



Comparison of personality characteristics between high-level Brazilian athletes and non-athletes

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ABSTRACT

Background: Comparison of psychological characteristics between athletes and non-athletes is one of the most explored topics in the personality study in sports. To find a possible personality profile for high-level athletes has been one of the main goals of researchers, studying and comparing samples of athletes with those of non-athletes. **Objective:** To compare the personality profiles between Brazilian high-level athletes and non-athletes through psychological characteristics, verifying similarities and differences between them. **Methods:** Two hundred and nine athletes (108 men and 101 women) from four sport modalities (volleyball, basketball, judo and swimming) and 214 non-athletes (169 men and 45 women) composed the study sample. The FPI-R (Freiburg Personality Inventory) was used to evaluate personality. **Results:** Significant differences ($p < 0.05$) were found in eight out of the 12 FPI instrument variables: Inhibition, Irritability, Aggressiveness, Fatigability, Physical Complaints, Health Concern, Frankness, and Emotionality between athletes and non-athletes. When subgroups of athletes and non-athletes men and women were compared, the data indicated more generalities and small specificities in the differences between them, presenting significant differences ($p < 0.05$) in the eight variables previous mentioned, as well as in Self-satisfaction ($p < 0.05$). Finally, when non-athletes and athletes of team sports (volleyball and basketball) and individual sports (swimming and judo) were compared, once again significant differences ($p < 0.05$) were observed in the same variables and also in Self-satisfaction ($p < 0.000$) and Social Orientation ($p < 0.01$). **Conclusions:** It is observed that there are specific and unique psychological characteristics of Brazilian high-level athletes when compared with a non-athletes sample. The groups are distinguished significantly in the majority of variables, indicating that athletes present differentiated psychological characteristics.

INTRODUCTION

The search for a possible personality profile for high-level athletes has always been one of the main objectives for researchers, and this fact led this population to be studied and compared with non-athlete samples. In this context, Auweele *et al.*⁽¹⁾ assure that

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the definition, identification and measurement of the predictable behavior functionality of athletes are extremely important in the sports psychology, justifying studies that attempt to distinguish athletes from other populations.

Several personality concepts are found in the scientific literature on the topic. It is observed in works of Butt⁽²⁾, Cox⁽³⁾ and Weinberg and Gould⁽⁴⁾ some personality similarities when pointed to a definition based on the set of psychological characteristics that, altogether, compose the single character of each individual.

Demonstrating the complexity of the topic, Allport (*in* Cox⁽³⁾: p. 21) defined personality as “the dynamic organization of the individual’s psychophysical systems that determine unique adjustments to his environment”. More recently, Hernández-Ardieta *et al.*⁽⁵⁾ (p. 106) defined personality as the “organization more or less stable and lasting of the character, mood, intelligence and physical composition of an individual who determines his particular way to adjust himself to environment and to interact with it”. The presence not only of psychological characteristics related to personality, but also of physical aspects are observed, corroborating the complexity of this study topic. However, the present study will be narrowed to investigate the psychological factors of personality only.

Since the decade of 1970, many studies comparing athletes and non-athletes were performed⁽⁶⁻¹⁴⁾. This type of psychological characteristics comparison between athletes and non-athletes including athletes from team and individual sports has always been emphasized in these studies. However, Weinberg and Gould⁽⁴⁾ and Saint-Phard *et al.*⁽¹⁰⁾ indicate that researches involving these populations are still incomplete and inconclusive and what distinguishes athletes from non-athletes is not a single profile, once the differences between groups are not consistent. This characteristic seems to be constant in personality studies, demonstrating that this area is still an open field full of questions to be explored.

With regard to researches on the topic, the existence of a personality profile of the competitive athlete has been matter of many controversies among researchers. Vealey⁽¹⁵⁾ already assured the inexistence of a personality profile for athletes, once there are no distinguishable differences between athletes and non-athletes, fact also corroborated by Morris⁽¹⁶⁾ and Guillén and Castro⁽¹⁷⁾.

Auweele *et al.*⁽¹⁸⁾ performed a meta-analysis and verified that athletes are not different from non-athletes with regard to extroversion in three different instruments (16 PF, EPI and EPQ), becoming a robust result for personality researches.

Unlike the authors mentioned above, Butt⁽²⁾, Cox⁽³⁾ and Saint-Phard *et al.*⁽¹⁰⁾ reported that the competitive athlete presents some psychological characteristics that distinguish him from other populations. Among these differences, the authors consider that athletes present higher emotional stability, extroversion, self-confidence and present higher mental resistance if compared with non-athletes.

Maresh *et al.*⁽¹⁹⁾ compared a group of runners with a group of non-athletes. The results indicated that these athletes were more

withdrawn, thoughtful and presented lower anger levels than non-athletes. With a sample of similar characteristics, however using the POMS (Profile of Mood States) questionnaire, Morgan and Costill⁽²⁰⁾ concluded that athletes presented a better *iceberg* profile, also presenting lower levels of tension, depression, anger, fatigue and mental confusion than non-athletes. In short, athletes presented more positive characteristics than non-athletes.

Weinberg and Gould⁽⁴⁾ and Backmand *et al.*⁽⁶⁾ intended to compare different groups of athletes with non-athletes so that possible differences could be better understood due to largeness of the athletes population. The first authors reported that team athletes were characterized by being more extroverted and dependent on the group and presented lower indication of the ego orientation. Athletes of individual sports also demonstrated to be more dependent from a group than non-athletes; however, they were distinguished by higher objectivity and lower anxiety levels. The findings of Backmand *et al.*⁽⁶⁾ corroborated that athletes are different from non-athletes, but the psychological qualities are common to some groups of athletes and not to athletes as a whole.

Other subgroups were also investigated. Comparing the athlete with non-athlete woman, Weinberg and Gould⁽⁴⁾ and Hernández-Ardieta *et al.*⁽⁵⁾ demonstrated that the athletes are more aggressive, independent, emotionally more stable and more concentrated in work than non-athletes. Using the methodology of comparing ex-athletes with non-athletes, Backmand *et al.*⁽⁶⁾ verified that not many differences were observed with regard to variables extroversion and hostility, unlike some studies previously presented. A difference was found in the lower neuroticism level of non-athletes.

Other result to be presented was the study by Dobosz and Beaty⁽⁷⁾ that indicated that athletes presented higher leadership ability than non-athletes. This demonstrates the large amount of variables studied. Analyzing groups of athletes and comparing them with non-athletes, they found that runners presented lower stress, depression and anger levels (similar to Morgan and Costill⁽²⁰⁾); that team sports athletes were less neurotic and that endurance athletes were more extroverted than non-athletes.

In the last years, researchers have performed comparisons between groups of athletes and non-athletes. Kitsantas and Zimmerman⁽²¹⁾ compared groups of volleyball players with non-athletes in the self-regulatory process during the practice of physical activity. Dineen⁽²²⁾ investigated the personality of athletes and non-athletes who presented higher indexes of neuroticism and lower indexes of extroversion. In another study, Lernieux *et al.*⁽²³⁾ verified no aggressiveness differences between athletes and non-athletes.

Based on the studies presented, one observes that there are several differences between athletes and non-athletes. However, there is a small consistence due to the large diversity of variables studied and especially due to the difficulty to group athletes and non-athletes into a single group. There are countless subgroups that may be studied separately, however, the results cannot be presented as a whole.

The personality profile comparison between athletes and non-athletes must remain as research object; however, methodological cautions and the research's external validity must be considered in the analysis of results and in the conclusions presented. It is worth emphasizing that there should not be a single group of athletes, but several subgroups that need to be delimited in researches.

In this context, the present study presents the following objectives:

- To compare personality characteristics between high-performance athletes and non-athletes, verifying similarities and differences between groups;
- To perform comparisons of the personality characteristics between athletes (individual and team sports, men and women) and non-athletes subgroups (men and women).

METHODS

Sample

A total of 209 athletes (women, n = 101 and men, n = 108) from four sportive modalities (volleyball, basketball, judo and swimming) and 214 non-athletes (women, n = 45 and men, n = 169) composed the sample (table 1). All individuals were informed about the objectives of the research and that data would only be used for research purposes and generally analyzed, and they signed a consent form to participate in this study.

The sample of high-level athletes was composed of individuals who competed in the modalities volleyball, basketball, judo and swimming in 2003 and 2004. The performance level established for athletes to participate in this study was based on the fact that athletes were competing in adult national championships / national leagues of their respective sportive modalities and/or summoned to the national teams (main team or base categories).

TABLE 1
General characteristics of the sample

	Athletes	Non-athletes	General
n (Total)	209	214	423
n (Men)	108	169	108
n (Women)	101	45	101
Average age (years)	20.69 ± 4.19	25.13 ± 4.06	22.91 ± 4.68

Research instrument

The instrument used was the reviewed version of the Freiburg Personality Inventory (FPI-R) containing 138 questions with response possibilities ranging from I Agree to I Do not Agree, being applied just once. The following variables were studied: Self-Satisfaction, Social Orientation, Labor Effort, Inhibition, Irritability, Aggressiveness, Fatigability, Physical Complaints, Health Concerns, Frankness, Extroversion and Emotionality.

The FPI-R is a German personality multidimensional test that was initially validated for this population with a sample of 2,035 subjects. Later, it was translated and validated to Portuguese language as part of the Vienna Tests System in which Infoteste do Brasil has the right to use them in Brazil⁽²⁴⁻²⁶⁾.

In order to corroborate its applicability and reliability for a Brazilian sample, Bara Filho⁽²⁷⁾ analyzed the FPI-R intra-class reliability index. An average value of $r = 0.862$ was found for variables correlation in a testing (pre and post-tests with five weeks interval) with Brazilian individuals. It was verified that 11 out of the 12 FPI-R variables presented correlations equal to or greater than the standard deviations (0.7 to 0.8) indicated in studies of Schurger *et al.*⁽²⁸⁾ for FPI-R. For the analysis of the data collected internal consistency, the Cronbach Alpha index was calculated and the value $\alpha = 0.62$ was found.

Statistical analysis

For the analysis of the personality traits comparison between athletes and non-athletes, the descriptive analysis was initially used (average and standard deviation) for the behavior of each variable to be studied. Later, the Student's *t* test was applied in order to verify differences between the groups' averages. For the comparison of different athletes and non-athletes subgroups, the one-way analysis of variance (ANOVA) with Sheffé *post-hoc* was applied to analyze differences between average of variables between each subgroup. The statistical program used was the SPSS version 11.0.

RESULTS

One may initially observe in table 2 the existence of many differences between the average of both groups of athletes and non-

athletes. The variables that most differed in the averages were: Irritability (5.03 and 2.37 points for athletes and non-athletes, respectively); Aggressiveness (4.01 and 1.57 points); Fatigability (5.15 and 2.77 points); Frankness (6.62 and 4.35 points) and Emotionality (6.20 and 3.59 points). On the other hand, the variables presenting the smallest differences between averages were: Self-satisfaction (7.78 and 8.03 points for athletes and non-athletes, respectively), Social orientation (8.04 and 8.33 points) and Labor Effort (8.64 and 8.59 points).

In order to verify these differences statistically, the Student's *t* test was applied (table 2) and the sample of athletes was significantly distinguished from non-athletes ($p < 0.05$) in eight out of 12 variables of the FPI instrument: Inhibition ($p < 0.001$), Irritability ($p < 0.001$), Aggressiveness ($p < 0.001$), Fatigability ($p < 0.001$), Physical Complaints ($p < 0.001$), Health Concerns ($p < 0.01$), Frankness ($p < 0.001$) and Emotionality ($p < 0.001$).

TABLE 2
Average and standard deviation of age and personality variables (in scores) of athletes and non-athletes and Student's *t* test for differences between averages

Variable/groups	General X ± SD	Athletes X ± SD	Non-athletes X ± SD	"t"	P
Self-satisfaction	7.90 ± 1.97	7.78 ± 2.23	8.03 ± 1.67	-1.296	0.196
Social Orientation	8.18 ± 1.87	8.04 ± 1.86	8.33 ± 1.87	-1.591	0.112
Labor Effort	8.61 ± 1.81	8.64 ± 1.91	8.59 ± 1.70	0.270	0.787
Inhibition	3.56 ± 2.27	4.37 ± 2.28	2.77 ± 1.98	7.729	0.000***
Irritability	3.69 ± 2.60	5.03 ± 2.55	2.37 ± 1.89	12.196	0.000***
Aggressiveness	2.78 ± 2.32	4.01 ± 2.36	1.57 ± 1.53	12.638	0.000***
Fatigability	3.94 ± 2.65	5.15 ± 2.74	2.77 ± 1.94	10.339	0.000***
Physical Complaints	2.22 ± 2.07	3.03 ± 2.17	1.43 ± 1.63	8.618	0.000***
Health Concern	7.09 ± 2.39	6.72 ± 2.49	7.45 ± 2.25	-3.188	0.002**
Frankness	5.47 ± 2.63	6.62 ± 2.34	4.35 ± 2.42	9.787	0.000***
Extroversion	10.14 ± 2.26	10.06 ± 2.54	10.23 ± 1.96	-0.778	0.437
Emotionality	4.88 ± 2.81	6.20 ± 2.92	3.59 ± 1.99	10.787	0.000***

* ($p < 0.05$)/** ($p < 0.01$)/*** ($p < 0.001$).

Based on these differences, the athletes presented higher significant scores ($p < 0.05$) in variables Inhibition, Irritability, Aggressiveness, Fatigability, Physical Complaints, Frankness and Emotionality, and lower only in variable Health Concern. These data characterize athletes in relation to non-athletes as more withdrawn with regard to personal relations, less spontaneous and less self-controlled, presenting higher disposition to aggressive behavior and more frequent stress level, with more physical complaints, thoughtless with social norms, with higher mood and anxiety alterations and less concerned about health. Firstly, the data evidenced a series of differences between athletes and non-athletes, indicating the existence of special psychological characteristics for high-level athletes.

TABLE 3
Average and standard deviation of personality variables (in scores) of subgroups athletes and non-athletes men (M) and women (W) and analysis of variance

Variable/groups	Athletes M	Athlete W	Non-athlete M	Non-athlete W	F	p
Self-satisfaction	8.11 ± 2.01	7.42 ± 2.41	8.05 ± 1.59	7.93 ± 1.95	2.741	0.043*
Social Orientation	7.92 ± 1.77	8.16 ± 1.96	8.42 ± 1.93	7.98 ± 1.56	1.782	0.150
Labor Effort	8.67 ± 1.94	8.60 ± 1.89	8.52 ± 1.73	8.84 ± 1.59	0.424	0.736
Inhibition	4.04 ± 2.19	4.69 ± 2.34	2.79 ± 1.99	2.71 ± 1.95	21.522	0.000***
Irritability	4.39 ± 2.47	5.72 ± 2.46	2.18 ± 1.78	3.09 ± 2.15	60.908	0.000***
Aggressiveness	4.35 ± 2.48	3.64 ± 2.17	1.61 ± 1.58	1.44 ± 1.31	56.240	0.000***
Fatigability	4.96 ± 2.84	5.35 ± 2.62	2.75 ± 1.87	2.82 ± 2.22	36.047	0.000***
Physical Complaints	2.31 ± 1.74	3.80 ± 2.32	1.21 ± 1.45	2.24 ± 1.99	42.779	0.000***
Health Concern	6.47 ± 2.49	6.98 ± 2.47	7.53 ± 2.23	7.15 ± 2.35	4.499	0.004**
Frankness	6.77 ± 2.21	6.46 ± 2.48	4.31 ± 2.48	4.53 ± 2.18	32.252	0.000***
Extroversion	10.28 ± 2.42	9.82 ± 2.65	10.17 ± 2.01	10.44 ± 1.80	1.079	0.358
Emotionality	5.67 ± 2.48	6.77 ± 3.25	3.52 ± 1.91	3.84 ± 2.26	43.242	0.000*

* ($p < 0.05$)/** ($p < 0.01$)/*** ($p < 0.001$).

The group was divided into four subgroups in order to verify differences between athletes and non-athletes including variable gender. To do so, the analysis of variance shown in table 3 and Sheffé *post-hoc* test were used.

According to the analysis shown in table 3, the analysis of variance (ANOVA) demonstrated the existence of a statistically significant difference in nine out of the 12 variables: Self-satisfaction ($p < 0.05$), Inhibition ($p < 0.001$), Irritability ($p < 0.001$), Aggressiveness ($p < 0.001$), Fatigability ($p < 0.001$), Physical Complaints ($p < 0.001$), Health Concerns ($p < 0.01$), Frankness ($p < 0.001$) and Emotionality ($p < 0.001$).

The Sheffé *post-hoc* test indicated more generalities and less specificities in the differences between men and women subgroups. The behavior of variables was similar for all variables in relation to the first analysis (table 2), when athlete and non-athlete men were compared. Non-athlete men and women were equally statistically distinguished from athlete men in variables Inhibition ($p < 0.000$ for both genders), Irritability ($p < 0.05$ and $p < 0.001$ for non-athlete men and women, respectively), Aggressiveness ($p < 0.001$), Fatigability ($p < 0.001$), Frankness ($p < 0.000$) and Emotionality ($p < 0.001$). Non-athlete men were also distinguished from athletes for variables Physical Complaints ($p < 0.001$) and Health Concern ($p < 0.01$).

When athlete women were compared with both non-athlete groups (men and women), an identical behavior between groups for variables Inhibition ($p < 0.001$), Irritability ($p < 0.001$), Aggressiveness ($p < 0.001$), Fatigability ($p < 0.001$), Physical Complaints ($p < 0.001$), Frankness ($p < 0.001$) and Emotionality ($p < 0.001$) was observed.

In the other comparisons, not many differences in relation to this variable were found, with athlete women being distinguished from non-athlete men and women for variable Health Concern ($p > 0.05$). The same behavior was observed between athlete men and non-athlete women, also presenting no significant differences for variable Physical Complaints ($p > 0.05$).

These data reveal a homogeneous behavior of the variables studied, with subgroups presenting, generally, consistent differences and similar to analysis performed with the entire athletes and non-athletes group without being divided by gender.

In order to fulfill the data analysis, an analysis of variance was performed to verify the existence of statistically significant differences between another non-athlete group category and team sports athletes (volleyball and basketball) and individual sports (swimming and judo). The ANOVA data are presented in table 4.

TABLE 4
Average and standard deviation of personality variables (in scores) of subgroups team and individual sports athletes and non-athletes and analysis of variance

Variable/group	Athletes (individual)	Athlete (team)	Non-athlete	F	p
Self-satisfaction	7.09 (2.25)	8.36 (2.05)	8.03 (1.67)	12.223	0.000***
Social Orientation	7.64 (1.98)	8.37 (1.70)	8.33 (1.87)	5.276	0.005**
Labor Effort	8.41 (2.10)	8.83 (1.72)	8.59 (1.70)	1.479	0.229
Inhibition	4.66 (2.54)	4.13 (2.01)	2.77 (1.98)	31.597	0.000***
Irritability	5.48 (2.61)	4.65 (2.45)	2.37 (1.89)	79.014	0.000***
Aggressiveness	4.38 (2.60)	3.69 (2.09)	1.57 (1.53)	84.133	0.000***
Fatigability	5.73 (2.94)	4.65 (2.46)	2.77 (1.94)	60.171	0.000***
Physical Complaints	3.25 (2.34)	2.85 (2.00)	1.43 (1.63)	38.389	0.000***
Health Concern	6.50 (2.66)	6.90 (2.33)	7.45 (2.25)	5.837	0.003*
Frankness	7.36 (2.30)	5.99 (2.19)	4.35 (2.42)	58.798	0.000***
Extroversion	9.84 (2.58)	10.23 (2.50)	10.23 (1.96)	1.093	0.336
Emotionality	6.82 (3.06)	5.68 (2.70)	3.59 (1.99)	65.144	0.000***

* ($p < 0.05$)/** ($p < 0.01$)/*** ($p < 0.001$).

One observes that the eight variables that presented significant differences in the general analysis (table 2) also behaved similarly in this moment: Inhibition ($p < 0.001$), Irritability ($p < 0.001$), Ag-

gressiveness ($p < 0.001$), Fatigability ($p < 0.001$), Physical Complaints ($p < 0.001$), Health Concerns ($p < 0.01$), Frankness ($p < 0.001$) and Emotionality ($p < 0.001$). However, other two variables indicate differences between groups: Self-satisfaction ($p < 0.000$) and Social Orientation ($p < 0.01$).

Based on the Sheffé *post-hoc* test, it was observed that individual sports athletes were significantly distinguished from non-athletes in seven of the variables that presented differences in table 2: Inhibition ($p < 0.001$), Irritability ($p < 0.001$), Aggressiveness ($p < 0.001$), Fatigability ($p < 0.001$), Physical Complaints ($p < 0.001$), Frankness ($p < 0.001$) and Emotionality ($p < 0.001$). When team sports athletes and non-athletes were compared, the same values presented between non-athletes and individual sports athletes are observed; however, with a difference in variables Self-satisfaction ($p < 0.001$) and Labor Effort ($p < 0.05$), with athletes presenting higher values in both.

DISCUSSION

The data obtained in the present study are not in agreement with findings of Guillén and Castro⁽¹⁷⁾, Morris⁽¹⁶⁾, Auweele *et al.*⁽¹⁸⁾ and Vealey⁽¹⁵⁾, who verified the lack of psychological differences between these two groups. Butt⁽²⁾, Cox⁽³⁾ and Saint-Phard *et al.*⁽¹⁰⁾ characterized athletes as presenting higher emotional stability and extroversion. In the first variable, an opposition was observed, and in the second, no differences.

These scores may cause surprise at first due to differences in relation to other studies, but it is worth mentioning that the population of athletes of the present study is well defined; however, the number of options for the selection of non-athlete samples is significantly high, many times causing heterogeneity and hence differences in results.

The results also indicated that athletes and non-athletes are distinguished in a constant way, even when separated into subgroups of men and women, athletes and non-athletes, as well as when these two last subgroups were compared with individual and team sports. Thus, the results of the present study demonstrated to be very consistent within all analyses performed.

Comparing with other studies conducted by Weinberg and Gould⁽⁴⁾ and Henández-Ardieta *et al.*⁽⁵⁾, who investigated and compared athlete and non-athlete women, the data found in the present study corroborate the fact that athletes are more aggressive and contrast with the higher emotional stability of non-athletes. There are also differences with data obtained by Weinberg and Gould⁽⁴⁾, and Morgan and Costill⁽²⁰⁾ for variable Extroversion, that presented no significant variations, while for the mentioned authors, team sports athletes were characterized by being more extroverted and by the fact that athletes presented lower stress level, which contrasted with data found in the present study.

The results of the present study determined the absence of differences in variables Extroversion and Self-satisfaction, making this study distinguished from others previously performed^(3,6), that characterized athletes as more extroverted, fact that was not observed in the present study. Also, this study demonstrated that athletes and non-athletes present similar self-satisfaction degrees with regard to their respective activity.

Furthermore, other relevant data must be mentioned. Athletes presented higher aggressiveness when compared with non-athletes, fact that corroborates recent findings of Lernieux *et al.*⁽²³⁾. This data may characterize athletes as of higher competitiveness, factor required and vital within high-level sports.

Unlike other studies^(2,3,10,19,20), athletes presented higher indexes of insecurity and shyness in personal relations, irritability, more frequent stress episodes and being occasionally more labile than non-athletes. These characteristics were clearly distinct within the interpretations of the variables studied, indicating an athletes' profile. What was initially understood as negative characteristics, needs

to be explained and understood within the high-level sports context.

It is worth mentioning that the inconsistency of results and conclusions in the personality comparisons of athletes and non-athletes, generated by a series of studies performed during many years, was caused by many reasons. Among them, one may mention the use of different research instruments (EPQ, 16 PF, FPI, POMS, EPI, and now, FPI) that measure different variables not allowing significant comparison between instruments. The amount of intervenient variables (social, educational and economic) is surely source of distinct and inconsistent results. For this reason, the present study narrowed the sample of high-level athletes with minimum participation in national championships and non-athletes with full high school or university level.

Despite the results of the present study are shown to be inconsistent, the understanding of its limitations becomes necessary. One of the limiting factors lies in the fact that the sample of Brazilian athletes is limited to only four modalities (basketball, volleyball, swimming and judo). The sportive universe is extremely wide with countless sportive modalities. Thus, differences found between groups of athletes and non-athletes studied must be understood.

In this context, the sample of non-athletes selected for the present study does not represent necessarily the entire population, once there are several ranges of age, social classes, educational level among others, variables that make the data generalization difficult. Therefore, the results found must be considered as indicative of possible differences between athletes and non-athletes populations, but in order for these results to be pointed as constant for the entire population, further studies must be conducted.

Other limitation of the present study is the lack of knowledge of researches on the personality of Brazilian athletes performed with the FPI-R. This makes difficult the discussion of results that were compared with similar personality dimensions researched through other research instruments. This aspect may be considered as a limiting factor for personality studies, once finding traits that identify a given study group becomes more and more difficult.

CONCLUSIONS

The objective of the present study was to compare personality traits between high-level athletes and non-athletes, and presented results that contrasted with findings of studies previously performed. However, it became clear that athletes and non-athletes are significantly distinguished in most psychological variables studied.

One could observe, based on the results found, that athletes and non-athletes are constantly distinguished, even when divided and compared through variables gender (athlete men and women with their similar non-athletes) and sportive modality (team and individual sports athletes with non-athletes). This verification indicates consistence of the data collected and points to a possible generalization of differences between individuals from both groups; fact that deserves further investigations.

In order for the personality traits of high-level athletes to be better studied and scientifically understood, and for a better knowledge development on this area, some studies with the following topics are suggested:

- To enlarge the amount of sportive modalities (ex.: artistic and rhythmic gymnastics, diving, equestrian, sailing and nature sports) researched for a better verification of the comparison between each other, as well as between athletes and non-athletes;
- Longitudinal studies that allow evaluating the development of the athlete's personality since first years until high-level is reached;
- To compare athletes from distinct performance levels with different samples of non-athletes for a better establishment of differences in which extracts appear more clearly.

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