

PERSONAL AND SOCIAL RESPONSIBILITY AND ATTITUDES TOWARDS SPORT AMONGST ATHLETES

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ABSTRACT: This study aims to improve our current understanding of the relationship between personal and social responsibility (PSR) and positive and negative attitudes of athletes towards sport within competitive settings. The Portuguese versions of the Personal-Social Responsibility Questionnaire (PSRQ) and Sports Attitudes Questionnaire (SAQ) were used to measure, respectively, PSR levels and attitudes, both positive and negative, towards sport. A total of 472 athletes of different competitive levels, active in different sports and from different regions of the country participated in the study. The results revealed that high levels of PSR correspond to high levels of positive attitudes towards sport competition. Furthermore, results also showed that high levels of PSR have no significant relationship with negative attitudes towards sport competition. Based on the results we put forth a suggestion of possible directions for future additional research on this topic.

KEYWORDS: Psychosocial activities, Positive youth development, Sports

RESPONSABILIDAD PERSONAL Y SOCIAL Y ACTITUDES PARA EL DEPORTE ENTRE ATLETAS

RESUMEN: Este estudio tiene como objetivo contribuir a la comprensión de la relación entre el desarrollo de la responsabilidad personal y social (RPS) y las actitudes positivas y negativas en deporte en el contexto de la competición deportiva. Utilizaron las versiones en portugués del Cuestionario responsabilidad personal y social (CRPS) y el Cuestionario de Actitudes en Deportes (CAD) respectivamente, para medir los niveles de RPS y las "actitudes positivas" y "actitudes negativas" frente a la competición deportiva. En el estudio participaron 472 atletas de diferentes niveles competitivos de diferentes deportes y diferentes regiones de Portugal. Los resultados mostraron que los niveles altos de RPS están asociados positivamente a los niveles altos de actitudes positivas frente a la competición deportiva. Los resultados también mostraron que los altos niveles de RPS no tienen una asociación significativa con las actitudes negativas. Con base en los resultados se sugieren líneas de investigación futura.

PALABRAS CLAVE: Actividades psicosociales, Desarrollo positivo de jóvenes, Deporte

NÍVEIS DE RESPONSABILIDADE PESSOAL E SOCIAL, E ATITUDES FACE AO DESPORTO ENTRE ATLETAS

RESUMO: Este estudo visa contribuir para a compreensão da relação entre o desenvolvimento da responsabilidade pessoal e social (RPS) e as atitudes, positivas e negativas, face ao desporto no contexto da competição desportiva. Utilizaram-se as versões portuguesas do Personal-Social Responsibility Questionnaire (RPSQ) e do Sports Attitudes Questionnaire (SAQ) para medir, respetivamente, os níveis de RPS e as "atitudes positivas" e "atitudes negativas" face à competição desportiva. Participaram no estudo 472 atletas de diferentes níveis competitivos, de diferentes desportos e de diferentes regiões de Portugal. Os resultados revelaram uma associação positiva entre níveis elevados de RPS e níveis elevados de atitudes positivas face à competição desportiva. Os resultados mostraram ainda que elevados níveis de RPS não têm relação significativa com as atitudes negativas face à competição desportiva. Com base nos resultados alcançados sugerem-se pistas para investigação futura.

PALAVRAS CHAVE: Atividades psicossociais, Desenvolvimento positivo de jovens, Desporto

Received Date: 09/10/2017

Accepted Date: 02/09/2018

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Sport activity is considered to influence the positive development of young people, namely their personal and social development and their ethical formation. In fact, sport practice is deemed capable of promoting personal and social competencies as a series of life competencies that allow for a successful transition into adult life (Gould, Carson, 2008; Hellison, Martineck, 2006). As a result, the development of a series of prosocial competencies through sport justifies a great part of the investment made in its promotion. This point of view emphasizes the role of sport in the development of personal and social responsibility, as well as in ethical education and in the creation of codes of conduct inherent to competitive behaviour amongst its practitioners (Escartí, et al., 2012).

Amongst the various personal competencies sport practice is susceptible to influence, several authors (Escartí, et al., 2012; Hellison Martineck, 2006) include the development of personal and social responsibility (PSR). Personal responsibility reflects the level of individual responsibility, which is characterized by personal effort and self-direction in relation to the individual's own needs. As for social responsibility, it translates both the respect for and the responsibility to take care of others (Hellison, 1988; Hellison, Martineck, 2006).

Within the specific domain of sport activity, it is considered that the conduct of athletes must be guided by the respect for sportsmanship or fair play, a concept englobing a set of "good-practices". The latter confers ethical character to training and competition, which constitutes a form of ethical education of its participants and clearly impacts their personal development. Furthermore, some of the direct contributions of sport to the education of its participants seem to result from the respect for the rules of the game, consideration for the adversary, honest competition and the search for fun and pleasure in the game itself (Gonçalves, Silva, et al., 2006). As such, the respect for sporting rules and conventions as well as for the adversary, the relevance of equal conditions amongst its participants, the refusal to attain victory at any cost, the experiencing of both victory and defeat with dignity, and the drive to give

one's best towards self-improvement and personal excellence are considered of fundamental educational value.

Several studies suggest that the role of sport practice as an ignitor of socially positive convictions and attitudes amongst youngsters should be examined (Martins, Pedro, 2017; Martins, et al. 2017) with additional empirical evidence still being called for concerning the effects of sport participation on the personal and social development of young people (Bagozzi, Kimmel, 1995; Holt, Sehn, et al., 2012). More to the point, research has pinpointed the need to study the effects of sport practice on several aspects of personal and social development (Bagozzi, Kimmel, 1995; Hellison, Walsh, 2002) including ethical attitudes towards sport (Gould, Carson, 2008).

In fact, being merely exposed to sports does not assure the adherence to a moral and ethical code of conduct, which means that this process should, in turn, constitute a pedagogical concern clearly visible in the process of sportive development and education (Lee, Withehead, 1999). Training should, therefore, be seen as an educational process, taking into consideration one's personal, social and moral development, connected and complementary to the development of sportive skills (Bagozzi, Kimmel, 1995). Despite this, sports' orientation towards the result and its inevitable pressure to succeed seem to still be highly present within the sports' system as a whole, and in particular within the youth ranks (Lee, Withehead, 1999; Li, Wright, et al., 2008). Though other variables can be taken into account within the process of personal and social education; sport, as a human organized form of physical activity represents a privileged opportunity for pursuing a humanistic oriented educational process (Hellison, 1973; Lee, Whitehead, Ntoumanis, 2007). Consequently, the need to study the effect of youngsters' exposure to sports (pertaining the issue of personal and social development) has been rising (Catalano, Berglund, et al., 1999). The promotion of this psycho-social skill, regarded as fundamental in the development of one's adult personality, has only been analyzed through studies focused on evaluating the impact of programs geared towards the development of this skill within either a school

setting or small extra-curriculum programs (Bentler, 2007; Cecchini, Montero, et al., 2007; Escartí, Gutiérrez, et al., 2010) and mostly by means of qualitative analyses.

No studies have been conducted to date concerning this construct within a sportive setting. Therefore, we consider that, without such an additional and complementary analysis, the reflexion concerning the development of personal and social responsibility is quite limited, thus needing to added support within the investigation field through empirically based approaches (Hellison, Walsh, 2002).

On the other hand, from the literature in PSR, it seems that there is not only the need to strengthen the theoretical models that connect this variable with other important ones, such as the type and level of participation, but also the need to strengthen knowledge concerning attitudes regarding sport. More to the case, several studies (e.g., Kavussanu, 2006; Martins, et al., 2017) reveal that a high level of personal and social responsibility is connected with moral values, making this construct a crucial one in the predicament of the attitudes expressed by athletes towards sport practice (Lee, Witthead, 1999). Within formative oriented sport practice, the positive pedagogical effects (and which reflect fair play attitudes) are observed through participants' respect for the game's rules, consideration for the opponent, honest competition and search for entertainment, together with pleasure with the game itself (Gonçalves, et al., 2006; Lee, Witthead, 1999).

However, between the highlighting and cultivation of excellence (e.g., high performance professional sport) and the practice motivated by pleasure, there seems to exist a contradiction that might produce non desirable effects, such as negative sportive behaviours or unsportmanship ones (Gonçalves, et al., 2006; Lee, et al., 2007). Regarding anti-sportive behaviours identified two conceptually similar categories as occurring in sport and which violate fair competition: anti-sportive behaviour and cheating. Upon analyzing these behavioural categories, the authors state that a negative sportive attitude is characterized by means of two main behaviours. First winning by means of a non-legit strategy based on violating the rules of the game. It looks like anti-sportive attitudes mostly consist of breaking the game's rules so as to get an advantage, without however looking to disguise one's behaviour (e.g., committing a foul in order to get an overall advantage, despite being penalized). Secondly, behaviours aimed at hiding one's true intentions. These refer to cheating while looking that others are kept unaware of the rule breaking behaviour. Cheating implies, therefore, an attempt to deceive by creating an illusion that the game took place fully within its rule set.

With the exception of the widening of concepts on psychological development impacting the conceptualization and operationalization of personal and social education (Bagozzi, Kimmel, 1995) the study of the relationship between personal and social responsibility and ethical attitudes towards sport has not yet been attempted. Therefore, this work targets the study of the relationship between levels of personal responsibility development in connection to athletes' attitudes towards sportive practice.

METHOD

Ethics

The present study was conducted in Portugal, after approval by the Ethics Committee of the Faculty where the study took place, where the study was developed. Athletes were invited to participate voluntarily in the study, meaning that no incentives were presented to the subjects in question.

Participants and data collections

This study gathered the participation of athletes from different (a) competitive levels (i.e. elite, national and regional levels), (b) sports [i.e. team sports ($n = 313$; 60.5%), individual sports ($n = 133$; 25.7%) and combat sports ($n = 71$; 13.7%)], and (c) regions of Portugal. Males ($n = 365$) represented about two thirds of the sample (77.3%) with a mean age of 16.97 years ($DP=4.51$). Girls ($n=107$) represent about one third of the sample (22.7%) with a mean age of 16.03 ($DP=2.86$).

Before answering the questionnaires, all participants were provided with information on the objectives and methods of the study. A total of 600 questionnaires were distributed before athletes began training. After screening and depuration, 472 questionnaires were considered valid for data analysis.

Measures

The personal and social responsibility scale is comprised by two constructs derived from Li, et al., (2008) and later validated for the Portuguese research community by Martins, et al., (2015). The first is the construct of personal responsibility, which reflects the basic responsibilities necessary to establish a positive learning environment (i.e. effort and self-direction), and includes 4 items (e.g. "I work hard", "I define my own goals"). The second is the construct of social responsibility (i.e. respect for others and responsibility to take care of others), also comprised by 4 items (e.g. "I respect others", "I am useful to others). All items were measured using a 6-point Likert type scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

The Sports Attitudes Questionnaire (SAQ), derived from Lee, Whitehead, et al., (2002) and adapted and validated for the Portuguese language by Gonçalves, et al., (2006), is an instrument that evaluates four attitude-based constructs. Two of the constructs, with four items each, reflect socially positive

attitudes regarding ethical conduct in sport (Engagement and Convention). The two remaining constructs, also with four items each, reflect socially negative attitudes regarding sport (Cheating and Anti-sportmanship). All items were measured using a 5-point Likert type scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

The first factor (F1), designated Cheating, is comprised by four items, such as "there is no problem in cheating if nobody notices it" and "if others cheat, I can cheat too". The second factor (F2), designated Anti-sportmanship, includes four items, such as "I can disturb the adversary, as long as I don't break the rules" and "sometimes, I try to deceive the adversary". The third factor (F3), Convention, is comprised by four items, such as "after winning, I salute the adversary" and "whatever the result, I always salute the adversary". The fourth and last factor (F4) corresponds to Commitment, also comprised by four items, such as "I always make the effort, even when I know I am going to lose" and "I always try to excel myself".

Data Analysis

AMOS 24.0 software (SPSS Inc. Chicago, IL) was used. To examine the psychometric properties of the measurement model, a confirmatory factor analysis was conducted (CFA) by using the method of maximum likelihood (Bentler, 2007). The multivariate normality of the items and the inexistence of outliers, requirements of the confirmatory factor model, were evaluated by form coefficient (skewness and kurtosis) and by Mahalanobis squared distance (D^2) respectively (Arbuckle, 2009). Model refinement was based on modification index values by Lagrange multipliers (LM), considering trajectories and/or correlations with $LM > 11$ ($p < 0.001$) as indicators of significant variation in model quality. To estimate the overall adequacy of the model, indicative values of good adjustment for CFI (Comparative Fit Index), GFI (Goodness Fit Index) and TLI (Tucker-Lewis Index), indexes higher than 0.9 were considered (Marôco, 2018). It was also deemed that χ^2/df lower than 5.0 indicates an acceptable model fit to the data, whereas values lower than 3.0 indicate a good model fit to data (Arbuckle, 2009; Kline, 2004). For absolute adjustment index it was also considered the value for SRMR (root mean square residual) i.e. when the SRMR was lower than .1 it indicates good adjustment to the data (Marôco, 2010). When the RMSEA (Root Mean Square Error of Approximation) adjustment index is lower than 0.06 with non-significant P probability [$rmsea \leq 0.05$], it indicates good adjustment of model to data (Schumacker, Lomax, 1996). The internal consistency of constructs was assessed by composite reliability (Hair, Black, Babin, Anderson, 2009), while average variance extracted (AVE) were estimated to assess convergent validity (Fornell, Larcker, 1981). A composite reliability equal or higher than 0.7 and an AVE equal or higher than 0.5 are considered reliable and valid constructs (Fornell, Larcker, 1981). Discriminant validity was established when AVE for each construct exceed the squared correlations between that construct and any other construct (Fornell, Larcker, 1981).

The assessment of the structural model was conducted using structural equation modelling (SEM). In order to examine the relationships between constructs, the significance of structural weights was evaluated using Z-tests, generated by AMOS for structural model fit considering $Z \geq 1.96$ and statistical significance with $p \leq 0.05$ (Marôco, 2010).

RESULTS

Analysis of first order measurement model

Asymmetry (S_{ij}) and kurtosis (K_{ij}) values for each individual item were lower than 3 and 7 respectively, as indicated by Kline (2004) for factor analysis. Moreover, squared Mahalanobis distances indicate the inexistence of multivariate outliers (p^1 and $p^2 \leq 0.001$). The results obtained pertaining the measurement model showcase an acceptable fit to the data [$\chi^2(237)=513.27$, ($p < 0.001$), $\chi^2/df = 2.17$; CFI= 0.95; GFI= 0.92 and TLI= 0.94; RMSEA= 0.04; RSMR= 0.096]. The p value was significant, and its correlation with the degrees of freedom was under the threshold of 3.0 (Arbuckle, 2009; Kline, 2004). The values of the CFI, GFI and TLI were in accordance with the criteria of good model adjustment to the data (> 0.90), while RMSEA was lower than 0.06, which also suggests good adjustment (Hair, et al., 2009). The results indicate that each item did load significantly on its construct, that is, the loads of all items were higher than 0.50, while also having adequate individual reliability given that the R^2 of each item was greater than .25. The latter ranged, in effect, between 0.67 and 0.89, while the Z-test varied between 13.76 and 24.42 (Hair, et al., 2009). The composite reliability was also achieved with values varying between 0.80 and 0.93, thus exceeding the recommended threshold of 0.70 (Bagozzi, Kimmel, 1995). Convergent validity was accepted for all constructs, since AVE values for each construct ranged between 0.50 and 0.76, thus observing the minimum recommended of 0.50 (Fornell, Larcker, 1981). Table 1 reports the standardized factor weights, as well as the individual reliability for each item in the final model.

Descriptive statistics for the first order constructs, together with the respective squared correlations, are reported in Table 2. Discriminant validity is indicated when the estimation of AVE for each construct exceeds the squared correlations between the respective constructs (Fornell, Larcker, 1981). In all cases, AVE values were higher than any squared correlation between all pairs of constructs, meaning that discriminant validity is, therefore, accepted. Based on these results, the scale was considered reliable for a follow-up analysis of the second order measurement model.

Table 1. Factor loadings (λ), Z-values, construct reliability (CR), and average variance extracted (AVE).

Constructs/items	λ	Z-value	CR	AVE
<i>Personal responsibility</i>			.80	.50
I respect others	.77	16.215		
I help others	.76	18.563		
I encourage others	.68	17.355		
I am kind towards my teammates	.69	16.209		
<i>Social responsibility</i>			.83	.55
I expend effort	.81	20.839		
I set personal goals	.67	15.436		
I want to improve	.65	15.775		
I give my best	.80	22.753		
<i>Cheating</i>			.93	.77
Sometimes I cheat to gain an advantage	.90	24.234		
Sometimes one needs to cheat	.90	24.419		
I cheat if no one will notice	.89	23.680		
I would be able to cheat if it would help me win	.81	20.673		
<i>Anti-sportsmanship</i>			.84	.57
I try that referees make decisions in my favors, even if it does not correspond to the truth	.63	14.279		
It is a good idea to get on my opponents' nerves	.84	21.198		
If I don't want that someone plays well, I try to disturb him	.81	19.919		
Since it is not against the rules to psychologically disturb my opponents, I try to do it	.71	16.655		
<i>Convention</i>			.87	.63
After winning I greet my opponents	.87	21.369		
Regardless of the results, I greet my opponents	.87	21.242		
I greet the opposing coach	.55	11.674		
I greet opponents after loses	.84	20.150		
<i>Commitment</i>			.80	.50
I don't give up, even after making mistakes	.66	13.000		
I always put on a good effort, even when I know I will lose	.72	14.823		
I am always thinking on how to improve	.68	13.771		
I always give it my best	.75	16.079		

Note: All items showcase good reliability ($\lambda \geq .50$)

Table 2. Mean (M), Standard deviation (SD) and correlations among constructs.

Constructs	Correlations					
	1	2	3	4	5	6
1. Personal responsibility	1					
2. Social responsibility	.637**	1				
3. Cheating	-.030	.078	1			
4. Anti-sportsmanship	-.023	.050	.767**	1		
5. Convention	.314**	.310**	-.016	.096*	1	
6. Commitment	.479**	.539**	-.022	-.002	.377**	1
A	5.00	4.78	2.16	2.68	4.25	4.34
SD	.73	.53	1.21	1.14	.82	.58

Note. ** $p < 0.01$; * $p < 0.05$

Analysis of second order measurement model

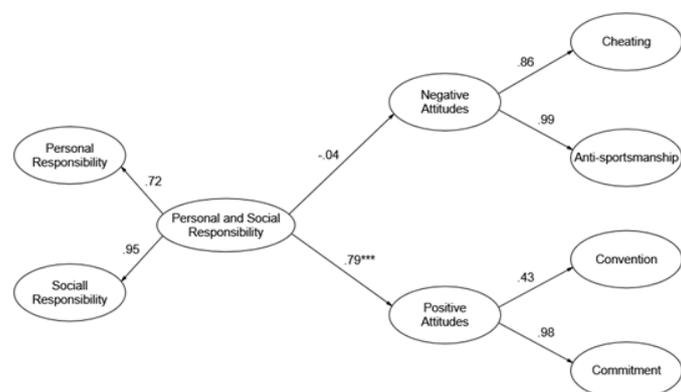
After the first order model has been confirmed, the second order model was examined. The results obtained demonstrated a good fit to the data $\chi^2(245)=567.994$, ($p < 0.001$), $\chi^2/df= 2.31$; CFI= 0.95; GFI= 0.91 and TLI= 0.94; RMSEA= 0.054]. Paths between second order factors and respective subscales were all significant, with $p < .001$. Inspection of the path coefficients indicates that Social Responsibility [$\beta= 0.95$: (CI 90%)= 0.89-1.01; $p= 0.001$] has the strongest association with PSR, followed by personal responsibility [$\beta= 0.72$: (CI 90%)= 0.65-0.79; $p= 0.001$]. Regarding "Attitudes towards Sport", results showed that Anti-sportsmanship [$\beta= 0.99$: (CI 90%)= 0.92-0.99; $p= 0.001$] has a stronger association with "Negative attitudes" and, although "Cheating" presents a higher value [$\beta= 0.86$: (CI 90%)= 0.81-0.90; $p=0.002$]. On the other hand, results showed that "Commitment" [$\beta= 0.98$: (CI 90%)= 0.98-0.99; $p= 0.001$]

and "Convention" [$\beta= 0.43$: (CI 90%)= 0.34-0.52; $p= 0.001$] have, respectively, the strongest and weakest association with "Positive attitudes". Based on these results, the second order measurement model was considered adequate for further analysis, which led to the examination of the structural model.

Structural model

The structural analysis model included an adjustment test of the overall model, as well as a test concerning the relationships between latent constructs. The overall assessment of the structural model indicates good adjustment to data [$\chi^2(247)= 616.93$, ($p < 0.001$), $\chi^2/df= 2.498$; CFI= 0.94; GFI= 0.90 and TLI= 0.93; RMSEA= 0.058]. The values of CFI, GFI and TLI respect the recommended criteria of good fit (Hair, et al., 2009). Furthermore, the ratio between χ^2 and the respective degrees of freedom being lower than 3.0 is an additional indicator of good adjustment. Moreover, RMSEA showed the existence of good fit (Hair,

et al., 2009). The inspection of path coefficients between "PSR" and "Positive and negative attitudes" (Figure 1) revealed that the coefficient between "PSR" and "Negative attitudes" ($\beta = -.04$, $p = .689$) are not associated. On the other hand, results reveal that PSR ($\beta = .79$, $p < .001$) has a positive association with "Positive attitudes". Overall, in the context of the "Positive attitudes" factor, these variables accounted for approximately 63% of its variance ($R^2 = 0.63$).



Note 1. $\chi^2(247) = 616,93$ ($p < .001$), $\chi^2/df = 2,498$; CFI = 0.94, GFI = 0.90; TLI = 0.93, RMSEA = 0.058

Note 2. *** $p < 0.001$

Figure 1. Standardized direct effects of the model.

DISCUSSION

This study focused on examining the relationship between PSR and attitudes of athletes towards sport practice, with the latter reflecting the conduct adopted by each athlete (i.e. affective and instrumental assessment of adequate conduct) when confronted with sportive-ethical conflicts (Lee, et al., 2008). The results obtained in the structural model indicated that PSR is positively correlated with "Positive attitudes", more to the point, with the dimensions of engagement and convention. According to these results, when faced with different sportive-ethical problems presented by practice, the development of higher levels of social and personal responsibility are related to attitudes deemed more positive. These results support the idea that ethical attitudes in sport are based on a system of accountability and concern for others (Hellison, Wright, 2003). Along this perspective Lee, et al., (2008) in studying the role of values that defend prosocial and antisocial attitudes, showed that there is a significant positive correlation between moral decisions and the intention to adopt socially positive attitudes. This said, the analysis of the relationship between PSR and positive attitudes assumes an important role in understanding the correlation between attitudes and values amongst young athletes (Martins, et al., 2017).

On the other hand, while the literature suggests a negative relationship between PSR and negative social attitudes (Li, et al., 2008), such negative association between PSR and negative sportive-ethical attitudes (Cheating and Anti-sportsmanship) had, in this study, no statistical significance. This indicates a significant independence between PSR and attitudes regarding cheating and anti-sportsmanship. The highest levels of PSR are associated with attitudes deemed more positive within the scope of ethical conduct in sport. PSR fails, however, to shed light on the occurrence of negative attitudes towards sport. The latter might be a result of other variables, such as varying types of motivation (task oriented vs ego oriented), having an interference-like effect.

Should sport enable the development of life competencies, together with the endorsement of sportive-ethical conduct, coaches should promote such competencies and values. This intention could be fulfilled by promoting consciousness of both values and moral rules specific to sport, such as reflection and ethical reasoning on moral dilemmas in sport (Bredemeier, Shields, 2008). Therefore, sport should represent, namely amongst youth, a commitment to learn positive values as well as personal and social competencies.

From an ecological perspective, it is also fundamental to mobilize external resources, like those resulting from the community-centred influences, for the optimal development of young people (Benard, 2002; Cecchini et al., 2007). This is a less tangible domain, but equally critical in the positive development of youngsters (Hellison, 1973).

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

As with any other study, our work is also comprised by both limitations and suggestions for future research.

First, since this study only included the Portuguese sporting context, the generalization of its results to other contexts is, unsurprisingly, limited. Therefore, future studies should look to replicate this study in different contexts, pertaining both country and participants, in order to better understand the relationship between personal responsibility and ethical attitudes towards sport.

In the context of sport clubs, athletes are not immune to the effects and influences of club culture. More to the point, the organizational environment is a decisive variable in explaining the conduct of athletes. In fact, one of the factors that may influence how athletes react to different ethical dilemmas is, precisely, their specific cultural perspective. Therefore, cultural factors should be included in the explanatory models that look to depict the relationship between PSR and ethical attitudes. The sociocultural context where each individual is integrated, and which is kept as reference, should be considered. In practical terms, variables such as the context specific of family and community, friendships and supporting networks are amongst the variables that, in the future, ought to be included as this line of research is developed further.

Finally, although the instruments used were obtained from the existent literature (Gonçalves, et al., 2006), only attitudes were assessed, i.e. predispositions for action. Therefore, additional research efforts associating this group of attitudes to several other behaviours, namely prosocial, also seem necessary. On the other hand, the construction of more complex models, through the inclusion of both new constructs and simultaneous analysis of their respective correlations with prosocial competencies, may contribute for a better understanding of the relationship between PSR and attitudes towards sport. Nevertheless, the current study is already a product of these concerns and is, therefore, geared towards making a modest but decisive contribution in pressing for an urgent debate concerning these themes.

REFERENCES

- Arbuckle, J. L. (2009). Amos 18 Reference Guide (Version 18) [Computer Software]. Chicago, IL: SPSS Inc.
- Bagozzi, R. P., Kimmel, S. K. (1995). A comparison of leading theories for the prediction of goal-directed behaviours. *British Journal of Social Psychology*, 34(4), 437-461. doi: doi:10.1111/j.2044-8309.1995.tb01076.
- Benard, B. (2002). Applications of Resilience. In M. Glantz & J. Johnson (Eds.), *Resilience and Development* (pp. 269-277). New York: Springer US.
- Bentler, P. M. (2007). On tests and indices for evaluating structural models. *Personality and Individual Differences*, 42(5), 825-829. doi: https://doi.org/10.1016/j.paid.2006.09.024
- Bredemeier, B., Shields, D. (2008). Sport and the development of the moral self. In D. Hackfort, J. Duda & R. Lidor (Eds.), *Handbook of research in applied sport and exercise psychology*. Morgantown, WV: Fitness Information Technology.
- Catalano, R. F., Berglund, M. L., Ryan, R. M., Lonczak, H. S., Hawkins, J. D. (1999). Positive youth developmental in United States: Research findings on evaluations of positive youth developmental programs, from <http://aspe.hhs.gov/hsp/PositiveYouthDev99>
- Cecchini, J. A., Montero, J., Alonso, A., Izquierdo, M., Contreras, O. (2007). Effects of personal and social responsibility on fair play in sports and self-control in school-aged youths. *European Journal of Sport Science*, 7(4), 203-211. doi: 10.1080/17461390701718497
- Escartí, A., Gutiérrez, M., Pascual, C., Llopis, R. (2010). Implementation of the Personal and Social Responsibility Model to Improve Self-Efficacy during Physical Education Classes for Primary School Children. *International Journal of Psychology and Psychological Therapy*, 10(3), 387-402.
- Escartí, A., Pascual, C., Gutiérrez, M., Marín, D., Martínez, M., Tarín, S. (2012). Applying the Teaching Personal and Social Responsibility Model (TPSR) in Spanish Schools Context: Lesson Learned. *Agora for PE and Sport*, 14(2), 178-196.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobserved variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388. doi: 10.2307/3150980
- Gonçalves, C. E., Silva, M. J. C. e., Chatzisarantis, N., Lee, M., Cruz, J. (2006). Tradução e validação do SAQ (Sports Attitudes Questionnaire) para jovens praticantes desportivos portugueses com idades entre os 13 e os 16 anos. *Revista Portuguesa de Ciências do Desporto*, 6(1), 38-49.
- Gould, D., Carson, S. (2008). Life skills development through sport: current status and future directions. *International Review of Sport and Exercise Psychology*, 1(1), 58-78. doi: 10.1080/17509840701834573
- Hair, J. F., Black, W. C., Babin, B., Anderson, R. E. (2009). *Multivariate data analyses* (7th ed.). New York: Prentice Hall.
- Hellison, D. (1973). *Humanistic physical education*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Hellison, D. (1988). Our constructed reality - some contributions of an alternative perspective to physical education pedagogy. *Quest*, 40(1), 84-90. doi: 10.1080/00336297.1988.10483890
- Hellison, D., Martineck, T. (2006). Social and individual responsibility programs. In D. Kirk, D. Macdonald & M. O'Sullivan (Eds.), *The handbook of physical education* (pp. 610-626). Thousand Oaks, CA: Sage.
- Hellison, D., Walsh, D. (2002). Responsibility-based youth programs evaluation: Investigating the investigations. *Quest*, 54(4), 292-307. doi: 10.1080/00336297.2002.10491780
- Hellison, D., Wright, P. (2003). Retention in an urban extended day program: A process-based assessment. *Journal of Teaching in Physical Education*, 22(4), 369-381. doi: 10.1123/jtpe.22.4.369

- Holt, N. L., Sehn, Z. L., Spence, J. C., Newton, A. S., Ball, G. D. C. (2012). Physical education and sport programs at an inner city school: exploring possibilities for positive youth development. [Article]. *Physical Education and Sport Pedagogy*, 17(1), 97-113. doi: 10.1080/17408989.2010.548062
- Kavussanu, M. (2006). Motivational predictors of prosocial and antisocial behaviour in football. *Journal of Sports Sciences*, 24(6), 575-588. doi: 10.1080/02640410500190825
- Kline, R. B. (2004). *Beyond Significance Testing: Reforming Data Analysis Methods in Behavioral Research*. Washington, DC: American Psychological Association.
- Lee, M., Whitehead, J., Balchin, N. (2000). The measurement of values in youth sport: development of the youth sport values questionnaire. *Journal of Sport and Exercise Psychology*, 22(4), 307-326. doi: 10.1123/jsep.22.4.307
- Lee, M., Whitehead, J., Ntoumanis, N. (2007). Development of the Attitudes to Moral Decision-making in Youth Sport Questionnaire (AMDYSQ). *Psychology of Sport and Exercise*, 8(3), 369-392. doi: 10.1016/j.psychsport.2006.12.002
- Lee, M., Whitehead, J., Ntoumanis, N., Hatzigeorgiadis, A. (2002). The effect of values, achievement goals and perceived ability on moral attitudes in youth sport. Technical Report to the Economic and Social Research Council.
- Lee M., Whitehead J. (1999) The effects of values, achievement goals, and perceived ability on moral attitudes in youth sport. Report provided to the Economic and Social Research Council, Swindon, England.
- Li, W., Wright, P., Rukavina, P., Peckering, M. (2008). Measuring Students Perceptions of Personal and Social Responsibility and Relationship to Intrinsic Motivation in Urban Physical Education. *Journal of Teaching in Physical Education*, 27(2), 167-178.
- Marôco, J. (2010). *Análise de equações estruturais: fundamentos teóricos, software & aplicações*. Lisboa: Report Number.
- Marôco, J. (2018). *Análise estatística com utilização do SPSS statistics (7th ed.)*. Pêro Pinheiro: Report Number.
- Martins, P., Pedro, S. (2017). Motivational Regulations and Recovery in Olympic Wrestlers. *International Journal of Wrestling Science*, 7(1-2), 27-34. doi: 10.1080/21615667.2017.1346345
- Martins, P., Rosado, A., Ferreira, V., Biscaia, R. (2015). Examining the validity of the personal-social responsibility questionnaire among athletes. *Motriz: Revista de Educação Física*, 21, 321-328. doi: <https://dx.doi.org/10.1590/S1980-65742015000300014>
- Martins, P., Rosado, A., Ferreira, V., Biscaia, R. (2017). Personal and Social Responsibility among Athletes: the Role of Self-Determination, Achievement Goals and Engagement. *Journal of Human Kinetics*, 57, 39-50. doi: 10.1515/hukin-2017-0045
- Schumacker, R. E., Lomax, R. G. (1996). *A beginner's guide to structural equation modelling*. Mahwah, NJ: Lawrence Erlbaum Associates.