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Core self-evaluations and sportive practice: Comparisons between practitioners and non-practitioners college students

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Abstract

Generally, it is assumed that practicing sports may contribute to developing positive self-perceptions. However, this assumption is still controversial, especially in competitive sports, which is characterized by high amounts of pressure and possible frustrations. Therefore, this study aims to investigate and compare the core self-evaluations (CSE) of three groups of college students: competitive sports practitioners (CSP), recreational sports practitioners (RSP), and non-practitioners (NP). Participants were 703 college students from different regions of Brazil. Covariance analyses showed that CSP had significantly higher CSE means than RSP ($p < 0.05$) and NP ($p < 0.001$). The RSP also presented significantly higher means than NP ($p < 0.001$). Despite the controversies, the results demonstrate that individuals who practice sports, even at a competitive level, may present more positive CSE, which contributes to better adaptation to different life demands and greater personal agency.

Keywords: Sports Psychology; competition; self-evaluations; self-efficacy; agency.

AVALIAÇÕES AUTORREFERENTES E PRÁTICAS ESPORTIVAS: COMPARAÇÕES ENTRE UNIVERSITÁRIOS PRATICANTES E NÃO PRATICANTES

Resumo

Espera-se que o engajamento em práticas esportivas contribua para o desenvolvimento de autopercepções positivas. Porém, há controvérsias sobre esse pressuposto, sobretudo no esporte competitivo, que é caracterizado por maior pressão e possíveis frustrações. O objetivo deste estudo é investigar e comparar as avaliações autorreferentes centrais (AAC) de três grupos de universitários: praticantes de esportes em nível competitivo (PEC), praticantes de esportes por lazer (PEL) e não praticantes (NP). Participaram 703 universitários de diferentes regiões do Brasil. As análises de covariância demonstraram que os PEC apresentaram médias de AAC significativamente maiores que os PEL ($p < 0,05$) e NP ($p < 0,001$). Os PEL também apresentaram médias significativamente maiores que os NP ($p < 0,001$). Os resultados demonstram que, apesar das controvérsias, indivíduos que praticam esportes, inclusive em nível competitivo, podem apresentar AAC mais positivas, o que contribui para uma melhor adaptação às diferentes demandas da vida e para um maior exercício da agência pessoal.

Palavras-chave: Psicologia do Esporte; competição; autoavaliação; autoeficácia; agência.

EVALUACIONES AUTO-REFERENTES Y PRÁCTICAS DEPORTIVAS: COMPARACIONES ENTRE UNIVERSITARIOS PRACTICANTES Y NO PRACTICANTES

Resumen

Se espera que la práctica de deportes contribuya al desarrollo de autopercepciones positivas. Todavía, hay controversias sobre ese presupuesto, especialmente en el deporte competitivo, que se caracteriza por mayor presión y posibles frustraciones. Este estudio pretende investigar y comparar las evaluaciones auto-referentes centrales (EAC) de tres grupos de universitarios: practicantes de deportes a nivel competitivo (PDC), practicantes de deportes por ocio (PDO) y no practicantes (NP). Participaron 703 universitarios de diferentes regiones de Brasil. Los análisis de covariancia demostraron que PDC presentaron promedios de EAC significativamente mayores que PDO ($p < 0,05$) y NP ($p < 0,001$). PDO también presentaron promedios significativamente mayores que NP ($p < 0,001$). Los resultados demuestran que, a pesar de las controversias, individuos que practican deportes, incluso el competitivo, pueden presentar EAC más positivas, lo que contribuye a una mejor adaptación a las diferentes demandas de la vida y mayor ejercicio de la agencia personal.

Palabras clave: Psicología del Esporte; competición; autoevaluación; autoeficacia; agencia.

1. Introduction

Physical activities and sportive practice are important for human development because they promote not only physical health but also psychosocial health, which justifies the investment directed to such practices at a global level (Programa das Nações Unidas para o Desenvolvimento [Pnud], 2017). Sports players, specifically, can exercise different skills through these practices (Holt, 2016). The engagement in sports, especially when focused on high performance and competition, involves constant feedback to the athlete, which can influence their levels of motivation and competitiveness (Cranmer, Gagnon, & Mazer, 2019). Athletes who have good performance levels can develop more positive self-perceptions and generalize them to other life dimensions, which allows better adaptation to challenges in different contexts. At the same time, when there is high pressure to increase performance, the practice of sports can be associated with the fear of negative evaluations (Geukes, Harvey, Trezise, & Mesagno, 2017; Newman, Howells, & Fletcher, 2016).

The pursuit of high positions in the performance rank can be associated with a desire for excellence, promoting self-esteem (Gill, Kissova, Lee, & Prowse, 2015) and being associated with a perception of incompetence or inadequacy when the individual's possibilities fall short of their ideal performance (Fox & Lindwall, 2014). Dealing with adversity is inherent to the sportive experience, which includes adapting to evaluative contexts in which the consequences for victory and defeat are clearly established (Galli & Gonzalez, 2014). Athletes commonly report that the perception of self-worth associated with a victory is short when compared to the psychological impact of defeat and that they have an extreme approach and high perfectionism when assessing their failures (Newman, Howells, & Fletcher, 2016). However, a meta-analysis study demonstrated that perfectionist concerns do not predict good performance and are associated with several maladaptive symptoms, such as the low perception of self-worth and high self-criticism (Hill, Mallinson-Howard, & Jowett, 2018). Therefore, the benefits of sportive practice for developing positive self-perception are not absolute or automatic and may vary according to its nature (e.g., competitive or leisure), which justifies the emphasis given to these elements in this paper. In this study, we intend to expand the investigation on this topic by comparing the self-perceptions of individuals not engaged in sports with individuals engaged in different types of sportive practices.

The terms "self-evaluations" and "self-perceptions" can encompass different constructs. Currently, a number of authors suggest that constructs such as self-esteem, generalized self-efficacy, internal locus of control, and emotional stability constitute a single, multidimensional factor named Core Self-Evaluations – CSE (Judge, Erez, Bono, & Thoresen, 2002). This proposal is justified by the strong association and similarity between these four sub-factors, which can be empirically observed (Chang, Ferris, Rosen, & Tan; Judge et al., 2002), allowing a more integrated understanding and simplifying the measurement of these sub-factors. There is also conceptual proximity between the four sub-factors, in order that CSE are defined as a core of self-evaluations and self-perceptions (Debusscher, Hofman, & De Fruyt, 2017) that occur within the scope of the evaluation of personal value (self-esteem), the perception of individual effectiveness (generalized self-efficacy), personal responsibility for their actions and results (internal locus of control), and the ability to regulate emotions (emotional stability). Individuals with more positive CSE are more likely to experience subjective well-being and use their personal

resources to pursue their goals in different circumstances (Chang et al., 2012), whereas the opposite occurs with individuals with negative CSE.

According to Bandura's Social Cognitive Theory (2018), mastery experiences are the main sources of constituting beliefs of personal effectiveness (i.e., self-evaluations). These experiences correspond to learning new skills and achieving success in implementing them. When referring to domains of relevance to the individual, the beliefs of effectiveness associated with that specific domain can be generalized to a better self-assessment of overall effectiveness (Bandura, Adams, & Beyer, 1977). In other words, an individual who considers sports to be very important and learns new skills through them can develop and generalize a positive global self-evaluation beyond the sportive domain. Therefore, CSE can be influenced by individual performance in certain domains, at the same time that CSE influence this performance in different tasks with good predictive values (Jiang & Jiang, 2015; Rode, Judge, & Sun, 2012). This phenomenon can be explained by the concept of reciprocal determinism, which refers to the mutual and reciprocal influence of personal, environmental, and behavioral factors in human development (Bandura, 2018). In this context, CSE influence and are influenced by the results obtained in certain domains in a reciprocal way.

The hypothesis of this study is that individuals engaged in sports have more positive CSE than those who are not engaged. Practitioners can experience greater stimulus to the development of positive CSE due to the mastery experiences associated with sports although there is ambiguity as to the causal relationship between these elements – since individuals may already have positive CSE prior to their contact with sport – it is understood that correspondence between such practices and more positive CSE, when compared to non-practitioners, may indicate that sports, in some way, consist of a domain of experiences that correlates with positive self-evaluations. Previous studies have demonstrated an association between the practice of sports and greater perception of personal value and self-esteem (Duncan, Strycker, & Chaumeton, 2015; Yigiter & Bayazit, 2013), and greater generalized self-efficacy (Richards, 2018) in different ethnic and age groups. However, there are still few studies in Sports Psychology that use the integrative concept of CSE. This concept has been used mostly in studies of Organizational Psychology (Rocha, Corrêa, & Dias, 2018). Regarding the competitive aspect of certain practices, there are still controversies about their relationship

with practitioners' self-evaluations. Individuals who compete possibly give more importance to the sport and its role in their lives than people who practice the sport for leisure. In this sense, the sportive domain can exert greater influence on the CSE of competing practitioners, both positively and negatively. In other words, as competitive sports involve more pressure and possible frustrations related to "bad performance," they can also stimulate negative self-evaluation.

Therefore, this study aims to compare the CSE of three natural groups of individuals: 1. competitive sports practitioners (CSP); 2. recreational sports practitioners (RSP); and 3. non-practitioners (NP). Groups are expected to show significant differences in their CSE. The CSP and RSP are expected to present more positive CSE when compared to the NP. In turn, there are no clear expectations regarding the relationship between CSP and RSP due to the issues associated with pressure and competitiveness previously exposed. Thus, the exploratory analyses (i.e., with open expectations) will be carried out on the CSE of these groups.

2. Method

2.1 Participants

The participants were 703 college students (aged between 18 and 61 years of age; $M = 23.97$; $SD = 5.56$), being 496 women (70.5%) and 207 men (29.4%) living in five regions of Brazil (4.7 % North, 11.7% Northeast, 4.4% Midwest, 20.6% Southeast, and 58.7% South) and enrolled in 64 different courses. Of these participants, 215 played sports at a competitive level (CSP), 241 played for leisure (RSP), and 247 were non-practitioners (NP).

2.2 Instruments

Sportive practice questionnaire: a questionnaire prepared by the researchers was used and employed questions related to the sports practiced and level of engagement. Participants were able to choose which of the three groups characterized them: CSP, RSP, or NP.

Core Self-Evaluations Scale (Ferreira et al., 2013): this scale assesses CSE as a single, multidimensional construct that encompasses four sub-traits: self-esteem, generalized self-efficacy, internal locus of control, and emotional stability (i.e., the opposite of neuroticism). It consists of 12 items (6 negative and 6 positive) that

assess how much the individuals agree with the statements on a 5-point Likert scale, being 1 = “strongly disagree” and 5 = “strongly agree” (examples of items: “Sometimes, when I fail, I feel worthless,” “When I try, I am usually successful”). The Brazilian version of the scale was used, which maintained the unidimensionality and the same 12 items of the original scale, with a Cronbach’s alpha of 0.78. In this study, the alpha obtained was 0.90.

2.3 Procedures

From June to December 2018, online surveys were made through the Survey Monkey platform. The invitation to participate in the study was published on different social networks, such as groups of universities on Facebook and emails to course coordinators, constituting a convenience sample. All participants agreed to the informed consent form before proceeding with the study. The platform allows only one participation for each IP (Internet Protocol) record in order to prevent participants from answering the survey more than once. The anonymity of the participants is not affected by this measure. The survey took an average of 20 minutes to complete, and all instruments were self-administered. In total, 1307 participants answered the online survey. However, there was a sample loss (i.e., survey dropout) of 606 participants, resulting in $n = 703$.

2.4 Data analysis

Statistical analyses were performed using the software SPSS 20.0. After the recoding of inverted items, the means, standard deviations, and confidence intervals of the three groups were calculated. Through a t-test for independent samples, significant differences in CSE scores were identified between men and women ($t(445) = -2.398$, $p = 0.017$), with men ($M = 43.31$, $SD = 8.93$) presenting higher averages than women ($M = 41.14$, $SD = 9.20$) despite the predominance of women in the sample (70.5%). Thus, covariance analyses (ANCOVA) were performed using “sex” as a covariate in order to control a possible effect (i.e., reduce a possible bias of the predominance of women in the sample). The Kolmogorov-Smirnov test was used to assess the normality of the data, the Levene test to assess the homogeneity of variance, and the Bonferroni post hoc test to adjust multiple comparisons errors, considering a statistical significance of $p \leq 0.05$ for all analyses.

2.5 Ethical considerations

This research was previously approved by the Research Ethics Committee of the Psychology Institute of the Federal University of Rio Grande do Sul (CAAE n. 88316618.6.0000.5334).

3. Results

The means, confidence intervals (95% CI), and standard deviations of the three groups for the scores obtained in the CSE Scale (including the “sex” covariable) are shown in Table 3.1. The CSP group presented higher means than those of the RSP group, which, in turn, also presented higher means than those of the NP group. The Kolmogorov-Smirnov test showed that there is a normal distribution of the obtained scores, and the Levene test demonstrated a satisfactory homogeneity of variance ($F [2, 700] = 0.63$; $p = 0.53$). The means and standard deviations for each group in the four subtraits of the CSE construct are shown in Table 3.2.

Table 3.1. Descriptive statistics of CSE adjusted for the “sex” covariable.

Groups	M	SD	CI 95%
Competitive sports practitioners (CSP)	43.07	16.76	[41.84, 44.31]
Recreational sports practitioners (RSP)	40.83	15.40	[39.68, 41.98]
Non-practitioners (NP)	35.76	15.64	[34.61, 36.92]

Table 3.2 – Descriptive statistics of CSE sub-traits adjusted for the “sex” covariable.

Sub-traits	CSP group		RSP group		NP group	
	M	SD	M	SD	M	SD
Self-esteem	10.30	3.06	9.72	2.95	7.95	3.14
Self-efficacy	11.40	2.16	11.20	2.04	10.08	2.38
Internal locus of control	10.52	2.56	9.86	2.69	8.87	2.69
Emotional stability	11.06	2.86	10.06	2.98	8.64	3.05

The results of ANCOVA (factor: practitioner groups, covariable: sex) are shown in Table 3.3. This covariance analysis demonstrated that there is a significant difference between the groups in the CSE means ($F [2, 699] = 37.32$, $p < 0.001$). The Bonferroni test confirmed that there are significant differences between the CSP and RSP group ($p = 0.028$, $d = 0.14$) and NP group ($p < 0.001$, $d = 0.63$). There are also significant differences between the RSP and NP group ($p < 0.001$, $d = 0.32$). Thus, the CSE averages were significantly different between all groups, with the CSP group presenting the highest averages and the NP group the lowest.

Table 3.3. ANCOVA results.

Groups	SQ (III)	df	MS	F	P
Corrected Model	7652	3	2550.66	30.71	< 0.001
Intercept	103635.81	1	104635.81	1259.80	< 0.001
Sex	327.46	1	327.46	3.94	0.047
Groups	5199.44	2	3099.72	37.32	< 0.001
Error	58056.88	699	83.05		
Total	1175996	703			

4. Discussion

This study aimed to compare the CSE of college students who practice sports, both at a competitive level and for leisure, with those of non-practicing college students. The hypothesis that sports practitioners (CSP and RSP) present more positive CSE was confirmed by the data of this study. Both groups had significantly higher CSE averages, controlling a possible confounding effect of the variable “sex.” Hence, when the effects of the “sex” covariable are mitigated, the CSE remain significantly different, indicating that this variance is probably due to an effect of groups ($p \leq 0.05$). Effect sizes for comparisons between groups ranged from small ($d = 0.14$ for CSP-NP, $d = 0.32$ for RSP-NP) to medium ($d = 0.63$ for CSP-NP). In general, results suggest that, as expected, engagement in sports may be associated with more positive self-evaluations. Moreover, the results may also indicate that people who evaluate themselves more positively are more likely to practice sports or physical activities, even as a form of self-care.

Practicing sports is recognized for its potential to promote the development of personal and interpersonal skills and improve the physical health and socialization of individuals (UNDP, 2017). In this sense, such engagement can help practitioners to experience positive emotional states and develop more positive beliefs about their personal effectiveness, self-worth, and ability to influence events in their life. In other words, sports can stimulate individuals to exercise their personal agency, which, according to Social Cognitive Theory, refers to the human capacity to act proactively and deliberately, influencing their own development. Therefore, individuals do not suffer from environmental influences only passively but also actively (Bandura, 2018). Based on these theoretical assumptions, it is understood that practicing sports, when well conducted (i.e., without excessive pressure for high performance or blame in case of lower than expected earnings), is a promising weapon to encourage individuals to develop more positive CSE, as reported here and in other studies that evaluated the sub-traits of CSE separately (Duncan et al., 2015; Richards, 2018; Yigiter & Bayazit, 2013).

Results also showed that practitioners of competitive sports (CSP) showed significantly more positive CSE than practitioners at the recreational level (RSP) and non-practitioners (NP). In competitive sports, the search for increasing performance and the learning of new skills may expose individuals more frequently to mastery experiences, which are an important source of information for the development of self-evaluations (Bandura, 2018). In addition, individuals with more positive CSE may be more predisposed to compete as eventual pressures for performance can be seen as positive challenges for them. In this sense, it is possible that even underperforming does not necessarily affect the athlete's global self-evaluations as this may help them develop a resilient attitude when facing eventual flaws in the sport (Galli & Gonzalez, 2014). In a reciprocal way, competition can also be reinforcing for these individuals, as an experience that provides them with mastery will thus help them remain positive self-evaluations or develop even more positive CSE since they overcome positive challenges.

Despite the controversy over the relationship between competition and self-evaluations, the data in this study indicate that competing practitioners have more positive CSE than recreational-level practitioners. Individuals who compete can devote more time, effort, and attach greater importance to the sportive domain than individuals who practice for leisure. Thus, mastery experiences in sports can

have a greater influence on competitors' CSE. Future studies can investigate how individuals experience competitive sports (e.g., how they relate to their coaches, what their levels of performance requires and expectations of performance, their levels of frustration tolerance) in order to better understand the relationship between these experiences and their self-evaluations.

People with negative CSE may have greater difficulties in adapting to the demands of different life contexts (Chang et al., 2012) as they perceive themselves as having little personal value, little efficiency in their actions, and low capacity to influence events and regulate their emotions. The fact that sports practitioners present significantly more positive CSE may indicate that, according to our hypothesis, such practices may help participants perceive themselves in a more positive and confident way. Hence, interventions based on the practice of sports can contribute to individuals to develop more positive self-evaluations, as reported in previous studies that focused on specific sub traits of CSE (Duncan et al., 2015; Richards, 2018; Yigiter & Bayazit, 2013). However, these influences would be better explored if this study were associated with a complementary qualitative investigation that sought to understand whether (and how) sports practitioners perceived the influence of this practice on their self-evaluations.

This study has limitations that must be highlighted. Since this is a cross-sectional quantitative study, there is no information on how and under what conditions sports can influence CSE, and it is not possible to specify a causal direction in this regard, although the results are interpreted based on theoretical considerations existing in the literature on this topic. Thus, the interpretation of results is associated with (and limited to) the theoretical assumptions that underlie this study, in order that the identification of a causal relationship was not a test objective for this study, given the method limitations to identify causalities. As it is an online survey made with participants from different regions of the country, the continuity of this survey with a qualitative study (i.e., mixed-method) is difficult to carry out.

Future studies should use a mixed-method approach (also called multiple methods) and/or longitudinal designs in order to obtain a more comprehensive understanding of this phenomenon as a developmental process. However, this study sought to expand the existing knowledge on the relationship between the practice of sports (competitive and recreational) and the individuals' self-evaluations, comparing practitioners of both levels of practice with non-

practitioners. The results point to a correspondence between the practice of sports and positive CSE, which differ between practitioners and non-practitioners, in addition to presenting possible theoretical explanations for this phenomenon and about how the sportive practice may have contributed to the occurrence of these findings. Self-evaluations were also investigated through the unique CSE construct. Although this construct is more used in research in the organizational and work context, it is suggested that this variable is also important in studies in the area of Sports Psychology.

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