

Group cohesion, conflict, achievement goals and anxiety in youth sport: differences according to the 2 × 2 model of perfectionism

José Roberto de Andrade do Nascimento ^{*},
Gabriel Lucas Morais Freire ^{***}, Leonardo Fortes de Sousa Fortes ^{***},
Renan Codonato ^{**}, Daniel Vicentini de Oliveira ^{****}

(^{*}) Physical Education College, University of Federal do Vale do São Francisco, Petrolina, Brazil
(^{**}) Physical Education College, University Estadual de Maringá, Paraná, Brazil
(^{***}) Physical Education College, University of Federal da Paraíba, João Pessoa, Brazil,
(^{****}) Universidade cesumar (UNICESUMAR). Departamento de pós graduação stricto sensu em promoção da saúde. Instituto cesumar de ciência, tecnologia e inovação (ICETI)

Perfectionism has been shown to influence youth athletes' sport experiences in a variety of ways, however, only a limited amount of evidence has been provided through a person-centered approach rather than the study of variables alone. This cross-sectional study investigated the differences in group cohesion, conflict, achievement goals and anxiety of 177 Brazilian youth athletes (M age = 16.15±0.90 years) according to 2 × 2 model of perfectionism. The instruments were the Sport Multidimensional Perfectionism Scale-2, Sports Anxiety Scale-2, Youth Sport Environment Questionnaire, Group Conflict Questionnaire and Task and Ego Orientation in Sport Questionnaire. Data analysis was conducted through Cluster Analysis and Multivariate Analysis of Variance. The results revealed four clearly distinct perfectionism profiles: perfectionistic strivings, perfectionistic concerns, mixed perfectionism and nonperfectionist. The main findings revealed that the highest mean score in task cohesion and task orientation occurred for athletes with perfectionistic strivings in comparison to athletes with mixed and perfectionistic concerns. Athletes with perfectionistic concerns had higher scores in somatic anxiety, worry and concentration disruption when compared to the remaining profiles. Study implications include identifying athletes' perfectionism profiles prior to intervention and increasing the attention and support over those at greater risk for less desirable outcomes (e.g. conflict and anxiety). It was concluded that perfectionistic striving seems to promote more positive experiences, such as both task cohesion and orientation, whilst perfectionistic concerns seem to promote more experiences related to competitive anxiety.

KEY WORDS: Personality; Sport; Youth athletes; Emotional reactions; Group process.

Correspondence to: José Roberto De Andrade Do Nascimento Jr. (E-mail: bi88el@gmail.com)

Introduction

It is fairly common to hear coaches describing the perfectionism of their athletes as something that encompasses a mixture of desirable and undesirable characteristics. On one hand, the propensity to define success or failure according to standards of achievement is described as a fundamental characteristic of people who are considered to be perfectionists. On the other hand, other athletes are labeled perfectionists because of their tendency to fall apart under the pressure of their quest to behave and act in seemingly perfect ways (Hill, Madigan et al., 2019; Stoeber, 2018; Stricker et al., 2019).

Nevertheless, what does it exactly mean to be perfectionist? Perfectionism is a personality disposition characterized by the establishment of high performance standards, accompanied by a tendency to excessive critical evaluation (Hill et al., 2019; Stoeber, 2018; Stricker et al., 2019). Different approaches and conceptual models have provided valuable knowledge about the positive and negative outcomes associated with each of the core dimensions of perfectionism (Gaudreau, 2016). Contemporary understanding of perfectionism has progressed from a one-dimensional to multidimensional perspectives, which are characterized by the development of multiple separate dimensions of perfectionism (Stoeber, 2018). The hierarchical model proposed by Stoeber and Otto (2006) indicates the need to differentiate perfectionism into two major dimensions: perfectionistic concerns and perfectionistic striving.

Perfectionistic striving capture the aspects of perfectionism associated with high standards of personal achievement to perform a designated role with excellence (Stoeber, 2018). This dimension of perfectionism has been associated with several positive outcomes in sport, such as enhancement of performance (Holt, 2014), increased intrinsic motivation

(Oliveira et al., 2015), self-confidence (Freire et al., 2020) and team cohesion (Nascimento Junior et al., 2020), along with indicators of subjective well-being and good psychological adjustment (Hill et al., 2019).

Perfectionistic concerns, on the other hand, correspond to the aspects related to worries about making mistakes, fear of negative evaluation by others, doubts about action, feelings of discrepancy between one's expectations and performance, and negative reactions to imperfection (Hill et al., 2019; Stoeber, 2018; Stoeber & Otto, 2006). This dimension is frequently associated with negative outcomes, such as frustration of basic psychological needs (Jowett et al., 2016), negative emotional responses (Pineda-Espejel et al., 2019), increased extrinsic motivation (Madigan, Stoeber, & Passfield, 2016), burnout (Gustafsson, Hill, Stenling, & Wagnsson, 2016), pre-competitive

anxiety (Freire et al., 2020) and reduced levels of team cohesion (Nascimento Junior, Freire, et al., 2020), being also related to indicators of psychological disadjustment and mental disorders (Méndez-GiMénez, CeCChini-estrAdA, & Fernández-Río, 2014).

Recent studies have emerged to examine the different associations of concerns perfectionism, non-perfectionism and mixed perfectionism, authors have proposed the 2x2 dispositional perfectionism framework, which postulates that the interaction between perfectionistic striving and concerns allows to differentiate between four subtypes of perfectionism (Mallinson-Howard et al., 2014; Mallinson-Howard et al., 2019). The first subtype is the non-perfectionist (NP), which represents a neutral condition characterized by low scores on both perfectionistic striving and concerns. The second profile, pure perfectionistic striving (PS), represents athletes scoring high on perfectionistic strivings and low on perfectionistic concerns. The third subtype is characterized by high levels of perfectionistic concerns and low levels of perfectionistic strivings, referred to as evaluative concerns perfectionism or pure perfectionistic concerns (PC). The fourth subtype is named mixed perfectionism (MP), describing athletes with high levels of both perfectionistic striving and concerns (Gaudreau, 2016; Gaudreau & Thompson, 2010; Muñoz-Villena,

Gómez-López, & González-Hernández, 2020; Stoeber & Otto, 2006). This within-person configuration of perfectionistic profiles can be considered a useful form of analysis to differentiate and understand multiple ways of being perfectionist (Méndez-GiMénez et al., 2014; Mallinson-Howard et al., 2014; Mallinson-Howard et al., 2019).

The four subtypes of perfectionism are proposed to be indicators of negative and positive experiences in youth sport (Mallinson-Howard, Hill, & Hall, 2019). Perfectionism can be seen as a predictor of adaptation and psychological well-being when youth athletes focus their efforts on how to achieve the proposed goals and provide appropriate support in a more realistic manner (Hill et al., 2019; Stoeber, 2018). Thus, recent studies have also tried to associate perfectionism with athletes' perception of group processes, such as team cohesion (Nascimento et al., 2017; Nascimento Junior et al., 2020). Team cohesion has been defined as "the dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (Carron, Widmeyer, & Brawley, 1985). Cohesion can be differentiated in task cohesion and social cohesion. Task cohesion refers to the group members' willingness to work together to reach a common goal, whilst social cohesion refers to the degree of how much the members enjoy each other (Eys, Bruner, & Martin, 2019).

Recent studies have demonstrated that perfectionism can be considered a positive predictive factor for high levels of team cohesion (Nascimento et al., 2017; Nascimento Junior et al., 2020). However, there is no evidence about the role of the 2x2 model of perfectionism on team cohesion within youth sport. Another group process that we assessed in the present study was group conflict, which has been defined by disagreements and interpersonal problems, being theorized by a two-dimensional nature, composed of social (negative affect) and task (disagreements in relation to objectives) conflicts (Barki &

Hartwick, 2004). There is no evidence in the literature about the differences in the youth athletes' perception of group conflict according to the 2x2 model of perfectionism, highlighting another gap this study intends to explore.

The distinction between the subtypes of the 2x2 model may also prove to be relevant when investigating perfectionism and achievement goals among youth sport participants. According to Achievement Goals Theory (Nicholls, 1989), goal orientation refers to the situational goal structures created by social peers, being characterized in two distinct dimensions: a) task-orientation, focused on the display of competence through selfassessment and a desire to enhance one's own performance; b) ego-orientation, when individuals aim to display competence by outperforming others (i.e., normative competence), winning, and by displaying their superior performance in their social surroundings (Nicholls, 1989).

Stoeber, Damian and Madigan (2018) conducted a systematic review of twenty-two studies on the association between achievement goals and perfectionism in a range of domains (e.g., sport, education, work). The majority of the studies found that perfectionistic athletes (athletes high in either perfectionistic strivings, concerns, or both) may still be more concerned about beating others than trying to master a task. Madigan, Stoeber and Passfield (2017) found that striving for perfection was positively associated with both mastery and performance-approach goals whereas negative reactions to imperfection were positively associated with mastery-avoidance, performance-approach, and performance-avoidance goals within youth athletes. Nevertheless, perfectionism can also predict psychosocial maladjustment when the environment is harmful or low emotional self-regulation is part of the athletes' beliefs (Freire et al., 2020; Gustafsson et al., 2016; Hill et al., 2019). In this way, when the approval and affection received by a youth athlete is conditioned by the achievement of unrealistic goals or performance standards, several emotional negative experiences can be triggered (Muñoz-Villena et al., 2020).

A common outcome used to capture more specific emotional experiences in youth sports is anxiety (Mallinson-Howard et al., 2019). Sports anxiety is among young sport participants and manifests itself in situations in which the performance adequacy of a young person is assessed (Smith et al., 2006). It has cognitive and somatic components, which is evident in the dimensions of concentration disruption and worry, as well as in the perception of physiological arousal (Smith et al., 2006). These subscales of anxiety have been associated with lower enjoyment of sport, avoidance of sport, and dropout (Freire et al., 2020; Mallinson-Howard et al., 2019). Mallinson-Howard et al. (2019) examined the 2 × 2 model in regard to undesirable outcomes indicative of negative experiences in youth sport, verifying that perfectionistic concerns were associated with the most negative experiences (higher negative affect, anxiety, and intentions to dropout), whilst perfectionistic striving was associated with the least negative experiences (lower negative affect, anxiety, antisocial behavior, and intentions to dropout and higher positive affect). Studies have shown that perfectionist strivings presented no association with concentration disruption and somatic anxiety, whilst perfectionistic concerns was positively associated with these anxiety dimensions (Carter & Weissbrod, 2011; Mallinson-Howard et al., 2019).

By characterizing the different ways in which perfectionism dimensions interact with each other to form specific profiles to represent individuals, the 2x2 model of perfectionism offers a person-centered approach to understanding different types of athletes according to their respective profiles. Thus, examining the associations between perfectionism profiles and other individual and environmental variables can provide relevant evidence for practical application. To summarize, perfectionism has been shown to affect the way in which athletes interact with their groups (cohesion and conflict), set and pursue their goals (goal orientation), and the experience emotions (anxiety), which could represent important moderators between perfectionism and outcomes in sport, such as performance and wellbeing.

The Present Study

Although there is already several evidences regarding the role of 2x2 model of perfectionism on the cognitive, affective and behavioral experiences of athletes within the sporting context (Madigan et al., 2017; Mallinson-Howard et al., 2019; Méndez-GiMénez et al., 2014), this study becomes relevant to the extent that it intends to explore the differences in positive and negative experiences, specifically in pre-competitive anxiety, goal orientation, team cohesion

and group conflict among youth athletes with different profiles of perfectionism according to the conceptual framework proposed by Gaudreau (2016). The purpose of this study was to test the 2×2 model with a focus on outcomes of positive and negative experiences in youth sport. In line with the 2×2 model (Gaudreau, 2016), the starting hypothesis are as follows:

Hypothesis 1. Athletes with PS will show less negative sport experiences (lower anxiety, ego orientation and group conflict) and higher positive experiences (team cohesion and task orientation) compared to non-perfectionism;

Hypothesis 2. Athletes with PC will show more negative sport experiences (higher anxiety, ego orientation, and group conflict) compared to non-perfectionism;

Hypothesis 3. Athletes with mixed perfectionism were hypothesized to show less negative sport experiences (lower anxiety, ego orientation and group conflict) compared to PC; **Hypothesis 4.** Athletes with mixed perfectionism were hypothesized to show more negative sport experiences (higher anxiety, ego orientation, and group conflict) compared to PS.

Method

STUDY DESIGN AND PROCEDURES

The present study involved a cross-sectional research design with all data collected at one time point. Ethical approval was granted by the lead researcher's university ethics and human research committee. Before any data was collected, permission was obtained from the organizing committee of the sports tournament where the data collection took place and the coaches of the teams involved. The data collection commenced after participants completed an informed consent form. Before completing the study questionnaire, brief instructions were provided to participants about the purpose of the research and what was required when completing the questionnaire. The questionnaire took participants 30 minutes to complete and the order of the questionnaires was randomized among participants to avoid bias.

PARTICIPANTS

The participants were 177 youth athletes of both sexes (104 boys and 73 girls), aged between 11 and 18 years ($M = 16.15$; $SD = .90$), from teams that participated in a Brazilian School Games. Participants represented the following sports: futsal ($n=64$), volleyball ($n=57$), basketball ($n=14$) and handball ($n=42$). The adolescents reported that they have been participating in their sport for an average of 4.41 years ($SD = 3.25$) and were with their current team for a mean time of 2.16 years ($SD = 1.58$). The participants were selected in a non-probabilistic way and for convenience and the selection criteria were as follows: 1) to practice the sport for more than 1 year; and 2) to have participated in some regional/state level competition during the 2016/2017 seasons. Only the athletes who had the informed consent read and signed by their respective coaches (responsible for the athletes in the sports event) participated in the study.

INSTRUMENTS

Sport Multidimensional Perfectionism Scale-2 (SMPS-2). SMPS-2 was developed by Gotwals and Dunn (2009), and validated for the Brazilian context by Nascimento Junior et al. (2015). It consists of 24 items answered on a Likert scale of five points (from 1=completely disagree to 5=completely agree). The results are grouped into four subscales: organization-personal standards (OPS) (for example, "On the day of the competition, I have a routine that I try to follow"); concern over mistakes (COM) (for example, "If I don't go well every time I'm competing, I feel like people don't respect me as an athlete"); perceived parental pressure (PPP) (for example, "My parents set high levels of performance for me in my sport"); and doubts about action (DAA) (for example, "I usually feel uncertain as to whether or not my training effectively prepares me for competition"). Past studies have supported the factorial validity, test-retest reliability, and internal consistency reliability of this scale with youth sport participants (Gustafsson et al., 2016; Jowett et al., 2016). The Cronbach's Alpha ($\alpha = .72$ to $\alpha = .77$) indicated strong internal consistency for the present study (Hair et al., 2019).

Youth Sport Environment Questionnaire (P-YSEQ). This instrument was developed by Eys, Loughead, Bray and Carron (2009) and validated for Portuguese-speaking athletes by Nascimento Junior et al. (2018). The YSEQ assesses team cohesion in youth between the ages of 13 to 17 years and consists of 16 items that evaluate task and social cohesion, and 2 spurious items that do not enter in the analysis, totaling 18 items. Task cohesion contains eight items and a sample item is "We all share the same commitment to our team's goals".

Social cohesion contains eight items and a sample item is "I spend time with my teammates". All items are scored on a 9-point Likert-type scale anchored at the extremes of 1 (strongly disagree) and 9 (strongly agree). The literature has demonstrated the factorial validity, test-retest reliability, and internal consistency reliability of this scale in youth sport participants (Nascimento Junior, Silva et al., 2019; Tamminen et al., 2019). The Cronbach's Alpha ($\alpha = .79$ to $\alpha = .88$) indicated strong internal consistency for the present study (Hair et al., 2019).

Group Conflict Questionnaire (P-GCQ). The GCQ was developed by Paradis et al. (2014), and validated for the Brazilian context by Nascimento Junior, Codonhato, et al. (2020). It contains 12 items distributed in two dimensions: task conflict (e.g., "The team's ability to be successful is jeopardized because of heated disagreements during competition") and social conflict (e.g., "Emotions run high in social situations over personal disagreements brought to light"). All items reference a cognition (such as disagreement), a negative emotion (such as anger), and a behavioral action (such as sabotage). Responses are provided on a 9-point Likert-type scale, anchored at the extremes of 1 (strongly disagree) and 9 (strongly agree). Past researches have demonstrated the factorial validity, test-retest reliability, and internal consistency reliability of this scale with youth sport participants (Nascimento Junior, Codonhato, et al., 2020; Paradis et al., 2014). The Cronbach's Alpha ($\alpha = .89$ to $\alpha = .94$) indicated strong internal consistency for the present study (Hair et al., 2019).

Sport Anxiety Scale-2 (SAS-2). The SAS-2 was developed by (Smith et al., 2006) and validated for the Brazilian context by Silva-Rocha and Osório (2017). SAS-2 consists of 15 items and evaluates the individual differences at somatic anxiety (for example, "My body feels tense") and at two dimensions of cognitive anxiety (worry -for example "I worry that I will play badly"; and concentration disorder -for example, "It is hard to concentrate on the game"). The items are answered on a four-point Likert scale (1 = never to 4 = almost always). Previous work have demonstrated the factorial validity, test-retest reliability, and internal consistency reliability of this scale with youth sport participants

(Freire et al., 2020; Silva-Rocha & Osório, 2017). The Cronbach's Alpha of the dimensions ($\alpha=0.70$ to $\alpha=0.72$) indicated strong internal consistency for the present study (Hair et al., 2019).

Task and Ego Orientation in Sport Questionnaire (TEOSQ). The TEOSQ was developed by Duda and Nicholls (1989) and validated for the Brazilian context by Goulart et al. (2007) was used to measure young athletes goal orientations. This scale consists of eight task-related ("I learn a new skill by trying hard") and eight ego-related ("I can do better than my friends") items reflecting the definitions of success in sport contexts. The items are prefaced with the heading "I feel most successful in this class when..." Young athletes rated each item on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The literature has demonstrated the factorial validity, test-retest reliability, and internal consistency reliability of this scale in youth sport participants (Cheuczuk et al., 2016). The Cronbach's Alpha of the dimensions ($\alpha=.79$ to $\alpha=.91$) indicated strong internal consistency for the present study (Hair et al., 2019).

DATA ANALYSIS

We applied cluster analysis, using the non-hierarchical method of quick cluster analysis, which allows previously specifying the number of clusters to be formed, so that only one cluster solution is given, and it also permits moving subjects from one group to another during the grouping process in order to optimize the cluster solution (Clatworthy et al., 2005). The profiles of youth athletes perfectionism were defined based on the different combinations of the dimensions OPS, COM, PPP and DAA, which were taken as indicators of the two dimensions proposed by the 2×2 model (Perfectionistic striving and concerns, respectively) as in previous studies (Franche, Gaudreau, & Miranda, 2012; Gaudreau & Verner-Filion, 2012). Before cluster analysis, we standardized the raw scores because the four subscales did not contain the same number of items. In order to replicate the 2×2 model, we defined an initial solution of four clusters. According to the criterion of Cumming and Duda (2012), z scores below -0.5 are considered to be low levels; z scores between -0.5 and +0.5 moderate, and z scores over +0.5 are considered high.

We then carried out various Multivariate Analyses of Variance (MANOVA) to examine the differences between the four clusters identified in the positive and negative experiences, and thus verify the validity of the hypotheses posed by the 2×2 model.

Subsequently, in cases presenting statistical significance, post hoc tests were performed (Scheffé method) to determine between which groups such differences were found. The effect size (ES) was indicated by eta square partial (η^2). Regarding the Rhea(2004) criteria for athletes, it was adopted the following classifications: $\eta^2 < 0.25$ = trivial, $0.25 \leq \eta^2 < 0.50$ = low, $0.50 \leq \eta^2 < 1.0$ = moderate and $\eta^2 \geq 1.0$ = large effect size. All analyses were conducted in the SPSS 22.0 software, adopting the level of significance of $p < 0.05$.

Results

PRELIMINARY ANALYSIS

Prior to all analysis, missing data was imputed using multiple imputation chain equations (mice package for R). No cases were excluded due to incorrect answering, since only few missing values were present (e.g., athlete skipped single items). The Shapiro-Wilk test was used to assess data

normality, revealing a non-parametric univariate distribution. In this sense, the bivariate relationship between variables was tested through Spearman correlations. Data was screened for outliers and two cases were excluded based on the Mahalanobis distance. The data has also shown multivariate non-parametric distribution according to the Mardia test.

DESCRIPTIVE ANALYSIS

Table I presents the means, standard deviations, minimum, maximum, skewness and kurtosis for all variables. The mean scores on the 1-5 response scale of the SMPS-2 revealed high levels of OPS and COM followed by moderate levels of PPP and DAA. The mean scores on the 1-9 response scale of the P-YSEQ revealed moderate-to-high scores on team cohesion for both task and social components, while levels of task and social group conflict were moderate to low, according to the mean scores on the 1-9 response scale of the P-GCQ. The mean scores on the 1-9 response scale of the TEOSQ revealed that these athletes' task orientation was greater than their ego orientation, however, mostly moderate levels of task orientation were found. The participants also displayed high levels of somatic anxiety, moderate worry and scored low for concentration disruption.

The correlations revealed that age was significantly and positively associated with ego orientation, social conflict and somatic anxiety (r range = .15 to .16) and negatively associated with social cohesion ($r = -.15$). Time of practice was significantly and positively associated with time within the team and PPP ($r = .21$ and $.26$, respectively). Time within the team was significantly and negatively associated with ego orientation, PPP and concentration disruptions (r range = $-.18$ to $.21$). Task cohesion was significantly and positively associated with goals orientation ($r = .36$ and $.21$, respectively) and negatively associated with COM, DAA, group conflict and anxiety (r range = $-.18$ to $-.35$). Social Cohesion were significantly and positively associated with goals orientation ($r = .16$ and $.27$, respectively) and negatively associated with DAA and anxiety (r range = $-.16$ to $-.34$). Ego orientation were significantly and positively associated with OPS, PPP, group conflict, somatic anxiety and concentration disruptions (r range = $.16$ to $.37$). Task orientation was significantly and positively associated with OPS ($r = .32$) and negatively associated with group conflict and concentration disruptions (r range = $-.17$ to $-.23$). OPS were significantly and negatively associated with anxiety (r range = $-.16$ to $-.27$). COM, PPP and DAA were significantly and positively associated with conflict group and anxiety (r range = $.18$ to $.42$). Conflict group were significantly and positively associated with anxiety (r range = $.21$ to $.47$).

TABLE I
Summary Of Intercorrelations, Scale Ranges, Means, Standard Deviations And Reliability Estimates.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	-	-.03	-.03	-.11	-.15*	.15*	.01	-.15*	.08	-.08	-.04	.10	.16*	.16*	.05	.08
2. Time of Practice		-	.21**	.01	-.10	.11	-.26*	.02	-.03	.26**	.11	.03	.09	.03	.01	.05
3. Time within the team			-	.05	-.03	-.18*	-.01	-.03	-.09	-.18*	-.13	-.04	-.04	-.05	-.02	-.21**
4. Task Cohesion				-	.45**	.02	.36**	.31**	-.18*	.08	-.21**	-.33**	-.35**	-.23**	-.18*	-.25**
5. Social Cohesion					-	.03	.16*	-.11	.07	-.16*	.06	-.11	-.34**	-.28**	-.25**	
6. Ego Orientation						-	-.18*	.16*	.14	.26**	.09	.27**	.37**	.27**	.06	.20**
7. Task Orientation							-	.32**	-.04	-.11	-.09	-.17*	-.23**	-.14	.04	-.18*
8. OPS								-	.06	.29**	-.01	.06	.03	-.24**	-.16*	-.27**
9. COM									-	.23**	.27**	.28**	.29**	.31**	.32**	.24**
10. PPP										-	.48**	.18*	.27**	.02	.04	.27**
11. DAA											-	.15	.22**	.22**	.22**	.42**
12. Task Conflict												-	.74**	.23**	.21**	.30**
13. Social Conflict													-	.45**	.26**	.47**
14. Somatic Anxiety														-	.61**	.60**
15. Worry															-	.52**
16. Concentration Disruption																
Mean score	17.09	14.56	29.04	7.56	6.63	2.23	4.13	3.44	2.92	2.47	2.64	4.99	3.89	20.22	17.92	10.66
Standard deviation	8.82	29.52	24.21	1.39	1.59	.93	.61	.72	.87	.71	.89	2.11	2.39	6.88	5.88	3.40
Scale range	-	-	-	1-9	1-9	1-5	1-5	1-5	1-5	1-5	1-5	1-9	1-9	1-4	1-4	1-4
Alpha coefficient	-	-	-	.79	.88	.72	.75	.74	.77	.76	.80	.70	.72	.73	.70	.71

Note: OPS= Organization-Personal Standards; COM= Concern over Mistake; PPP= Perceived Parental Pressure; DAA= Doubts about action.
* $p < .05$, ** $p < .01$.

All other associations between the variables of study were not statistically significant.

CLUSTER ANALYSIS

According to the above criteria, the first cluster, which included 38 individuals (21.50%), was characterized by high levels of OPS and moderate to low levels of COM, PPP and DAA. Consequently, this group was called Perfectionistic Striving. The second cluster was made up of 43 participants (24.30%) who scored moderate in all perfectionist dimensions. Thus, we decided to call this cluster as Mixed Perfectionism. The third cluster included 61 athletes (35.50%) with high scores in COM, PPP and DAA and moderate scores in OPS. This cluster was called Perfectionistic Concerns. Lastly, we found a fourth cluster containing 35 participants (19.80%) with low scores in all dimensions, which was labeled Non-Perfectionist (see Figure 1).

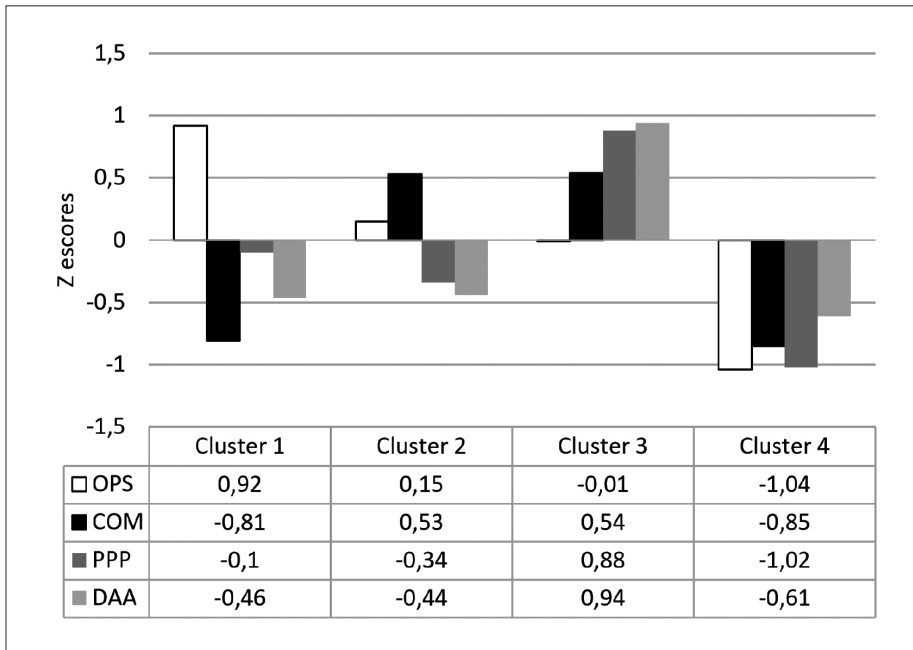


Fig. 1. - Graphic representation of the profiles of youth athletes' perfectionism through cluster analysis.

INTER-GROUP DIFFERENCES IN POSITIVE AND NEGATIVE EXPERIENCES

Table II demonstrates that there was significant difference in time within the team ($F=5.356$, $p=.002$) according to the profiles of perfectionism. The highest mean scores in time within the team occurred for athletes with PS, mixed perfectionism and non-perfectionism compared to athletes with PC.

In Table III, MANOVA results showed significant difference between the profiles of perfectionism in task cohesion ($F=2.628$, $p=.049$) and task orientation ($F=3.840$, $p=.011$). The highest mean score in both task cohesion and orientation occurred for athletes with PS in comparison to athletes with mixed perfectionism, PC and non-perfectionism profiles, and the effect size of the difference was low (η^2 range= .44 to .62). It was possible also to observe significant difference between the perfectionism profiles in somatic anxiety ($F = 4.780$; $p = .003$), worry ($F=4.750$, $p=.003$) and concentration disruption ($F = 8.505$; $p = <.001$). Athletes with PS showed lower score of somatic anxiety when compared to athletes with PC, and the effect size of this difference was moderate ($\eta^2 = .77$). Further, athletes with PS showed lower score of worry when compared to athletes with PC and mixed perfectionism, with a moderate effect size ($\eta^2 = .76$). Furthermore, athletes with PC profile had higher scores at concentration disruption when compared to athletes of all other profiles, and the effect size of this difference was large ($\eta^2 = 1.29$).

Discussion

The present study had the goal of exploring the differences in positive and negative experiences of goal orientation, group conflict, group cohesion

TABLE II
Comparison Of The Age, Practice Time And Time Within The Team According To 701 Perfectionist Profile Among Youth Athletes.

Variables	Perfectionistic Striving	Mixed Perfectionism	Perfectionistic Concerns	Non-Perfectionism	F	P	η^2
	M (Sd)	M (Sd)	M (Sd)	M (Sd)			
Age	16.08 (.86)	16.18 (.90)	16.06 (1.09)	16.30 (.74)	.496	.686	.10
Years of experience	4.49 (3.40)	4.25 (2.88)	4.18 (2.88)	4.18 (3.68)	.548	.650	.11
Time within the team	32.37 (19.87)	32.51 (21.16)	18.68 (16.19) ^a	30.03 (20.17)	5.356	.002*	.97

Note: M=mean and Sd= standard deviation. MANOVA. $p>.05$ among: a) PC with PS, mixed Perfectionism And Non-Perfectionism. Note: M=Mean And Sd= Standard Deviation.

TABLE III
Comparison Of The Team Cohesion, Goals Orientation, Group Conflict And Anxiety According To Perfectionistic Profile Among Youth Athletes.

Variables	Perfectionistic Striving	Mixed Perfectionism	Perfectionistic Concerns	Non-Perfectionism	F	p	η^2_p
	M (Sd)	M (Sd)	M (Sd)	M (Sd)			
Team cohesion							
Task Cohesion	8.08 (.90) ^a	7.26 (1.41)	7.51 (1.17)	7.43 (1.95)	2.628	.049*	.44
Social Cohesion	7.25 (1.24)	6.43 (1.81)	6.52 (1.46)	6.40 (1.77)	2.483	.063	.41
Goals Orientation							
Ego Orientation	2.28 (.77)	2.35 (.98)	2.52 (.91)	2.03 (1.04)	2.112	.101	.35
Task Orientation	4.41 (.46) ^a	4.17 (.64)	4.01 (.65)	4.02 (.62)	3.840	.011*	.62
Group Conflict							
Task Conflict	4.21 (2.12)	4.48 (2.13)	4.80 (1.82)	4.01 (2.11)	1.213	.306	.21
Social Conflict	3.47 (2.32)	3.81 (2.40)	4.50 (2.13)	3.37 (2.77)	2.311	.078	.39
Anxiety							
Somatic Anxiety	16.76 (6.64) ^b	20.67 (6.87)	21.90 (6.28)	20.48 (7.08)	4.780	.003*	.77
Worry	14.97 (6.12) ^c	18.58 (6.03)	19.29 (5.17)	17.91 (5.71)	4.750	.003*	.76
Concentration Disruption	8.94 (2.48)	10.32 (3.22)	12.18 (3.18) ^d	10.28 (3.84)	8.505	<.001*	1.29

* Significant difference (MANOVA) – $p < .05$ among: a) PS with mixed, PC and non-perfectionism; b) PS with PC; c) PS with mixed and PC; d) PC with PS, mixed and non-perfectionism. Note: M=mean; Sd=standard deviation.

and precompetitive anxiety of young athletes according to their profile of perfectionism, as described by the 2x2 model of perfectionism (Gaudreau & Thompson, 2010). Four initial hypothesis were drawn based on theoretical assumptions: H1a) the PS profile would exhibit greater levels of positive experiences along with H1b) attenuated negative experiences compared to a non-perfectionism profile; H2) the PC profile would present greater scores on negative experiences compared to a non-perfectionism profile; H3) a mixed-perfectionism profile would show less negative experiences in comparison to the PC profile; and H4) athletes with a mixed profile would have higher levels of negative experiences than those characterized by PS.

In this sense, results have shown that athletes with a PS profile had greater levels of task orientation compared to the non-perfectionism profile, what is in line with current literature suggesting a more task-related approach for athletes who strive for perfection (Madigan et al., 2017), however, levels of all other tested variables remained similar between these two profiles, providing little to no support for H1.

Providing only partial support for H2, the PC profile displayed higher levels of concentration disruption compared to the non-perfectionism profile,

corroborating with the existing evidence positively associating the PC profile with symptoms of anxiety (Carter & Weissbrod, 2011; Mallinson-Howard et al., 2019), higher scores of ego orientation comparing these two profiles reached a near-significant difference ($p=0,08$), a relationship currently supported by evidences from a systematic review showing positive associations between perfectionistic concerns, characteristic of the PC profile, and ego orientation (Stoeber, 2018). Meanwhile, the remaining negative experiences (group conflict, worry and somatic anxiety) did not vary significantly between them.

In support of H3, athletes with mixed-perfectionism have experienced less concentration disruption compared to athletes with a PC profile, although both profiles present characteristics of perfectionistic concerns, which have been linked to greater experiences of anxiety, it is possible that the aspects of perfectionist strivings that are present within the mixed profile may have acted as a protective factor against concentration disruption (Carter & Weissbrod, 2011; Mallinson-Howard et al., 2019). On the other hand, no differences were found between these two profiles for all other negative experiences assessed.

We found only partial support for H4 as well, as athletes with a mixed profile of perfectionism presented higher levels of worry compared to the PS profile, while their higher scores of somatic anxiety were on the brink of statistical significance ($p=0,055$). These results suggest that, despite striving for perfection as well, the higher prevalence of perfectionist concerns in the mixed profile may be responsible for some undesirable outcomes such as symptoms of anxiety (Mallinson-Howard et al., 2019). The remaining negative experiences were similar between PS and mixed profiles. The PS profile scored higher on task cohesion compared to the mixed profile of perfectionism, a result not initially hypothesized. Considering the lack of evidences about team cohesion specificities within the 2x2 model of perfectionism in youth sports, such result represent a new evidence supporting the positive association between striving for perfection and team cohesion found by previous studies (Nascimento et al., 2017; Nascimento Junior et al., 2020)

In light of these results, none of our initial hypothesis has been fully supported. One possible reason for failing to confirm our hypothesis may be the focus on trying to differentiate profiles according athletes' negative experiences (H1b, H2, H3 and H4). Although a series of differences were identified for anxiety symptoms, levels of ego orientation and both dimensions of group conflict seem to have not been influenced by the athletes' perfectionism profile, contradicting the majority of our expectations.

One possible explanation for the similarity between ego orientation

scores across all four profiles of perfectionism is that these young school athletes were not ego-oriented in general (Table 1), regardless of their perfectionistic traits, contradicting the results from the literature on achievement goals and perfectionism that found concerns about beating others and fulfilling the ego for athletes with either high perfectionist strivings or concerns (Stoeber, 2018). Considering the absence of relationships between group conflict and different profiles of perfectionism, it is possible that the disagreements and interpersonal problems experiences by athletes in Brazilian school sports might be much more sensitive to situational factors rather than an individual personality trait, which differs from findings from a study by Mallinson et al. (2014) suggesting differences in interpersonal relationships based on perfectionistic characteristics with young athletes from the UK. It is important to mention, however, that these authors did not assess the same variable of group conflict as in the present study.

No major hypothesis was drawn for comparisons between the two extremes of the 2x2 model of perfectionism: the PS vs PC profiles. Still, we found greater scores of task orientation followed by lower levels of all three symptoms of anxiety when comparing PS perfectionists with PC ones. The PS profile was also more task-oriented than non-perfectionist athletes (H1a), and more task-cohesive than mixed-perfectionists. These results highlight the importance of setting high standards of personal achievement and organization while being realistic and not overemphasizing perfectionistic concerns when striving for perfection (Hill et al., 2019; Stoeber, 2018), leading to athletes that are task-committed and less likely to fall apart due to the pressures of showing unrealistic perfection, consequently staying within more functional levels of anxiety (Carter & Weissbrod, 2011; Mallinson-Howard et al., 2019).

Regarding the inconsistencies between the theoretically drawn hypothesis and the evidenced results, it is important to remember that the theory is being tested in a different cultural setting than the one where it has been originally developed. Therefore, it is possible that the interaction between each profile and the environment might have not been as straightforward as initially hypothesized. The reasoning behind such difference from theory to the observed data may be found on the importance of culture for each the socially-related aspects of perfectionism (COM, PPP and DAA).

The study by Franche et al. (2012) also found cross-cultural differences within the four profiles of perfectionism while trying to predict academic performance, their four initial hypothesis were confirmed for European Canadians while only two of these hypothesis held true for Asian Canadians. In line with these findings, present results with a Brazilian sample also suggest

that the outcomes from each perfectionism profile are influenced by socially prescribed factors, which differ among cultures. Such results highlight the importance of replicating the theory in different environments, as well as the need for more investigations about the 2x2 model of perfectionism in different cultures, to better understand the intricacies of each profile of perfectionism in a variety of cultural settings.

Despite the influences from cultural differences, one strong aspect that deserves to be highlighted was that cluster analysis (Figure 1) were able to successfully replicate the profiles suggested by the 2x2 model in our sample (Gaudreau & Thompson, 2010), reinforcing this framework's strength and replicability, along with its usefulness when applied to the study of athletes' perfectionism in a practical setting. Moreover, we were able to identify a higher prevalence of the PC profile on our sample of young athletes (35.5%), while the PS (21.5%) and non-perfectionist (19.8%) profiles were the least prevalent. Such profile distribution indicates that over half of our subjects (59.8%) possessed moderate to high levels of PC perfectionism traits, corresponding to the PC and mixed profiles.

In agreement with the recommendation by Hill and Madigan (2017) review of perfectionism studies, advocating for the use of the 2x2 model as a better approach for the study of perfectionism, the study of group cohesion in sports within the 2x2 framework constitutes an original aspect of our investigation, even further, accounting for both team cohesion and team conflict has offered a more complete understanding of team dynamics in relation to perfectionism. This is also the first study to analyze group conflict and goal orientation of athletes through the 2x2 model of perfectionism in school sports. We found it important to reiterate our present contributions in light of the existing evidence about cognitive, affective and behavioral experiences of athletes grounded on the 2x2 model of perfectionism (Madigan et al., 2017; Mallinson-Howard et al., 2019; Méndez-GiMénez et al., 2014), as well as for perfectionism possibly being one of the most studied personality traits in sports (Hill & Madigan, 2017).

Another original aspect found when comparing these profiles was that the athletes with a PC profile had a significantly lower time as being members of their teams, with a near-large effect of size ($\eta^2=0.97$) (Table II). Although it is hard to draw conclusions regarding the relationship between PC traits of perfectionism and time as team member right away, it is possible to suggest two different hypothesis for such result: 1) being a relatively newer member of the team could increase an athletes' perfectionistic concerns for not feeling entirely adapted to that team environment yet; or 2) athletes scoring high on perfectionist concerns will last for shorter periods of time as members of a

team. Either way, more studies are still necessary to investigate the specificities of the time within the team and PC relationship.

Considering all of our contributions, some limitations deserved to be recognized.

Having only participants from school team sports represented a limitation for both age (14-17yrs) and competitive level (regional/state level), however, most if not all athletes have been through these early stages of competitive sports, an extremely important setting to be studied. Another limitation was that the present sample only represented the northeast region of Brazil, which has its own cultural characteristics. Both these limitations are important to be kept in mind when attempting to generalize present results. In light of some marginally significant statistical results, it is important to remember that p-value statistics are very sensitive to sample sizes, and although a reasonable number of athletes were surveyed, each of the four groups ended up composed of a small number of subjects. Lastly, the cross-sectional nature of our investigation does not allow for inferring causality and is limited to a specific point in time, not assessing how variables progress through time.

Having these limitations in mind, future investigations could benefit from having larger sample sizes to gather greater amounts of variance across all groups of perfectionism profiles, representing athletes from different sports, age groups, competitive levels and cultural settings, while also increasing statistical power. Adopting a longitudinal method to assess athletes across different points in time can offer important contributions to the understanding or how these psychological variables are shaped throughout time, as well as for identifying seasonal differences in team dynamics, for example, from early season training to a competition period. Moreover, mixed-method designs that include both quantitative and qualitative methods could also enrich our understanding of such complex psychological attributes.

Conclusion

In general, our novel findings using cluster analysis suggested that both demographic variables and psychology positive and negative experiences in youth sport variables impact upon Brazilian participants' in 2 x 2 model of perfectionism development in youth sport. Specifically, young people participating in the sport with a PS profile had more years of experience in their sport, and these young people also scored higher for team cohesion (task) and goal orientation (task). In contrast, young practitioners with a PC profile had high scores for competitive anxiety. From a practical standpoint, the im-

portance of developing an interpersonal environment with athletes, coaches and physical education professionals is highlighted, since such environments tend to contribute to the development of cohesion group and goal orientation and decrease levels of conflict group and anxiety among youth athletes.

REFERENCES

- Barki, H., & Hartwick, J. (2004). Conceptualizing the construct of interpersonal conflict. *International journal of conflict management*, 15(3). <https://doi.org/10.1108/eb022913>
- Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of sport psychology*, 7(3), 244-266.
- Carter, M. M., & Weissbrod, C. S. (2011). Gender differences in the relationship between competitiveness and adjustment among athletically identified college students. *Psychology*, 2(02), 85. <https://doi.org/10.4236/psych.2011.2201>
- Cheuczuk, F., Ferreira, L., Flores, P. P., Vieira, L. F., Vieira, J. L. L., & Nascimento Junior, J. R. A. d. (2016). Qualidade do Relacionamento Treinador-Athleta e Orientação às Metas como Preditores de Desempenho Esportivo [Quality of coach-athlete relationship and goal orientation as predictors of Sports Performance]. *Psicologia: Teoria e Pesquisa*, 32(2), 10-22. <https://doi.org/10.1590/0102-3772e32229>
- Clatworthy, J., Buick, D., Hankins, M., Weinman, J., & Horne, R. (2005). The use and reporting of cluster analysis in health psychology: A review. *British journal of health psychology*, 10(3), 329-358. <https://doi.org/10.1348/135910705X25697>
- Cumming, J., & Duda, J. L. (2012). Profiles of perfectionism, body-related concerns, and indicators of psychological health in vocational dance students: An investigation of the 2x 2 model of perfectionism. *Psychology of Sport and Exercise*, 13(6), 729-738. <https://doi.org/10.1016/j.psychsport.2012.05.004>
- Duda, J., & Nicholls, J. (1989). The task and ego orientation in sport questionnaire: Psychometric properties. *Unpublished manuscript*, 1-13.
- Eys, M., Bruner, M. W., & Martin, L. J. (2019). The dynamic group environment in sport and exercise. *Psychology of Sport and Exercise*, 42, 40-47. <https://doi.org/10.1016/j.psychsport.2018.11.001>
- Eys, M., Loughhead, T., Bray, S. R., & Carron, A. V. (2009). Development of a cohesion questionnaire for youth: The Youth Sport Environment Questionnaire. *Journal of Sport and Exercise Psychology*, 31(3), 390-408. <https://doi.org/10.1123/jsep.31.3.390>
- Franche, V., Gaudreau, P., & Miranda, D. (2012). The 2x 2 model of perfectionism: A comparison across Asian Canadians and European Canadians. *Journal of Counseling Psychology*, 59(4), 567. <https://doi.org/10.1037/a0028992>
- Freire, G. L. M., Sousa, V. da C., Alves, J. F. N., Moraes, J. F. V. N. de, Oliveira, D. V. de, & Nascimento Junior, J. R. A. do. (2020). Are the traits of perfectionism associated with pre-competitive anxiety in young athletes?. *Cuadernos De Psicología Del Deporte*, 20(2), 37-46. <https://doi.org/10.6018/cpd.406031>
- Gaudreau, P. (2016). The 2x 2 model of perfectionism in sport, dance, and exercise *The psychology of perfectionism in sport, dance and exercise* (pp. 190-216): Routledge.
- Gaudreau, P., & Thompson, A. (2010). Testing a 2x 2 model of dispositional perfectionism. *Personality and Individual Differences*, 48(5), 532-537. <https://doi.org/10.1016/j.paid.2009.11.031>
- Gaudreau, P., & Verner-Filion, J. (2012). Dispositional perfectionism and well-being: A test

- of the 2×2 model of perfectionism in the sport domain. *Sport, Exercise, and Performance Psychology*, 1(1), 29. <https://doi.org/10.1037/a0025747>
- Gotwals, J. K., & Dunn, J. G. (2009). A multi-method multi-analytic approach to establishing internal construct validity evidence: The Sport Multidimensional Perfectionism Scale 2. *Measurement in Physical Education and Exercise Science*, 13(2), 71-92.
- Goulart, C., de Rose Junior, D., & Rezende, A. (2007). Tradução e validação do instrumento orientações às metas, aplicado a jovens esportistas brasileiros [Translation and validation of the goal orientations instrument, applied to young Brazilian sportsmen]. *Journal Of Physical Education*, 76(139).
- Gustafsson, H., Hill, A. P., Stenling, A., & Wagnsson, S. (2016). Profiles of perfectionism, parental climate, and burnout among competitive junior athletes. *Scandinavian journal of medicine & science in sports*, 26(10), 1256-1264. doi: 10.1111/sms.12553
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- Hill, A. P., & Madigan, D. J. (2017). A short review of perfectionism in sport, dance and exercise: Out with the old, in with the 2×2. *Current opinion in psychology*, 16, 72-77. <https://doi.org/10.1016/j.copsyc.2017.04.021>
- Hill, A. P., Madigan, D. J., Smith, M. M., Mallinson-Howard, S. H., & Donachie, T. (2019). Perfectionism in Sport.
- Holt, N. L. (2014). A person-oriented examination of perfectionism and slump-related coping in female intercollegiate volleyball players. *Perfectionism In Sport And Dance*, 45, 298-324. <https://doi.org/10.7352/IJSP.2014.45.298>
- Jowett, G. E., Hill, A. P., Hall, H. K., & Curran, T. (2016). Perfectionism, burnout and engagement in youth sport: The mediating role of basic psychological needs. *Psychology of Sport and Exercise*, 24, 18-26. <https://doi.org/10.1016/j.psychsport.2016.01.001>
- Madigan, D. J., Hill, A. P., Mallinson-Howard, S. H., Curran, T., & Jowett, G. E. (2018). Perfectionism and performance in sport, education, and the workplace *Oxford Research Encyclopedia of Psychology*.
- Madigan, D. J., Stoeber, J., & Passfield, L. (2016). Motivation mediates the perfectionism–burnout relationship: A three-wave longitudinal study with junior athletes. *Journal of Sport and Exercise Psychology*, 38(4), 341-354. <https://doi.org/10.1123/jsep.2015-0238>
- Madigan, D. J., Stoeber, J., & Passfield, L. (2017). Perfectionism and achievement goals revisited: The 3×2 achievement goal framework. *Psychology of Sport and Exercise*, 28, 120-124. <https://doi.org/10.1016/j.psychsport.2016.10.008>
- Mallinson-Howard, S. H., Hill, A. P., & Hall, H. (2019). The 2×2 model of perfectionism and negative experiences in youth sport. *Psychology of Sport and Exercise*, 45, 101581. <https://doi.org/10.1016/j.psychsport.2019.101581>
- Mallinson, S. H., Hill, A. P., Hall, H. K., & Gotwals, J. K. (2014). The 2×2 model of perfectionism and school and community based sport participation. *Psychology in the Schools*, 51(9), 972-985. <https://doi.org/10.1002/pits.21796>
- Méndez-Giménez, A., Cecchini-Estrada, J.A., & Fernández-Río, J. (2014). El modelo de perfeccionismo disposicional 2x2 en la adolescencia: una comprobación en el contexto de la Educación Física. *Universitas Psychologica*, 13(4), 1333-1343. <http://dx.doi.org/10.11144/Javeriana.UPSY13-4.mpda>
- Muñoz-Villena, A. J., Gómez-López, M., & González-Hernández, J. (2020). Perfectionism profiles and anger responses: the relevant role of self-esteem in athletes of professional quarries. *International journal of environmental research and public health*, 17(4), 14-16. <https://doi.org/10.3390/ijerph17041416>
- Nascimento Junior, J. R. A.d., Granja, C. T. L., Fortes, L. D. S., Freire, G. L. M., De Oliveira, D. V., & Peixoto, E. M. (2018). Cross-cultural adaptation and psychometric properties of the Portuguese version of the Youth Sport Environment Questionnaire (P-YSEQ).

- Journal of Physical Education and Sport*, 18(3), 1606-1614. [https://doi.org/ 10.7752/jpes.2018.03236](https://doi.org/10.7752/jpes.2018.03236)
- Nascimento, J., Vissoci, J., Lavallee, D., Codonhato, R., Do Nascimento, J. V., & Vieira, L. F. (2017). The mediating role of basic needs satisfaction on the relationship of perfectionism traits and team cohesion among elite futsal athletes. *International Journal of Sport Psychology*, 48(6), 591-609. [https://doi.org/ 10.7352/IJSP.2017.48.591](https://doi.org/10.7352/IJSP.2017.48.591)
- Nascimento Junior, J. R. A. d., Codonhato, R., Freire, G. L. M., Fortes, L. d. S., Quinaud, R. T., Carvalho, H. M., . . . Fiorese, L. (2020). Group Conflict Questionnaire: Adaptation and Evidences of Validity for Portuguese-Speaking Athletes. *Perceptual and motor skills*, 0031512520905694. <https://doi.org/10.1177/0031512520905694>
- Nascimento Junior, J. R. A. d., Freire, G. L. M., Silva, A. A. d., Costa, N. L. G., Fortes, L. d. S., & Oliveira, D. V. d. (2020). The predicting role of perfectionism on team cohesion among Brazilian futsal athletes. *Motriz: Revista de Educação Física*, 26(1). <https://doi.org/10.1590/s1980-6574202000010201>
- Nascimento Junior, J. R. A. do, da Silva, A. A., Granja, C. T. L., de Oliveira, D. V., Reis Batista, R. P., & Fortes, L. de S. (2019). ¿Las experiencias deportivas predicen la cohesión del equipo en atletas jóvenes?. *Cuadernos De Psicología Del Deporte*, 19(3), 102-112. <https://doi.org/10.6018/cpd.365201>
- Nascimento Junior, J. R. A. d., Vissoci, J. R. N., Lavallee, D., & Vieira, L. F. (2015). Adaptation and validation of the Sport Multidimensional Perfectionism Scale-2 (SMPS-2) for the Brazilian sport context. *Motriz: Revista de Educação Física*, 21(2), 125-136. <https://doi.org/10.1590/S1980-65742015000200003>
- Nicholls, J. G. (1989). *The competitive ethos and democratic education*: Harvard University Press.
- Oliveira, L. P. d., Vissoci, J. R. N., Nascimento Junior, J. R. A. d., Ferreira, L., Vieira, L. F., Silva, P. N. d., . . . Vieira, J. L. L. (2015). The impact of perfectionism traits on motivation in high-performance soccer athletes. *Revista Brasileira de Cineantropometria & Desempenho Humano*, 17(5), 601-611. <https://doi.org/10.5007/1980-0037.2015v17n5p601>
- Paradis, K., Carron, A., & Martin, L. (2014). Development and validation of an inventory to assess conflict in sport teams: The Group Conflict Questionnaire. *Journal of sports sciences*, 32(20), 1966-1978. <https://doi.org/10.1080/02640414.2014.970220>
- Pineda-Espejel, H. A., Morquecho-Sánchez, R., Fernández, R., & González-Hernández, J. (2019). Perfeccionismo interpersonal, miedo a fallar, y afectos en el deporte. *Cuadernos de psicología del deporte*, 19(2), 115-125. <https://doi.org/10.6018/cpd.348671>
- Rhea, M. R. (2004). Determining the magnitude of treatment effects in strength training research through the use of the effect size. *Journal of strength and conditioning research*, 18, 918-920.
- Silva-Rocha, V. V., & Osório, F. d. L. (2017). Cross-cultural adaptation of the Sport Anxiety Scale-2 (SAS-2) for the Brazilian context. *Trends in psychiatry and psychotherapy*, 39(3), 202-206. <http://dx.doi.org/10.1590/2237-6089-2017-0027>
- Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport and Exercise Psychology*, 28(4), 479-501.
- Stoeber, J. (2017). The Psychology of Perfectionism: Critical Issues, Open Questions, and Future Directions. In *The Psychology of Perfectionism* (pp. 333-352). Routledge.
- Stoeber, J., Damian, L. E., & Madigan, D. J. (2018). Perfectionism: a motivational perspective. In J. Stoeber (Ed.), *The psychology of perfectionism: theory, research, and applications*. London, UK: Routledge.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and social psychology review*, 10(4), 295-319.

- Stricker, J., Buecker, S., Schneider, M., & Preckel, F. (2019). Multidimensional perfectionism and the big five personality traits: a meta-analysis. *European Journal of personality, 33*(2), 176-196. <https://doi.org/10.1002/per.2186>
- Tamminen, K. A., Page-Gould, E., Schellenberg, B., Palmateer, T., Thai, S., Sabiston, C. M., & Crocker, P. R. (2019). A daily diary study of interpersonal emotion regulation, the social environment, and team performance among university athletes. *Psychology of Sport and Exercise, 45*, 101566. <https://doi.org/10.1016/j.psychsport.2019.101566>