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Validation of the Behavioral Regulation Sport Questionnaire in Portuguese athletes

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Abstract

The purpose of this study was to translate and validate the Behavioural Regulation in Sport Questionnaire (BRSQ), using confirmatory factor analysis, with a total sample formed of 940 athletes (n = 232 female and n = 708 male), from different sports: football (n = 623), basketball (n = 202), athletics (n = 43) and swimming (n = 72), participating in the categories of iniciated, juvenile, junior and senior, with an average of (M = 17.63; SD = 4.32) years. The results support the suitability of the model (6 factors/24 items), showing an adjustment fit to the data for this sample (S-B χ^2 = 1308; df = 237; p = .001; SRMR = .059; NNFI = .895; CFI = .901; RMSEA = .066; 90%IC RMSEA = .066-.070). As for the individual parameters, the items factorial weights present acceptable values, factor loadings varied (between .49 to .84), and acceptable values of internal reliability, convergent and discriminant validitys. Those findings allow us to conclude that the Portuguese version of the BRSQ can be used with high confidence to evaluate de motivation regulation in the sport context.

Keywords: Motivation; self-determination theory, behavioural regulation, sport, confirmatory factor analysis

The Self-Determination Theory (SDT: Deci and Ryan, 1985, 2008) approaches the human motivation in a wider perspective, considering personality factors in social contexts, as well as, the causes and consequences of the self-determined behavior. The SDT, which is a socio-cognitive macro theory, that include the organismic integration theory, advocate that the behavior regulation is based on a motivational continuum which varies between autonomous and controlled types of regulations (Deci and Ryan, 2008).

According to Deci and Ryan (2000) and Ryan and Deci (2007), the more controlled types of motivation regulation are: external regulation (where the subject engage in the behavior just to avoid punishment or to get some reward, learning that this behaviour depends on external reinforcement); introjected regulation (reflects the way in which the subject engage in the behaviour to avoid internal pressure or guilt feelings). On the other hand, the most autonomous types of motivation are: identified regulation (where the behaviour is regulated by the beneficts and results of participating in that behaviour); integrated regulation (where subject integrates the behavior as being part of himself, existing a high level of congruence with other values and needs of the subject that goes behind the behaviour itself); intrinsic motivation (when the subject engage in a behaviour for the pleasure and fun that it gives him).

According to Deci and Ryan (2000, 2008), there is also a state of regulatory process absence – amotivation (this state of amotivation represents the absence of motivation, both intrinsic and extrinsic, and it is related to the lack of will to act) – this state is also true for the subjects who are already involved in an activity, but no longer appreciate it.

As the behavior regulation is one of the main constructs of the SDT (Deci and Ryan, 2000; Ryan and Deci, 2000) the way it is evaluated has always interested the researchers, considering that it is necessary to develop tools to assess the variables underlying the SDT, (Viladrich, Torregrossa and Cruz, 2011). With respect to the measurement of the motivational regulation in the sport context two instruments stand-out: the *Sport Motivation Scale* (SMS: Pelletier et al., 1995) and the *Behavioral Regulation Sport Questionnaire* (BRSQ: Londsdale, Hodge and Rose, 2008).

The SMS (Pelletier et al., 1995) was translated from the French original version *the l'E´ chelle demotivation dans les sports* (EMS: Briére, Vallerand, Blais and Pelletier, 1995), that was adapted from *Academic Motivation Scale* (AMS: Vallerand et al., 1992). The SMS evaluates all types of behavior regulation, excluding integrated regulation (as well as it happened with the original version), and was translated and validated to other languages: Bulgarian (Chantal, Guay and Martinova, 1996), Finnish (Jaakkola, 2002) and Spanish (Núñez, Martín-Albo and Gregorio, 2007). However, the SMS was criticized due to this reason (Mallet, Kawabata, Newcombe, Otero-Forero, and Jackson, 2007; Lonsdale, et al., 2008), as well as due the psycometric properties in sub-

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sequent studies in other athlete samples, namely, poor adjustment of the measurement model (Martens and Webber, 2002).This issues led Pelletier, Rocchi, Vallerand, Deci and Ryan (2013) to recognize the need to review the scale, including also items that measured the integrated regulation, leading to a new version of the scale (i.e., SMS-II: Pelletier et al., 2013).

Meanwhile, Lonsdale et al. (2008) developed a new measure (i.e., BRSQ) as an alternative to the SMS, which Lonsdale et al. (2008) found to have somewhat questionable psychometric properties. The BRSQ was developed from an entirely new pool of items that included integrated regulation scale, and presented good psycometric properties. Besides that, BRSQ has been translated and validated to other languages, such as: Spanish (Moreno-Murcia, Marzo, Martínez-Galindo and Marín, 2011; Viladrich et al., 2011) and Greek (Tsitskari, Vernadakis, Foridou and Bebetsos, 2015). Acceptable model fit has also been demonstrated among dancers from UK (Hancox, Quested, Villadrich and Duda, 2015).

On other hand, Villadrich et al. (2013), also demonstrated that BRSQ adaptation to young athetles is invariante (i.e. equivalente) among young soccer atheletes, from five European countries (France, Greece, Spain, Normay and England), demonstrating the robustness of the psychometric properties of BRSQ in different cultures.

Pelletier et al. (2013) in the study where the SMS II was developed raised some critiques to the BRSQ. Accordingly with these authors, there was a lack of discrimination between external and introjected regulation scores in terms of their relationships with amotivation; in a same way, identified and integrated regulation subscales both had similar high correlations with intrinsic motivation. However, Lonsdale, Hodge, Hargreaves and Ng. (2014) responded to the criticisms pointed to the BRSQ in the study of Pelletier et al. (2013) presenting a study where both questionnaires were compared (i.e., SMS and BRSQ). According to study results, Lonsdale et al. (2014) concluded that BRSQ revealed higher measure model adjustment values and higher levels of internal consistency concerning the subscale interval.

On the other hand, results of Lonsdale et al. (2014) study also demonstrated the BRSQ had better scores to support for simplex structure (Ryan and Connell, 1989) than the SMS-II. Furthermore, according to Lonsdale et al. (2014), the result evidencies regarding the correlations between the various types of regulation and identified and integrated regulation, suggest that the SMS-II does not clearly distinguish the concepts of identified and integrated regulation, at least not in a consistent way with the theoretical assumptions of the SDT.

Taking in account the scientific evidencies reported on the studies mentioned above (Lonsdale et al., 2008, 2014), the main purpose of the present study was to translate and validate the BRSQ in a sample of Portuguese athletes.

Method

Participants

The sample was comprised of 940 athletes (232 female; 708 male) from different sports: Football (n = 623), Basketball (n = 202), Athletics (n = 43) and Swimming (n = 72), with ages between 13 and 36 years old (M = 17.63; SD = 4.32). From these, 544 compete at a regional level and 396 at a national level. The training experience of the athletes varied between one and twenty-eight; the weekly training sessions varied between one and eleven, and the number of training minutes per week varied between sixty and three hundred.

Instruments

Behavioral Regulation Sport Questionnaire (BRSQ: Lonsdale et al., 2008). This questionnaire consists of twenty-four items, with a seven point likert-scale, which varies between one («not at all true») and seven («very true»). The items were grouped posteriorly into six factors (with four items each), which reflect the motivacional continuum underlying SDT (Deci and Ryan, 1985).

Procedures: Translation of the questionnaire

For the BRSQ´s translation and adaptation from the original language (English) to the Portuguese language, it was adopted the methodological approach suggested by Vallerand (1989), and recommended by Banville, Desrosiers and Genet-Volet (2000). However, instead of using the translation/back translation technique proposed by Vallerand (1989) it was used the committee approach methologoly (see: Brislin, 1980). Thus, after obtaining the proper authorization to translate/validate the BRSQ to Portuguese language from the authors (Chris Lonsdale), the process was developed in five stages: (1) Preliminary Translation; (2) First Committee; (3) Second Committee (this stage was conclued only when all the specialists agreed with each other and their opinion was unanimous towards the item contents); (4) Pilot Study; and (5) Final Review (only for small syntax adaptations).

Procedures: data collection

After getting the authorization by the sports clubs, and the informed consent signature by the participants (or their parents in the case of the underaged), all of the data was collected and analysed anonymously, guaranteeing the confidenciality of the study participants. The questionnaires were applied at the end of the training sessions, and its application took about twenty minutes.

Statistical Analysis

The data analysis was made through the maximum likelihood (ML) estimation method following the recommendations made by Byrne (2006), Hair, Black, Babin, Ander-

son and Tatham (2006), using the chi-square test, with the Satorra-Bentler correction ($S\text{-}B\chi^2$: see Satorra and Bentler, 1994) that corrects the values towards the non normality of the data distribution (Chou and Bentler, 1995), since in our sample the Mardia coefficient (107.6) indicated a non-normal multivaried distribution of the data. In addition of the $S\text{-}B\chi^2$ test, the respective degrees of freedom (*df*) and the significance value (*p*), the following goodness-of-fit indexes were used: Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), Root Mean Square Error of Approximation (RMSEA) and the respective confidence interval (90% CI). In the present study, for the referred indexes, were adopted the cut-off values suggested by several authors (Byrne, 2006; Hair et al., 2006; Marsh, Hau and Wen, 2004): SRMR ≤ .08, CFI and NNFI ≥ .90 and RMSEA ≤ .08. For the comparison of non-nested models, the Akaike Information Criteria (AIC: Akaike, 1974) was used. Lower values of AIC indicate a better fit; hence, the model with the lowest AIC is the best fitting model and the most parsimonious (Hair et al., 2006).

Additionally, it was analysed the convergent validity (via the calculation of the average variance extracted - AVE), considering values of AVE ≥. 50. Also the discriminant validity was analysed; the value of the factors, when above the square of the correlation between the same. Finally, the internal consistency of the constructs was assessed via the calculation of composite reliability (CR) and Cronbach´s alpha (α), considering values of CR and α ≥ .70 (Hair et al., 2006). The analysis was undertaken using EQS 6.1 (Bentler, 2002).

Results

As we can observe in table 1, the subjects used all the Likert-type answer scale. The higher means are associated to the identified, integrated and intrinsic motivation items.

Table 1
Descriptive Analisys, Mean and Standard Deviation, Skewness, Kurtosis and Z Value

Items	Min-Max	M ± SD	Skewness	Z Value	Kurtosis	Z Value
1. mas questiono-me por que razão continuo. (AM)	1-7	2.51±1.64	0.69	0.86	0.68	4.27
2. porque as pessoas me pressionam para praticar. (EX)	1-7	1.92±1.41	1.41	17.62	1.00	6.28
3. porque me sentiria culpado se desistisse. (IJ)	1-7	2.55±1.78	0.88	11.00	-0.32	-2.01
4. porque os benefícios são importantes para mim. (ID)	1-7	5.19±1.56	-0.83	-10.37	0.39	2.45
5. porque é uma oportunidade para ser quem eu sou. (IG)	1-7	5.29±1.39	-0.75	-9.37	0.62	3.89
6. porque me dá prazer. (IM)	1-7	6.15±1.17	-1.34	-16.75	1.34	8.42
7. mas questiono-me por que razão me sujeito a isto. (AM)	1-7	2.88±1.72	0.44	5.55	-0.87	-5.47
8. para satisfazer todos aqueles que querem que eu pratique.(EX)	1-7	2.43±1.58	0.79	9.87	-0.38	-2.38
9. porque me sentiria envergonhado se desistisse.(IJ)	1-7	2.34±1.68	.99	12.37	-0.16	6.22
10. porque valorizo os seus benefícios.(ID)	1-7	5.32±1.42	-0.91	-11.42	.80	-5.74
11. porque faz parte mim.(IG)	1-7	6.00±1.19	-1.28	-16.00	1.78	-8.05
12. porque gosto.(IM)	1-7	6.26±1.13	-1.72	-21.50	2.90	-10.81
13. mas as razões para tal já não são claras para mim. (AM)	1-7	2.86±1.76	.54	6.75	-0.74	3.39
14. porque me sinto pressionado por outras pessoas para praticar.(EX)	1-7	2.08±1.50	1.20	15.00	.32	2.01
15. porque me sinto obrigado a continuar.(IJ)	1-7	2.30±1.70	1.10	13.75	0.05	.31
16. porque me ensina a ser autodisciplinado.(ID)	1-7	4.73±1.55	-0.68	5.25	.33	2.07
17. porque o que faço no desporto é uma expressão do que eu sou.(IG)	1-7	5.42±1.32	-0.74	4.32	.58	3.64
18. porque é divertido.(IM)	1-7	5.59±1.32	-0.87	-10.87	0.69	4.33
19. mas questiono-me se valerá a pena. (AM)	1-7	2.87±1.75	0.51	6.37	-0.81	-5.09
20. porque se não o fizer, as outras pessoas não ficarão satisfeitas comigo.(EX)	1-7	2.23±1.55	1.07	13.37	0.13	0.81

Items	Min-Max	M ± SD	Skewness	Z Value	Kurtosis	Z Value
21. porque me sentiria um falhado se desistisse (IJ)	1-7	2.58±1.83	0.85	10.73	-0.43	-2.70
22. porque é uma boa forma de aprender coisas que podem ser úteis na minha vida. (ID)	1-7	5.27±1.22	-0.76	-9.50	1.06	10.06
23. porque me permite viver de acordo com os meus valores. (IG)	1-7	5.32±1.22	-0.56	-7.00	0.81	5.09
24. porque acho agradável.(IM)	1-7	5.81±1.13	-0.90	-11.25	1.36	8.55

Note. AM (Amotivation); EX (External Regulation); IJ (Introjected Regulation); ID (Identified Regulation); IG (Integrated Regulation); IM (Intrinsic motivation); Mín-Max (Minimum and Maximum value); M (Mean); SD (Standard Deviation)

Concerning the measurement model adjustment to the data, as we can observe in table 2, the initial model (model one: six factors/twenty-four items) adjusted in a satisfactory way to the data.Nevertheless, since one of incremental indexes (NNFI) do not reached cut-off value adopted, we looked for potencial fragilities, trough the analysis of the residual values between the items and the modification indexes, and readjusted the model with the elimination of two items (item eleven of the integrated regulation and item fifteen of the introjected regulation), because these items presented higher values of correlation with other factors). However, model fit just improved slightly (model two), and does not justify items elimination. For that reason we decided maintain the original structure of BRSQ (model one).

Regarding, to the adjustment values of two second order factors model (autonomous motivation - intrinsic, integrated and identified motivation; controlled motivation – introjected, external motivation and amotivation), we verify that neither the initial model (model three: two second order factors, six first order factors and twenty-four items), nor the final model (model four: two second order factors, five first order factors and twenty items – without amotivation subscale) adjusted to the data. Thus, we cannot prove empirically the existence of a second order model underlying to the Portuguese version of BRSQ, at least in a satisfactory way. Finally, with respect to non-nested models comparison, the results show that model 2 is the most parsimonious because it has an AIC value closer to zero (Hair et al., 2006).

Table 2
Goodness-of-fit indexesof the Portuguese BRSQ (First and Second Order Models)

Models	S-B χ^2	*df*	*p*	χ^2/df	SRMR	NNFI	CFI	RMSEA	90% IC	AIC
Model 1	1308.0	237	.001	5.51	.066	.895	.901	.069	.066-.073	834.01
Model 2	995.1	194	.001	5.12	.059	.900	.921	.066	.062-.070	607.19
Model 3	1536.5	247	.001	6.22	.084	.872	.884	.068	.065-.072	976.95
Model 4	1164.3	164	.001	7.09	.092	.860	.880	.081	.076-.085	802.45

Note. S-B χ^2 = chi-square with Satorra-Bentler correction; df = degrees of freedom; SRMR = Standardized Root Mean Square Residual; NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Squared Error of Approximation; 90% IC = confidence interval of the RMSEA value; AIC= Akaike Information Criteria; Model 1 (six factors and twenty-four items; Model 2 (six factors and twenty-two items- without eleven and fifteen items); Model 3 (two factors of second order –autonomous motivation and controlled motivation, six factors/twenty four items); Model 4 (two factors of second order – autonomous motivation and controlled motivation, five factors – without amotivation first order factor, twenty items).

According with the results presented in figure 1, we verify, first that the correlation pattern between the different types of motivation reveales a simplex structure, that is, the regulation types closer along the continuum are positively correlated among them, and those that are farther away less positively or negatively correlated (Ryan and Connell, 1989). Relatively to the results of the model's individual parameter adjustment, we can verify that all of the items present a factorial weight between .49 and .91 and explain at least 25% of the variance of the latent factor ($\lambda ij^2 \geq .25$), something that is commonly accepted in the literature (Hair et al., 2006).

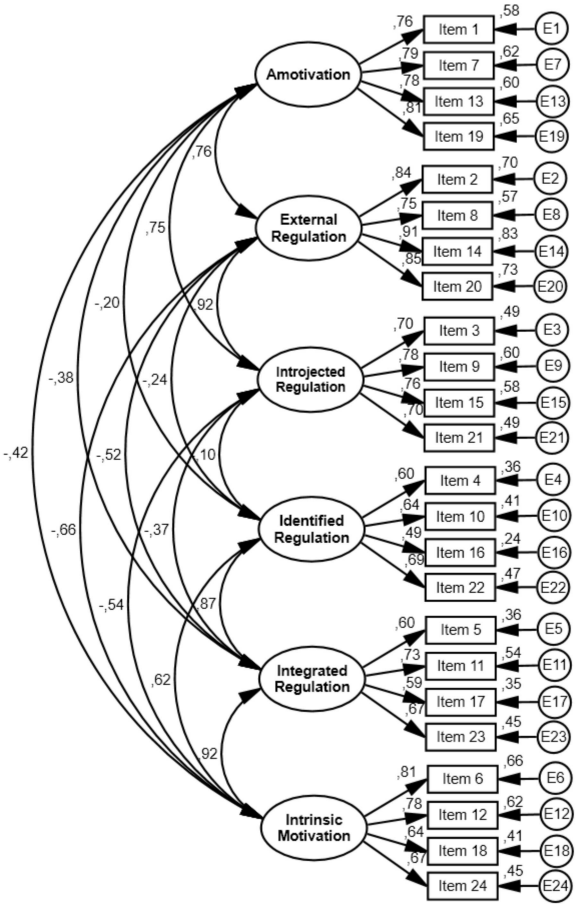

Figure 1.
Standardized parameter estimates (covariances between the factors, factor loadings and squared factor loadings) for the Portuguese BRSQ (24 items/6 factors)

In table 3, the measurement model presented good internal consistency values, in terms of cronbach's alpha and composite reliability, with all values being highter than .70, as suggested by Hair et al. (2006). However, considering convergent validity, some factors presented an average variance extracted (AVE) value of .40 (identified regulation) and .44 (integrated regulation), which was inferior to the value recommended by Hair et al. (2014) (AVE ≥.50). Additionally, there were also issues of discriminant validity, since $AVE_{ex} = .71$ and $AVE_{ij} = .54$, are below the $r^2_{ex\text{-}ij} = .84$; the $AVE_{id} = .40$ and $AVE_{ig} = .44$, are below the $r^2_{id\text{-}ig} = .75$. Finallythe AVE_{ig}. = 44 and $AVE_{im} = .54$ are below the $r^2_{ig\text{-}im} = .84$.

Table 3
Internal Reliability, Convergent and Discriminant Validity and Average Variance Extracted

Factors	CR	CA	AVE	AM	EX	IJ	ID	IG	IM
AM	.86	.86	.61	1	.57	.56	.04	.14	.17
EX	.90	.90	.71		1	.84	.05	.27	.43
IJ	.82	.83	.54			1	.01	.13	.29
ID	.69	.70	.40				1	.75	.38
IG	.74	.75	.44					1	.84
IM	.82	.82	.54						1

Note. Composite Realiability (CR); Cronbach´s alpha (CA); Average Variance Extracted (AVE); AM (Amotivation); EX (External); IJ (Introjected); ID (Identified); IG (Integrated); MI (Intrínsic Motivation the correlations among factors, represent the squared values) .

Discussion

The main purpose of this to study was to translate and validate the BRSQ in Portuguese athletes, extending the scientific evidence and contributing for the dissemination of measurement instruments already available for other populations, as suggested by Vlachopoulos et al. (2013) and contributing for knowledge regarding the universality of the underlying variables of the SDT, as Deci and Ryan (2008) claim.

The descriptive results reveals higher mean values for the most autonomous types of motivation (identified, integrated, intrinsic) indicating that these types of regulations are the more important for these athletes.

These results are in line with the ones reported in different studies that used the BRSQ, namely the original version (Londsdale, et al., 2008), the Spanish versions (Moreno-Murcia et al., 2011; Villadrich et al., 2011), and Greek version (Tsitskari et al., 2015) and among others studies that have been used the BRSQ (Assor, Vanteenkiste and Kaplan, 2009; Hancox et al., 2015; Holmerg and Sheridan, 2013).

Comparing the model's adjustment values from the Portuguese version with the ones presented in the study of Londsdale et al. (2008) it is evident that the original version shows better adjustment values (S-B χ^2 = 385.4; *df* = 237; TLI = .99; RMSEA = .04; RMSEA IC 90% = .03-.05). However, these differences can be justified because in the study of Londsdale et al. (2008) the authors started the BRSQ validation with a preliminary version of the instrument, based on a six factors and forty-two items initial model. This way, the authors felt the need to analyse separately each of the six factors, eliminating those that had higher fragilities (i.e, high residual values, low factorial weights and those whose indicated cross-loadings), keeping just the ones that gave them warranties of evaluation of the underlying constructs, which allowed to reduce the questionnaire's item number (i.e., twenty four) and obtain excellent adjustment values of the model.

On the other hand, comparing the results of the present study with those of the Spanish version (Viladrich et al., 2011), which also analysed a measurement model equal to ours (six factors and twenty four items), the results are very similar to ours either in the global (χ^2 = 815.41; df = 237; TLI = .91; CFI = .92; RMSEA = .07) and local adjustment of the model (i.e. all the factorial weights higher than .50, being mostly above .60), with all factors having a Cronbach's alpha score above .70, which to some extent is indicative of good internal consistency of the questionnaire. This could be further tested in future by conducting transcultural studies to test model invariance hypothesis. However, Spanish version model (Moreno-Murcia et al., 2011), composed of eight factors and thirty-six items (which includes three subclasses of intrinsic motivation, presented some problems (i.e., S-B χ^2 = 967.2; df = 550; TLI = .87; CFI = .89; RMSEA = .05) and only fitted the data when correlating the measurement errors of several factors, which indicates that the twenty item model seems to be the most adequate.

Regarding the comparison of non-nested models, model two proved to be the most parsimonious since it na AIC lower values to zero (Hair et al., 2006). This was somewhat expected, since model one (24 items / six factors) is more complex (237 degrees of freedom and 63 parameters to be estimated) than model two (22 items / six factors), which it is less complex (194 degrees of freedom and 59 parameters to be estimated). Regarding this coefficient, no previous evidence was found in the literature, so that we could compare with the results found in the present study.

Regarding the analysis of convergent validity, our results shows slightly problems in two factors (identified and integrated regulation), similar results was found by Moreno-Murcia et al. (2011) and Viladrich et al. (2011). However, both in present study and the two studies of Spanish version, all items had a factorial weight (all equal or high to .50) that was statistically significant in the respective factor, which, according to Hair et al. (2006), was a convergent validity indicator.

In relation to the discriminant validity ,our results showed some issues between external and introjected regu-

lation; integrated and indentified regulation; and integrated regulation and intrinsic motivation, since the squared correlation between these factors are higher to AVE. Similar results were also reported in several studies: in original version of BRSQ (Lonsdale et al., 2008), and also in SMS (Pelletier et al., 2013), as well in the Spanish versions of BRSQ (Moreno-Murcia et al., 2011; Viladrich et al., 2011). According to Lonsdale et al. (2008), these results indicate there appeared to be substantial evidence that the integrated and identification regulation, in particular, are not empirically distinguishable, as well the external and introjected regulation. However, Ryan and Connel (1989), justify the high correlation patterns, as the closest adjustment types along the continuum are positively correlated and high form among themselves, which seems to be the justification for the lack of discriminant validity involving external and introjected regulation, as well as, identified and integrated regulation and intrinsic motivation. Deci and Ryan (2000, 2008) highlight this issue, stressing that the constructs of the SDT underlying the autonomous and controlled motivation types correlate highly among themselves.

Regarding reliability, all factors revealed a good internal consistency, with values of composite reliability and Cronbach alpha ≥.70 (Hair et al., 2006). These results are in line with the ones reported in studies that used the BRSQ, namely: the original version (Londsdale et al., 2008), Spanish versions (Moreno-Murcia et al., 2011; Villadrich et al., 2011), the Greek version (Tsitskari et al., 2015), among young athletes (Villadrich et al., 2013) and among dancers (Hancox et al., 2015).

In relation to the second order models , the authors from the original BRSQ version (Lonsdale et al., 2008) tested themselves alternative models, taking in account not only that conceptually main distinction from the SDT refers to the autonomous and controlled motivation (Deci and Ryan, 2008) but also the correlation pattern between the distinct types of motivation regulation (Ryan and Connell, 1989) specifically, the authors tested a model with two second order factors, one of controlled motivation (introjected and external regulations and amotivation) and other of autonomous motivation (integrated and identified regulations and intrinsic motivation). And as happened in the present study, the adjustment values were slightly inferior to the ones of the first order model, although in the case of the Lonsdale et al. (2008) study they were considered acceptable, this way comproving empirically the second order model, which did not happen in this study (see table 2).

As a conclusion, the results showed that the measurement model (six factors and twenty four items) of the Portuguese version of BRSQ has acceptable psychometric properties. However, sharing Barret (2007) opinion, which refers that the evaluation of a model is a time consuming process that requires an enormous amount of work, by which it is strongly recommended that more studies must be conducted with BRSQ, to make this questionnaire even more robust in psychometric terms, and also to address some of possibles limitations of the present study, for example, invariance across genders, age-groups and different sports, as well as transcultural validations of BRSQ across different countries.

Finally, it is also important to highlight that now the scale is available as a Portuguese measurement instrument that assesses the six types of motivation underlying to the SDT (Deci and Ryan, 2008) in a sport context, as it contributes to filling an existing gap until now in Portugal. Therefore, this questionnaire can help coaches better understand how athletes regulate their behavior, allowing coaches to tailor their interventions to the needs and constraints of each group (individual or team sports).

Validación de la escala de regulación conductual del deporte en atletas portugueses

Resumen

El principal objeto del estudio fue la traducción y validación del *Behavioral Regulation Sport Questionnaire* (BRSQ), a través del análisis factorial confirmatorio, realizado con una muestra de 940 atletas (232 femeninos y 708 masculinos), de las modalidades de fútbol (623), baloncesto (202), atletismo (43) y natación (72), de las categorías de iniciados, juveniles, júniores y séniores, con una media de edad de 17,63 (SD 4,32) años. Los resultados obtenidos muestran que la versión final del BRSQ (6 factores y 24 ítems) se ajusta a los datos de forma aceptable (*S-B* χ^2 = 1308.0; *df* = 237; *p* =.001; SRMR = .059; NNFI = .895; CFI = .90; RMSEA = .066; 90%IC RMSEA =.066-.070). En relación a los parámetros individuales, los pesos factoriales de los ítems presentan valores aceptables (entre .49 y .84), y también valores aceptables de fiabilidad y validez convergente e discriminante. Estes resultados indican que la versión Portuguesa del BRSQ puede ser utilizada con un alto grado de confianza en la evaluación de la regulación de la motivación en el contexto deportivo.

Palabras clave: motivación, teoría de la autodeterminación, regulación del comportamiento, deporte, análisis factorial confirmatorio

Validação do behavioral regulation sport questionnaire em atletas portugueses

Palavras chave: Motivação, teoria da autodeterminação, regulação do comportamento, desporto, análise fatorial confirmatória

Resumo

O objetivo principal do estudo foi a tradução e validação do Behavioral Regulation Sport Questionnaire (BRSQ), com recurso à análise fatorial confirmatória, realizada com uma amostra de 940 atletas (232 femininos e 708 masculinos), das modalidades de futebol (623), basquetebol (202), atletismo (43) e natação (72), das categorias de iniciados, juvenis, juniores e seniores, com uma média de idades de 17.63 (SD 4.32) anos. Os resultados obtidos demonstram que a versão final do BRSQ (6 fatores e 24 itens) possui ajustamento aceitável aos dados: (S-B χ^2 = 1308; df = 237; p = .001; SRMR = .059; NNFI = .895; CFI = .901; RMSEA = .066; 90%IC RMSEA = .066-.070). Relativamente aos parâmetros individuais, os pesos fatoriais dos itens apresentam valores aceitáveis (entre .49 e .84), bem como valores de aceitáveis de fiabilidade compósita, validade convergente e discriminante. Estes resultados permitem concluir que a versão Portuguesa do BRSQ pode ser utilizada com elevada confiança na avaliação da regulação da motivação no contexto do desporto.

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