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The influence of perfectionistic traits on goal orientations of young athletes

La influencia de los rasgos perfeccionistas en la orientación a las metas de los atletas jóvenes

A influência de traços perfeccionistas na orientação as metas de jovens atletas

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RESUMEN

Este estudio transversal verificó la asociación entre rasgos de perfeccionismo y orientación a metas en atletas jóvenes. Los participantes fueron 413 jóvenes deportistas brasileños (227 niños y 186 niñas), con edades entre $16,04 \pm 0,89$ años, que compitieron en la fase final de los Juegos Escolares de Pernambuco en 2017, Brasil. Los instrumentos utilizados fueron el Sport Multidimensional Perfectionism Scale-2 (SMPS-2) y el Task and Ego Orientation in Sport Questionnaire (TEOSQ). El análisis de los datos se realizó mediante la prueba de Kolmogorov-Smirnov, correlación de Pearson y análisis de regresión múltiple ($p < 0,05$). Los análisis de regresión múltiple encontraron que los esfuerzos perfeccionistas (estándares personales / organizacionales) se asociaron significativa y positivamente con la orientación a la tarea ($\beta = 0.39$; $p = 0.001$) y las preocupaciones perfeccionistas (presión parental percibida) se asociaron significativa y positivamente con la orientación al ego ($\beta = 0.25$; $p = 0,001$). Se concluyó que los atletas jóvenes muestran un esfuerzo más perfeccionista y una mayor orientación a la tarea. Además, se percibieron asociaciones positivas de los esfuerzos perfeccionistas con la orientación a la tarea, mientras que las preocupaciones perfeccionistas se asociaron con la orientación al ego.

Palabras clave: Personalidad; Adolescentes; Psicología Deportiva; Deporte.

ABSTRACT

This cross-sectional study verified the association between perfectionism traits and goal orientation of young athletes. Participants were 413 Brazilian youth athletes (227 boys and 186 girls), aged between 16.04 ± 0.89 years, who competed in the Pernambuco School Games final phase in 2017, Brazil. The instruments used were the Sport Multidimensional Perfectionism Scale-2 (SMPS-2) and the Task and Ego Orientation in Sport Questionnaire (TEOSQ). Data analysis was conducted through Kolmogorov-Smirnov test, Pearson Correlation and Multiple Regression Analysis ($p < .05$). Multiple regression analyses found that perfectionistic strivings (personal standards/organization) was significantly and positively associated with task orientation ($\beta = .39$; $p = .001$) and perfectionistic concerns (perceived parental pressure) had a significant and positive association with the ego orientation ($\beta = .25$; $p = .001$). It was concluded that young athletes have more perfectionistic strivings and higher task orientation. Furthermore, positive associations of perfectionistic strivings with task orientation were perceived, while perfectionist concerns were associated with ego orientation.

Keywords: Personality; Adolescents; Psychology of Sport; Sport.

RESUMO

Este estudo transversal verificou a associação entre traços de perfeccionismo e orientação para metas em jovens atletas. Os participantes foram 413 atletas jovens brasileiros (227 meninos e 186 meninas), com idade entre $16,04 \pm 0,89$ anos, que competiram na fase final dos Jogos Escolares de Pernambuco em 2017, Brasil. Os instrumentos utilizados foram o Sport Multidimensional Perfectionism Scale-2 (SMPS-2) e o Task and Ego Orientation in Sport Questionnaire (TEOSQ). A análise dos dados foi realizada por meio do teste de Kolmogorov-Smirnov, Correlação de Pearson e Análise de Regressão Múltipla ($p < 0,05$). Análises de regressão múltipla descobriram que esforços perfeccionistas (padrões pessoais / organização) foram significativamente e positivamente associados à orientação para a tarefa ($\beta = 0,39$; $p = 0,001$) e preocupações perfeccionistas (pressão parental percebida) tiveram uma associação significativa e positiva com a orientação do ego ($\beta = 0,25$; $p = 0,001$). Concluiu-se que os jovens atletas apresentam esforços mais perfeccionistas e maiores orientação para tarefa. Além disso, foram percebidas associações positivas de esforços perfeccionistas com a orientação para a tarefa, enquanto as preocupações perfeccionistas foram associadas com a orientação do ego.

Palavras chave Personalidade; Adolescentes; Psicologia do Esporte; Esporte.

INTRODUCTION

In many departments of life, the pursuit of perfection is unrealistic and irrational. In the sport context, this struggle is a routine part of athlete life from the very beginning to the high-performance levels in sports (Hill et al., 2019). In sports, perfectionistic traits might lead to a vulnerable state of motivation, well-being, and performance (Stoeber, 2018). Additionally, some researchers point out the perfectionistic traits as a key for the big champions (Gould, Dieffenbach, & Moffett, 2002; Stoeber & Otto, 2006), whereas others indicate that those traits might impair performance (Pineda-Espejel et al., 2019).

Perfectionism is characterized as a multidimensional trait related to the individual's desire to achieve a high standard of performance accompanied by a critical tendency towards their performance (Cowden et al., 2019; Stoeber, 2018). Scientific evidence separates two great dimensions of perfectionism, an adaptive and other that is less adaptive (Cowden et al., 2019; Hill & Madigan, 2017; Stoeber, 2018).

Those dimensions have taken distinct terminologies over the past decades, nowadays is better known as perfectionistic strivings and perfectionistic concerns (Stoeber, 2018; Stoeber, Edbrooke-Childs, & Damian, 2016; Stoeber & Madigan, 2016). Thus, to understand the differences between those two domains is crucial. Perfectionistic strivings indicate a huge personal model or an internal effort to achieve excellence (Hill, Mallinson-Howard, & Jowett, 2018). When this tendency to achieve high performance targets is not followed by traits of perfectionistic concerns, the striving alone represent an adaptive personality (Hill et al., 2018; Stoeber, 2011). In consequence, it results in improvement in physical performance (Holt, 2014), intrinsic motivation (Hill, Witcher, Gotwals, &

Leyland, 2015; Oliveira et al., 2015), team cohesion (Nascimento et al., 2017) and emotions (positive and negative affection) (Oliveira et al., 2015; Stoeber, 2011).

Regarding perfectionistic concerns, it is a model of perfectionism that cover characteristics such as chronic worrying, fear of failure, excessive self-objection if competence depends on the performance level, and negative feelings when expectations are not reached (Oliveira et al., 2015). Perfectionistic concerns have been associated to the frustration of basic psychological needs satisfaction (Jowett, Hill, Hall, & Curran, 2016), negative emotional responses (Pineda-Espejel et al., 2019) and extrinsic motivation (Hill et al., 2019; Oliveira et al., 2015).

Literature has linked perfectionism to several aspects of sports motivation (Greblo, Barić, & Erpič, 2016; Machida, Marie Ward, & Vealey, 2012; Stoeber, Damian, & Madigan, 2017). One of them is the Achievement Goals Theory (Ames, 1992), which focuses on investigating goals orientation and the individual differences on motivating achievement goals (Greblo et al., 2016; Machida et al., 2012).

Goals orientation has been consistently pointed out in the literature as a consequence of the personality traits that elicit adjusted and unadjusted behaviors in the sports (Greblo et al., 2016; Machida et al., 2012). Goals orientation might be defined as structured situational goals established by technical and social peers, which might be discriminated for two distinct orientations: task orientation and ego orientation (Ames, 1992). As a feature in task orientation, the athlete bears greater effort, determination, and concern of achievements that reward him. On the other hand, athletes with ego orientation will also put effort and be

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determined to achieve what rewards them, what gives them a sense of success, particularly if they have high level of perceived competence (Ames, 1992).

Stoeber (2011) defends those perfectionistic concerns are easily associated with ego orientation, while perfectionistic strivings show a positive relationship with task orientation and sports performance. A meta-analysis conducted by Hill et al. (2018) showed that perfectionistic concerns may be no adaptive to athletes, presenting negative relation to poorly adaptive motivation (performance), ego orientation, and negative emotional reactions (cognitive anxiety and somatic anxiety). However, perfectionistic strivings are related to higher quality motivation (domain approach), task orientation, and positive emotions (self-confidence). Hill et al. (2015) indicate perfectionism as one of the main sources of motivation for success in college's athletes. A European study with Olympic athletes with high ego orientation assumed attitudes toward doping and association with perfectionistic concerns, and mistakes (Allen et al., 2015). Sagar e Stoeber (2009) found that perfectionistic strivings was associated with goals and increased sports performance in young hockey players, while perfectionistic concerns was linked to goals avoidance and lower performance.

Although the literature points out to a certain consistency in the association between perfectionism and goal orientation in the sport context (Lochbaum, Kallinen, & Konttinen, 2017; Lochbaum et al., 2016), few studies have been developed with youth athletes practicing team sports. Since most of the research was conducted with adult or high-performance athletes, mainly in the Brazilian context, this study becomes relevant insofar as it can provide relevant information regarding the role of personality traits (perfectionism) on the achievement goals of youth athletes. The findings might be used by coaches and sports professionals to develop strategies to optimize athletic participation, goal setting, and positive development of the young athlete according to the adaptive and maladaptive traits of personality. Thus, this study investigated the association between the traits of perfectionism and the goal orientation of youth Brazilian athletes. The present research hypothesizes that perfectionistic strivings are positively associated with task orientation, while perfectionistic concerns are positively associated with ego orientation.

MATERIALS AND METHODS

Study Design and Procedures

We used a cross-sectional research design with all data collected at one time point. Ethical approval for the research protocol was granted by the lead researcher's university ethics and human research committee. Prior to data collection we obtained permission from the organizing committee of the sports tournament where the data collection took place and from the coaches of participating teams. In addition, we obtained informed consent from parents/guardians of participants. Before completing the study survey, brief instructions were provided to participants about the purpose of the research and what was required when completing the survey. The survey took roughly 30 minutes to complete, and the order of the measures used in the survey was randomized to avoid order effects.

Participants

The participants were recruited from Brazilian student-athletes who competed at final phase of the School Games of Pernambuco, Brazil, in the year 2017. The minimum number of participants was calculated by the level of confidence of 95%, with a proportion error of 5% and 50% of the expected distribution (Richardson et al., 2014). Considering the 3000 athletes engaged in the previous edition of the competition, the minimum of 365 student-athletes was established, besides that, for possible losses, 442 athletes were selected; however, 29 questionnaires were excluded, following in 413 participants. The athletes showed mean age of 16.04 ± 0.89 years, practice time of 3.84 ± 2.91 years and a team time of 24.02 ± 18.90 months. The athletes were competitors of the team sports of futsal ($n = 80$), volleyball ($n = 131$), handball ($n = 135$) and basketball ($n = 67$). The selection criteria were: 1) to perform the sport at least 1 year; and 2) have participated in local / state / national competitions during 2015/2016 seasons. The athletes provided written informed consent signed by the coaches (legally responsible for the athletes in the event) and had declared purpose to intentionally participate.

Instrumentation

The Sport Multidimensional Perfectionism Scale-2 (SMPS-2), an instrument developed by Gotwals and Dunn (2009), which present reliability and validity evidence for Brazilian context by Nascimento Junior et al. (2015) was used to verify the traits of

perfectionism of the young athletes. SMPS-2 is composed of 24 items distributed into four factors: organization/personal standards (e.g., “I have and do a prior routine”); concern over mistakes (e.g., “my parents provides me high standards of performance in the sport”); perceived parental pressure (e.g. “my parents set high levels of performance for me in my sport”); and doubts about action (e.g. “generally, I feel insecure whether or not my training effectively prepares me for the competition”). The items are answered on a five-point likert scale (1 = strongly disagree to 5 = strongly agree).

To identify young athletes goal orientation, it was used Task and Ego Orientation in Sport Questionnaire (TEOSQ), which was developed by Duda (1989) and validated for the Portuguese language by Goulart et al.(2007). The instrument consists of 16 items that are distributed in two dimensions: task orientation (eight items, for example: “I learned something new and it makes me even more motivated to train”); and ego orientation (eight items, for example: “I am the only one to perform a certain technique”). The items are answered on a five-point likert scale, ranging from one (totally disagree) to five (totally agree).

Data Analysis

Data analysis, descriptive statistics, correlations (Pearson), and multiple regression were conducted using SPSS 23.0. All major assumptions of the statistical tests we conducted were met. Terms of the multiple regression analysis, tests of multicollinearity indicated that a low level of multicollinearity was present across the four multiple regression analysis. There were no sufficiently strong correlations between variables that indicated problems with multicollinearity (VIF range = 1.88 to 1.95) All VIF values were below the 5 or 10 deemed acceptable by Hair et al. (2019). Two models were conducted using the enter method to insert variables in order to investigate the prediction of the subscales of perfectionism (Organization-Personal/Standards; Concern over Mistakes; Perceived Parental Pressure; Doubts about action) (independent variables) on the scores goal orientation (task and ego). When conducting the multiple regression analyses, a Bonferroni adjustment was made to the p-value (.05) by dividing it by the number of dependent variables being tested. This procedure is commonly used to protect against a Type 1 error occurring (Pallant, 2013)

and resulted in the p-value being set at a more stringent .01 level. All independent variables were included together in each model using.

RESULTS

Table 1 presents the descriptive and internal consistency values of the dimensions of each assessed construction (perfectionism traits and goal orientation), as well as the correlation between the variables. It was found that the dimension of perfectionism with the highest value was personal standards/organization (M=3.36), followed by concern over mistakes (M=3.02), doubts about action (M=2.75) and perceived parental pressure (M=2.48). Regarding goal orientation, the athletes presented higher score in task orientation (x=4.10) and low score in ego orientation (M=2.25).

Table 1. Descriptive analysis, internal consistency and correlation between the perfectionism traits and the goals orientation of the Brazilian youth athletes.

Variables	Perfectionism Traits				Goal Orientations	
	1	2	3	4	5	6
1.OPS		.14*	.25*	.01	.18*	.38*
2.COM			.33*	.32*	.23*	.06
3.PPP				.38*	.33*	.03
4.DAA					.16*	-.06
5.EO						.01
6. TO						
Mean	3.36	3.02	2.48	2.75	2.25	4.10
sd	.74	.84	.77	.86	.94	.57
α	.76	.72	.71	.79	.76	.83

*Significant correlation – $p < .05$ (Pearson correlation). Note: OPS= Organization-Personal Standards; COM= Concern over mistakes; PPP= Perceived Parental Pressure; DAA= Doubts about action; EO= Ego Orientation; TO= Task Orientation; Sd=standard deviation; α =Cronbach’s alfa.

The alpha coefficient (Table 1) of all dimensions of perfectionism and goal orientation were acceptable ($\alpha > .70$), according to psychometric recommendations (Nunnally & Berstein, 1994; Hair et al., 2019). It was found (Table 1) that personal standards/organization (perfectionist striving) showed significant correlation ($p < .05$) with both task orientation ($r = .38$) and ego orientation ($r = .18$). In addition, all dimensions of perfectionistic concerns had significant correlations ($p < .05$) with the ego orientation: concern over mistake ($r = .23$), perceived parental pressure ($r = .33$) and doubts about action ($r = .16$).

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Standard multiple regression analyses (see Table 2) included two models with goal orientation (task and ego) as dependent variables. Perfectionistic strivings (personal standards/organization) explained a significant amount of the variance of task orientation ($\beta=.39$; $r^2=.15$; $p<.001$) and perfectionistic concerns (perceived parental pressure) made the largest positive unique contribution to ego orientation ($\beta= .25$; $r^2=.13$; $p<.001$).

Table 2. Perfectionism subscale predictors of task and ego orientation within Brazilian youth athletes.

Predictor Variables	Ego Orientation	Task Orientation
	β (CI)	β (CI)
OPS	.07 (-.02; .22)	.39 (.23; .38)***
COM	.12 (.02; .24)	.05 (-.03; .10)
PPP	.25 (.18; .44)***	-.09 (-.14; .01)
DAA	.03 (-.06; .15)	-.05 (-.10; .03)
R ²	.13	.15
F	16.179***	17.908***
Durbin-Watson	1.909	1.715

Only the standardized regression coefficients which were less than our significance level of .01 are highlighted in bold. * $p < .05$. ** $p < .01$. *** $p < .001$. Note: β = Standardized regression coefficient; CI = 95% confidence interval; OPS= Organization-Personal Standards; COM= Concern over mistakes; PPP= Perceived Parental Pressure; DAA= Doubts about action;

DISCUSSION

Although there is already scientific evidences in the literature regarding the association between perfectionism traits and goal orientation in the sporting context (Stoeber, 2018; Stoeber, Uphill, & Hotham, 2009), the findings of this research present theoretical and practical contributions to the sport psychology. It highlights the role of perfectionism traits on behavior, specifically goal orientation, among young Brazilian athletes. The main findings of this investigation demonstrate that perfectionistic strivings (personal standards/organization) were associated with task orientation, while perfectionistic concerns (perceived parental pressure) were associated only with ego orientation.

In fact, the results showed that perfectionistic strivings, referred to the adaptive perfectionism traits,

seems to promote positive (task orientation) in sport (see table 1 and 2). These findings differ from the studies that verified the association of perfectionistic strivings (Personal Standards and Organization) with the task orientation and of the perfectionistic concerns (concerns and parental pressure) with ego orientation (Greblo et al., 2016; Pineda-Espejel et al., 2019). This result indicates the perfectionism traits conduct to high achievements standards established by oneself are also associated with the greater effort, requiring dedication to perform tasks. Thus, our results suggest performing a type of task that reaches high-performance standards for its own performance (Pineda-Espejel et al., 2015).

The findings corroborate past studies, demonstrating that perfectionistic strivings are associated with greater effort, determination, and concern of achievements that reward him. In a recent meta-analysis, Hill et al. (2019) observed that perfectionistic strivings corresponded to the ability to produce a quality performance and that the quality level of the team is measured by the union of these athletes' abilities. Stoeber et al. (2009) observed the role of perfectionism in relation to goal setting in competitive triathletes. The findings demonstrate that perfectionistic strivings do not harm competitive performance but are associated with goals that help athletes achieve the best possible performance.

Regarding perfectionist concerns (perceived parental pressure) were associated with the ego orientation (table 2). It can be observed that athletes who care about mistakes and the pressure of their peers (parents) have a tendency to direct their performance by comparing results with the opponent. This result linked to evidence that parents and coaches create high expectations and disturbing press in young people, contributing to their fear of failure (Murcia, Marín, Torregrosa, & Pérez, 2016). These findings are similar to those found in previous research with young people (Kaye, Conroy, & Fifer, 2008; Stoeber et al., 2009) and adolescents (Villena, Hernández, & Zafra, 2016). An aggregate of authors points out that perfectionistic concerns in adolescents are related to various psychological occurrences, such as fear of failure, stress, depression, anxiety, somatic complaints and low personal satisfaction (Damian, Stoeber, Negru, & Băban, 2014; Stoeber, 2018; Stoeber & Madigan, 2016; Freire et al., 2020).

Finally, athletes presented higher scores in both perfectionistic strivings (personal standards/organization) and perfectionistic concerns (concern over mistakes) (Table 1). Athletes with high personal standards feel a need to achieve success and are intrinsically motivated to do their best in performing activities (Madigan, Stoeber, & Passfield, 2016). Previously, high values of concerns over mistakes related to the young athletes that participated in important competitions at school showing fear of making mistakes. Pineda-Espejel et al. (2019) showed that it might occur due to fear of failure in several perceptions of judgment socializing agents (parents, coach, teammates) as well as the fear to shame and humiliation to failure. When observing the goal orientation, it is noticed that the athletes presented superior scores at the task orientation, demonstrating that the young athletes present greater effort and determination for the performance and less concern in comparing the performance with colleagues and adversaries.

Limitations and future directions

This work presents some limitations. Firstly, concerning demographics, only student-athletes from a single state of Brazil participated in the study, which makes it impractical to induce results to national and international scenario. However, athletes compete in the state's main school competition. In addition, this study presented a cross-sectional design, evaluating the athletes in only one moment of the season, making it beyond to analyze the cause-and-effect relation between the variables. Future studies should overcome those limitations with individual athletes to compare groups as well as verify the association with other variables.

CONCLUSIONS

The results proved in parts the initial hypothesis; perfectionistic strivings had a positive association with task and ego orientation, while perfectionistic concerns were positively associated with ego orientation. Young athletes with adaptive perfectionism engage in the pursuit of healthy development, while young athletes with poor adaptive perfectionism suffer from error and parental pressure in an attempt to avoid failure. The set of results indicated low and moderate positive associations and did not present a correlation between the

perfectionism traits and the goal orientation. From a practical standpoint, it is important the psychological accompaniment of athletes to help them to develop their personality traits in a positive way (perfectionistic strivings), which are associated with better goal orientation.

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