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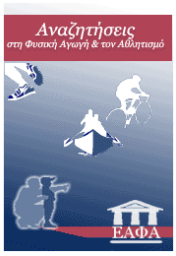

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Construct Validity of the Moral Disengagement in Sport Scale for Greek Athletes (Population)

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Abstract

The purpose of the present study was to translate the Moral Disengagement in Sport Scale (MDSS) items into Greek and examine the construct validity of the Greek versions of the MDSS and MDSS-S (short scale). 281 athletes (males, n = 133, and females, n = 148) were used. The study examined the construct validity of the scales MDSS and MDSS-S including factorial validity (confirmatory factor analyses), reliability (Cronbach's alpha) and criterion-related validity (concurrent validity with the scale Prosocial and Antisocial Behavior [PABS]) analysis. CFA results revealed that a 32-item six factor and the 8-item one factor models were acceptable, rejecting the 32-item one factor model. Furthermore, results provided support for internal consistency and concurrent validity of MDSS and MDSS-S. The MDSS and MDSS-S adapted in Greek can be considered useful for assessing sport moral disengagement.

Keywords: *Moral disengagement, sport, construct validity, confirmatory factor analysis, internal consistency, concurrent validity*

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Εννοιολογική Εγκυρότητα της Κλίμακας Ηθική Αποθάρρυνση στον Αθλητισμό για Έλληνες Αθλητές (πληθυσμό)

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Περίληψη

Σκοπός της παρούσας μελέτης ήταν η μετάφραση των θεμάτων της Κλίμακας Ηθική Αποθάρρυνση στον Αθλητισμό (ΚΗΑΑ) και η εξέταση της εννοιολογικής εγκυρότητας της Ελληνικής έκδοσης της ΚΗΑΑ και της ΚΗΑΑ-Σ (σύντομης έκδοσης). 281 αθλητές (αγόρια, n = 133, και κορίτσια, n = 148) χρησιμοποιήθηκαν. Η μελέτη εξέτασε την εννοιολογική εγκυρότητα των κλιμάκων ΚΗΑΑ και ΚΗΑΑ-Σ συμπεριλαμβάνοντας την ανάλυση της παραγοντικής ανάλυσης (επιβεβαιωτική παραγοντική ανάλυση), την αξιοπιστία (Cronbach's α) και την εγκυρότητα κριτηρίου (ταυτόχρονη εγκυρότητα με την κλίμακα Θετική Κοινωνική και Αντικοινωνική Συμπεριφορά). Τα αποτελέσματα της επιβεβαιωτικής παραγοντικής ανάλυσης φανέρωσε ότι ήταν αποδεκτό ένα μοντέλο 32-θεμάτων έξι παραγόντων και ένα 8-θεμάτων ενός παράγοντα, απορρίπτοντας το μοντέλο 32-θεμάτων ενός παράγοντα. Επιπλέον, τα αποτελέσματα εξασφάλισαν υποστήριξη για την εσωτερική συνοχή και την ταυτόχρονη εγκυρότητα του ΚΗΑΑ και ΚΗΑΑ-Σ. Το ΚΗΑΑ και ΚΗΑΑ-Σ προσαρμόστηκαν στην Ελληνική γλώσσα και μπορούν να θεωρηθούν χρήσιμα για την αξιολόγηση της αθλητικής ηθικής αποθάρρυνσης.

Λέξεις κλειδιά: *Ηθική αποθάρρυνση, αθλητισμός, εννοιολογική εγκυρότητα, επιβεβαιωτική παραγοντική ανάλυση, ταυτόχρονη εγκυρότητα*

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Introduction

Sports are a social environment where a range of behaviors appears (prosocial and antisocial). The adjustment of human behaviours is an issue of concern for scholars in ethics. Within this frame of concern, Bandura (1999) mentioned that the "disengagement of moral self-sanctions from inhumane conduct is a growing human problem at both individual and collective levels" (p.193). In particular, Bandura (1986, 1991), through social cognitive theory (SCT), introduced the construct of moral disengagement to explain the determinants and mechanisms governing aggressive behaviors. Social cognitive theory offers an agentic perspective on human behavior whereby individuals exercise control over their own thoughts and behaviors through self-regulatory processes (Bandura, 1986). The same researcher (1986) also suggested that moral self-regulation can be deactivated or disengaged via eight interrelated moral disengagement mechanisms: moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, disregard or distortion of consequences, dehumanization, and attribution of blame.

Drawing from the SCT, Boardley and Kavussanu (2007), in the context of sport, developed the Moral Disengagement in Sport Scale (MDSS). MDSS is a multidimensional self-report measure designed to assess mechanisms governing aggressive behaviors. Even though Bandura (1991) described eight mechanisms that people use to morally disengage, studies revealed that moral disengagement in sport as measured by the MDSS, is best conceptualized as having six dimensions. Specifically, the constructs moral justification and euphemistic, displacement and diffusion of responsibility were merged and formed the conducts reconstrual factor and non-responsibility factor respectively. The above mentioned merges were in agreement with the theory (Boardley & Kavussanu, 2007). Nevertheless, this claim is not confirmed by the findings of a study that revealed that the eight mechanisms of moral disengagement were operational in elite sport (Corrion, Long, Smith, & d'Arripe-Longueville, 2009). Boardley and Kavussanu (2007) supported the presence of a second-order sport moral disengagement factor, indicating that all mechanisms are part of one overriding construct.

Even though MDSS is a reliable and valid measure, it was considered that due to its length is difficult to use especially when multiple scales need to be administered concurrently (Boardley & Kavussanu, 2008). DeVellis (2003) claimed that shorter scales are more popular with respondents, but longer scales are more reliable. So, Boardley and Kavussanu (2008) suggested a short version of the MDSS, or the MDSS-S, including eight items representing all eight of the moral disengagement mechanisms. In contrast to the MDSS, which is a multidimensional measure, the MDSS-S is a unidimensional measure that measures the overall construct of sport moral disengagement.

Psychometric tests on the scores obtained from the MDSS and MDSS-S have provided substantial evidence of internal reliability and validity for the English versions of the scales. For the estimates of internal reliability of scales Cronbach's (1951) alpha was used. For the construct validity of scales, confirmatory factor analyses for the estimate of factor structure and additional evidences for the MDSS through convergent, concurrent and discriminant validity, and convergent, concurrent validity and multisample analyses for the MDSS-S were used. In order to ensure additional proof for construct validity for both scales, measures were used that are actually associations with sport moral disengagement as the moral disengagement in society and pro-social and antisocial behavior in sport.

The purpose of the present study was to translate the MDSS items into Greek and examine the construct validity of the Greek versions of the MDSS and MDSS-S. Practically, the development of Greek versions of the MDSS will provide the Greek-speaking research community with an adequate for measuring athletes' perceptions of sport moral disengagement. From a theoretical perspective, it will contribute to the construct validation and cross-national generalization of the instrument.

Method

Participants

Participants were 281 athletes (males, n = 133, and females, n = 148) who were involved in competitive sport at the time of data collection (football, basketball, track and field, volleyball, handball, martial arts, tennis, weightlifting). Their age ranged from 13 to 23 years (M = 15.01, SD = 2.29). Their experience ranged from 1 to15 years (M = 5.42, SD = 3.13).

Instruments

Moral Disengagement in Sport Scale (MDSS). The MDSS (Boardley & Kavussanu, 2007) is a self-report 32-item

measure. Standardized back-translation procedures were used to develop a Greek version of the MDSS using three independent bilingual translators (Brislin, 1986). The back to back-translation procedure was repeated iteratively until the original and back-translated English versions of the questionnaires were identical. The MDSS is designed to assess eight mechanisms of moral disengagement and encompasses six subscales: conduct reconstrual (8-item; e.g., "It is okay for players to lie to officials if it helps their team"), advantageous comparison (4-item; e.g., "Compared to physical violence, verbally provoking an opponent is not that bad"), non-responsibility (8-item; e.g., "A player is not responsible for acting aggressively if this is encouraged by his/her parents"), distortion of consequences (4-item; e.g., "Teasing an opponent does not really hurt him/her"), dehumanization (4-item; e.g., "Some opponents deserve to be treated like animals") and attribution of blame (4-item; e.g., "A player should not be held responsible if he/she retaliates when fouled"). Respondents were asked to indicate on a 7-point Likert-type scale the extent to which they agree or disagree with each of the 10 statements included in the inventory, ranging from (1) *strongly disagree* to (7) *strongly agree*. The scale has demonstrated acceptable to very good internal consistency with alpha coefficients ranging from .73 to .86 for the subscales.

Moral Disengagement in Sport Scale–Short (MDSS-S). The short form of the MDSS (Boardley & Kavussanu, 2008) was employed to measure athletes' overall sport moral disengagement. Participants were asked to "please respond to each of the following statements by indicating how much you agree with each statement. Please keep your main competitive sport in mind as you answer each question." Participants responded to eight items (e.g., "It is okay for players to lie to officials if it helps their team"; "Bending the rules is a way of evening things up"), using a 7-point Likert type scale; 1 = *strongly disagree*, 7 = *strongly agree*. Satisfactory psychometric properties for the short form of the MDSS have been reported by Boardley and Kavussanu (2008).

Pro-social and Antisocial Behavior in Sport (PABS). To check pro-social and antisocial behaviors in sport an adapted 13-item measure (Boardley & Kavussanu, 2007) was used. Standardized back-translation procedures were used to develop a Greek version of the PABS using three independent bilingual translators (Brislin, 1986). The back to back-translation procedure was repeated iteratively until the original and back-translated English versions of the questionnaires were identical. PABS includes two forms of behaviors: pro-social behavior including a 6-item (e.g., "Congratulating an opposing player") and antisocial behavior including a 7-item (e.g., "Winding-up (i.e., provoking) opposing player") measure. Participants were asked to report how often they had engaged in each of the 13 behaviors during the season on a 7-point Likert-type scale anchored by 1 (*never*) and 7 (*very often*).

To provide further validity for the scale developed by Boardley and Kavussanu (2007), a confirmatory factor analysis was conducted with the sample. The initial model (13-item two factor) demonstrated no acceptable fit to the data $\chi^2(64) = 225.33$, $p < .001$, IFI = .857, CFI = .854. RMSEA = .095. Based on modification indices for measurement parameters (i.e., correlations, factor loadings) the item "Encouraged an opponent" was removed. The final model showed a limited adequate fit to data $\chi^2(53) = 183{,}81$, $p < .001$, IFI = .880, CFI = .,878, RMSEA = .094. This result is a limitation for the present study. Reliability using coefficient alpha for pro-social behavior was relatively low ($\alpha = .67$) and high for the antisocial behavior ($\alpha = .88$). The aforementioned value (.67) can be considered as satisfactory as this factor comprises of fewer than 10 items (viz., five items; Ntoumanis, 2001; Pallant, 2010).

Procedure

Data collection was completed following ethical approval by the researchers' institution. First of all, team coaches were asked for their concern. Following their concern the athletes-participants were asked prior to the beginning of training to fill out a questionnaire at the training site, were completed during 15-minute, and their participation was voluntary. Before completing the questionnaire, all respondents were informed that the survey examined sporting attitudes that honesty in responses was vital to the success of the study. It was also explained that all responses would be kept strictly confidential and would be used only for research purposes.

Data analyses

To examine the construct validity of the scales MDSS and MDSS-S, factorial validity (confirmatory factor analyses), reliability (Cronbach's alpha) and criterion-related validity (concurrent validity) analysis was used. In the confirmatory factor analyses the models were tested using analyses with maximum likelihood

(ML) parameter estimates in AMOS 5.0 (Arbuckle, 2003). CFAs were applied because there was *a priori* knowledge of the number of factors at the initial stages of the questionnaire development (Stevens, 1996).

Several criteria were used to test the hypotheses factor structures of the AIMS. The traditional measure of fit for CFAs models is the x^2 goodness of fit test statistic. Non-significant values suggest a good fit, since they indicate only a minor discrepancy between the observed and the estimated covariance matrix. However, there is now general agreement that the x^2 statistic is sensitive to sample size and violations of multivariate normality (Bollen & Long, 1992). The incremental fit index (IFI) ranging from 0.00 to 1.00 and values greater than .95 indicate good fit. The comparative fit index (CFI) is an index that values greater than roughly .90 may indicate reasonably good fit of the researcher's model (Hu & Bentler, 1999). In addition, the root mean square error of approximation (RMSEA) is included here as a measure of fit. The RMSEA ≤ .05 indicates close approximate fit; values between .05 and .08 suggest reasonable error of approximation and RMSEA ≥ .10 suggests poor fit (Brown & Cudeck, 1993).

To check reliability of the scales MDSS and MDSS-S Cronbach's alpha coefficient was used. Cronbach's alpha measures the internal consistency of a group of items by measuring the homogeneity of the group of items—"it is an indication of how well the different items complement each other in their measurement of different aspects of the same variable or quality" (Litwin, 2003, p. 22).

A new measurement procedure (i.e., the translated measurement procedure), as the one in the present study, should have criterion validity; that is, it must reflect the well-established measurement procedure upon which it was based (Salkind, 2013). As criterion in this study a concurrent validity was used. Concurrent validity is concerned with whether a measure can predict a theoretically related external criterion when scores on the predictor and criterion are collected at the same time (Kline, 2005).

Results

Confirmatory factor analysis was conducted to test the 32-item six-factor structure of the MDSS established by Boardley and Kavussanu (2007). The proposed factorial structure adequately fitted the data (see Table 1) confirming the validity of the six-factor model. When the 32-item 6 factor model was examined for a higher-order factor structure owing to its satisfactory fit as a first-order structure. The results revealed that the data in the second-order analysis were not similar to those in the first-order analysis (see Table 1). The next model tested was the 8-item one-factor solution of the MDSS-S instruments established by Boardley and Kavussanu (2008). This model exhibited excellence fit to data (see Table 1).

Table 1. Psychometric data for MDSS models

Models	X^2/df	IFI	CFI	RMSEA
M1: MDSS $_{32\text{-item; 6 factor}}$	797.2/449	.912	.910	.053
M2: MDSS $_{32\text{-item; 1 factor}}$	1260.4/464	.797	.794	.078
M3: MDSS-S $_{8\text{-item; 1 factor}}$	28.2/20	.983	.982	.038

Notes: χ^2/df= Chi-squared/degrees of freedom; IFI = Incremental Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation;

The estimates of internal consistency for the six MDSS scales and one MDSS-S scale were satisfactory ranging between .75 and .86 (see Table 2).

Concurrent validity examined the existence of a relation between moral disengagement and pro-social and antisocial behavior in sports. Results of the present study indicated that sport moral disengagement scales 32-item was positively related to antisocial behavior ($.45 < r > .62$, $p < .01$) and negative linked to pro-social behavior ($-.15 < r > -.22$, $p < .01$), and for the short scale 8-item $r = .57$, $p < .01$ and $r = -.18$, $p < .01$, respectively (see Table 2).

Table 2. Correlation Reliability Estimates

Constructs	Cronbach α	1	2	3	4	5	6	7	8
MDSS									
Conduct Reconstrual	.81	-	-	-	-	-	-	-	-
Advantageous Comparison	.75	.63	-	-	-	-	-	-	-
Nonresponsibility	.83	.66	.48	-	-	-	-	-	-
Distortion of Consequences	.89	.65	.56	.55	-	-	-	-	-
Dehumanization	.86	.70	.50	.65	.59	-	-	-	-
Attribution of Blame	.80	.73	.57	.62	.66	.67	-	-	-
MDSS-S	.81	.85	.72	.79	.73	.78	.78	-	-
PABS									
8.Prosocial behavior	.67	-.22	-.15	-.07	-.18	-.18	-.17	-.18	-
9.Antisocial behavior	.88	.62	.41	.45	.55	.55	.53	.57	-.18

Note: $p < .01$

Discussion

The present study was to examine the construct validity of both MDSS and MDSS-S instruments in the Greek language. The confirmatory factor analyses confirmed the existence of six factors, as in the original version of the scale of 32-item. This factorial structure of the MDSS has also been supported by the Turkish version (Caliskan, 2013). As in the original study (Boardley & Kavussanu, 2007), after the confirmation of the six first-order factors the hierarchical nature of the MDSS was examined. The present study did not support the second-order sport moral disengagement factor. This finding weakens the claim of Boardley and Kavussanu (2007) that all mechanisms are part of one overriding construct.

Although, Bandura (1996) supported that the various mechanisms of moral disengagement are interrelated as a single factor in everyday life, this is not clear for sport context. For example even though the study of Boardley and Kavussanu (2007) supported the existence of a unilateral construct for moral disengagement, Corrion et al (2009) presented that the mechanisms of moral disengagement could be grouped into two main categories. This differentiation appearing in the mechanisms of moral disengagement in everyday life and sport context is possibly due to the different focus given by individuals to transgression behaviors. Shields and Bredemeier (2001, 2007) report that the sport context differs from everyday life contexts in terms of constraints in space, rules, time, and values. The validity of measure of moral disengagement as a two factor scale has been assured (Corrion, Scoffier, Gernigon, Cury, & d'Arripe-Longueville, 2010).

Contrary to the non-support of the MDSS 32-item as a unilateral construct, the results of the present study supported that the MDSS 8-item may become a short scale measuring overall moral disengagement, as suggested by other researchers (Boardley & Kavussanu, 2008). The results of the present study also confirmed a satisfactory internal consistency for both scales MDSS and MDSS-S.

Both scales MDSS and MDSS-S were positively related to antisocial behavior, supporting the construct validity of the scales. This finding also supports that the translated procedures did not cause any serious change in the original version. Similar findings were reported in the original studies (Boardley & Kavussanu, 2007; Boardley & Kavussanu, 2008).

In conclusion, the MDSS and MDSS-S adapted in Greek language can be considered as useful for assessing sport moral disengagement. The analyses performed provided evidence of 32-item six factor and 8-item one factor structure, while they did not support the 32-item one factor structure scale.

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