train with their students in addition to carrying out their own training.

In recent years there has been an increase in the high-intensity activities during the practice of physical exercises and sports⁹. Crossfit presents itself as a modality of intense physical activity, and is characterized by the performance of functional exercises that are constantly varied¹⁰.

With the emergence of these new types of training, it becomes necessary to evaluate the CW and the QoL in these professionals. In this context, this study aimed at evaluating the quality of life of crossfit trainers.

METHOD

This is an observational and cross-sectional study, carried out in 2019. A convenience sample of crossfit trainers was analyzed, whose inclusion criteria were: being 18 years old or older, from any sex, who were currently working on the profession in some box affiliated to the brand during the interview period.

The sociodemographic, and occupational characterization of trainers took place through the application of a questionnaire made up of items such as sex, age, marital status, educational level, time working as a trainer, daily workload, in addition to items related to the practice and the modality, such as for how long they practice, hours per day and weekly frequency.

To evaluate the capacity for work, the Work Capacity Index (WCI) was used. The WCI items evaluate seven dimensions: work capacity, work capacity related to physical demands, number of current diseases diagnosed, estimated losses at work due to diseases, absent days at work due to diseases in the 12 months, and prognosis for work capacity two years from now^{4,11}. The WCI score varies from 7 to 49 points, and is classified in four levels: low work capacity (from 7 to 27 points), moderate capacity (from 28 to 36 points), good capacity (From 37 to 43 points), and optimal capacity (from 44 to 49 points)^{3,4}.

To evaluate quality of life, the WHOQOL-Bref, a validated instrument, was used. It is made up of 26 questions, two of which are general and 24 of which are divided in the Physical Domain (pain and discomfort; energy and fatigue; sleep and rest; mobility; daily life activities; dependency on medication and treatments; capacity for work), the Psychological Domain (positive feelings; thinking, learning, memory, and concentration; self-esteem; body image and appearance; negative feelings; spirituality/religion/personal beliefs), the Social Relations domain (personal relations; social support; sexual activity), and the Environment Domain

(physical safety and protection; environment at home; financial resources; social and health-related care; availability and quality; opportunity to acquire new information and abilities; participation and opportunities for recreation/leisure; physical environment; transportation)¹².

The statistical analysis of the data was carried out using the statistical software SPSS, version 23.0. The database included sociodemographic and occupational variables and responses were given for each WCI and WHOQOL-Bref items. In the descriptive analysis of data, descriptive statistics were used at first. To associate the sociodemographic (age), occupational (time since the participant is a trainer and daily workload), and QoL variables with the CW, Mann-Whitney's U and Spearman's rho were used. A significance level of 5% was considered for all tests.

The study was approved by the Ethics Committee for Research with human beings from the Universidade Federal do Triângulo Mineiro, No. 2.624.996/2018.

RESULTS

13 workers participated in the research. Seven were male, their mean age was 29.92 ± 5.39 . The mean result of the WCI was 42.92 ± 7.27 . Regarding their quality of life, the domain in which participants had their best score was the general one, followed by the psychological and physical ones. The sociodemographic and occupational characteristics of the participants are presented in table 1, as are the ones related to their quality of life and capacity for work.

Table 1. Sociodemographic, occupational, and work-capacity characteristics of the trainers. Uberaba, 2019.

Variables		N	%
Sociodemographic			
	Female	7	53.84
	Male	6	46.16
Years of formal education			
	Complete higher education	8	61.53
	Ongoing post-graduation	2	15.38
	Complete post-graduation	3	23.00
Marital Status			
	Married/living with a partner	5	38.46
	Separated/divorced	1	7.69
	Single	7	53.85
		M	SD
	Age (years)	29.92	5.39
	Height (meters)	1.65	0.10
	Body mass (kg)	77.76	13.58
Occupational variables			
	Mean time since graduation (months)	68	42.23
	Time working as a trainer (months)	27.5	15.58
	Daily workload (hours)	7.69	2.01
	Daily hours training (minutes)	96.66	32.99
	Time of practice (months)	43.33	20.67
	Weekly frequency	5.5	0.75
Work Capacity		N	(%)
	Low	1	7.71
	Boa	4	30.76
	Ótima	8	61.53
Quality of life		M	SD
	General domain	87.69	10.13
	Psychological domain	81.98	7.89
	Physical Domain	80.48	11.31
	Social domain	79.9	12.17
	Environmental domain	75.7	10.01

N= number; M: mean; SD: standard deviation

Table 2 presents the correlations between CW and sociodemographic, occupational, and quality of life variables. The results suggest that the higher the CW, the better the QoL in the physical ($p=0.028$; $r=0.605$) and psychological domains ($p=0,043$; $r=0,568$).

Table 2. Correlation between the work capacity and the sociodemographic, occupational, and quality of life variables of crossfit trainers. Uberaba-MG, 2019.

Variables	Work Capacity	
	r	P
Sociodemographic		
Age	0.268	0.376
Occupational		
Time at work	0.292	0.334
Time working as a trainer (months)	0.005	0.987
Time of practice	-0.119	0.698
Daily time spent on practice	0.442	0.131
Quality of life		
General	0.312	0.300
Physical	0.605	0.028
Social	0.390	0.188
Psychological	0.568	0.043*
Environmental	0.523	0.067

* $p<0.05$, Spearman's correlation

DISCUSSION

No study was found that evaluated the CW in physical education professionals in any modality or field. Most studies on the quality of life of physical education professionals is focused on gym teachers¹³(weight training and gymnastics), physical education teachers⁸, and school physical education¹⁴.

The general domain of the QoL presented a higher score. This result may have been influenced by two general issues on QoL, which is evaluated by most of the group as good or very good. The professionals have an active lifestyle, which directly influences their health and QoL¹³.

The mean scores of the psychological domains also suggest good quality of life. This can suggest that this result reiterates that physical exercise has a good impact in the psychological aspects of people, including feelings of wellbeing, and improvements in self-esteem and self-confidence^{15,16}. Similarly, for the physical domain, the score showed a good quality of life, possibly due to the fact that participants trained very frequently every week, with a mean of 100.76 minutes ($SD=36.16$) a day of practice, similar to what was found in another study with weight training teachers¹³.

The social and environmental domains presented lower results for quality of life. The environmental domain had the lowest mean. That could be because, among other factors, there are high levels of noise-related stress in gyms and gymnastic rooms. The professionals spend long periods of time in these places, which would negatively affect their perception of quality of life in this domain^{13,17}.

Significant associations between higher CW and better QoL in the psychological and physical domains suggest that the perception of the capacity for work is not only associated to work-related factors, but can express, at least in part, the perception of one's quality of life outside their work environment¹⁸. This corroborates the theoretical framework with regards to the capacity for work and incorporates, to the analysis, a multi-factorial and multidimensional perspective. To this end, a systematic review of the effects of factors related to work and the individual found that satisfaction in life and CW seem to have an interactive and mutual relation, being often determined together¹⁹. Still, a study found that interactions

between professional and family life are important in the perception of the capacity for work and in one's emotional wellbeing¹⁹.

However, it should be considered that the age and the time in the profession of the trainers are low, and that age is a determining factor in the decline of physiological functions, such as physical strength, respiratory, hormonal, and mental capacities. These are intimately tied to the loss of functional capacity in the activities that are more physically demanding²⁰. In addition, younger workers, especially makes, are less insecure in their work environments, and more optimistic with regards to CW perception²¹.

Functions that are highly physically demanding have been associated to lower work capacity²²⁻²⁴, reiterating the need to develop preventive actions directed to the aspects connected to the physical domain. As a result, a longitudinal monitoring of these workers and the development of health promotion programs could highlight the results of their professional practices through time, considering the complex work relations to which they are exposed during the development of their practices.

CONCLUSION

In general, crossfit trainers were found to have a good capacity for work. Their capacity for work was significantly associated to the physical and psychological domains. This result is an initial contribution for studies that aim to analyze similar populations.

A limitation of this study is the low number of individuals interviewed, when counted in absolute numbers. However, on the other hand, this number can be seen as representative of a medium-sized Brazilian city, since it is studying trainers who have been certified by a method which is, still, gaining popularity as a method.

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CONTRIBUTIONS

Antonio Ribeiro, Lucimara Ferreira Magalhães and **Dernival Bertoncello** took part in the conception of this article, as well as in its design, analysis, data interpretation, writing, and revision. **Isabel Aparecida Porcatti de Walsh** took part in the revision of this article.

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