

EXAMINATION OF THE PSYCHOMETRIC PROPERTIES OF THE SPANISH VERSION OF THE APPROACH TO COPING IN SPORT QUESTIONNAIRE

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KEY WORDS: Coping strategies, cultural differences, psychological stress.

ABSTRACT: This study examined the psychometric properties of a Spanish version of the Approach to Coping in Sport Questionnaire and potential cultural differences in coping strategies between Spanish, Korean and US athletes. A total of 190 Spanish athletes (Male, N =152; Female, N = 38; *M* age = 21.2 ± 4.4 years) from various sports participated in the study. After specifying the frequency of the experience of psychological difficulties during competition, the athletes indicated how often they used each of the coping strategies targeted in the ACSQ-Spanish and they also completed the Athletic Coping Skills Inventory-28. The results of CFA provided support for the factorial validity of the ACSQ-Spanish and preliminary evidence regarding concurrent and convergent validity was garnered. Differences in the use of different coping strategies between the Spanish, Korean, and US athlete groups emerged.

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PALABRAS CLAVE: Estrategias de afrontamiento, diferencias culturales, estrés psicológico.

RESUMEN: En este estudio se analizan las propiedades psicométricas de la versión Española del ACSP (Approach to Coping in Sport Questionnaire) y las potenciales diferencias culturales existentes entre los deportistas españoles, coreanos y americanos en las estrategias de afrontamiento. 190 deportistas españoles (Hombres, N = 152; Mujeres, N = 38; *M* edad = 21.2 ± 4.4 años) de varios deportes participaron en este estudio. Después de especificar la frecuencia de dificultades psicológicas que tenían durante la competición, los deportistas indicaban con qué frecuencia utilizaban cada una de las estrategias de afrontamiento que figuraban en ACSP-Español y también rellenaron el Athletic Coping Skills Inventory-28. Los resultados del análisis factorial confirmatorio ofrecieron apoyo para la validez factorial del ACSQ-español. También se obtuvo evidencia preliminar sobre la validez concurrente y convergente del cuestionario. Se obtuvieron diferencias en las estrategias de afrontamiento utilizadas entre los deportistas españoles, coreanos y americanos.

There is general acceptance that athletes participating in competitive sport need to employ effective coping strategies and psychological skills in order to reach their best performance and be satisfied with their sport experience (Crocker, Alderman, and Smith, 1988; Gould, Finch, and Jackson, 1993). However, little agreement exists with respect to the selection of items representing coping strategies and psychological skills in the athletic domain specifically (Crocker, Kowalski, and Graham, 1998; Murphy and Tammen, 1998).

A number of measures have been developed specific to the sport setting and adopted from mainstream psychology to measure athletes' coping responses (Mahoney, Gabriel, and Perkins, 1987; Smith, Schutz, Smoll, and Ptacek, 1995; Crocker, 1992; Eklund, Grove, and Heard, 1998). Some of these instruments are not theoretically-based and are limited by a lack of clarity and specificity in regard to the targeted stressor in measuring the coping strategies utilized by sport participants (Crocker et al., 1998).

In order to address the limitations of previous work on athletes' coping strategies, some recent studies have been grounded in Lazarus' transactional model of stress and coping (Lazarus and Folkman, 1984; Lazarus, 2000). Coping processes, in this theoretical framework, are viewed as responses to an individual's cognitive appraisals of a

threatening condition. These appraisals are assumed to then determine the type of coping strategies evoked (Folkman, 1991). While early work in the coping literature focused on unconscious defensive mechanisms (e.g., Freud, 1936), Lazarus and Folkman (1984) emphasize conscious cognitive processes. Specifically, for Lazarus and Folkman, coping can be characterized as the cognitive, affective and behavioral efforts and resources used in order to meet specific external and/or internal demands.

Drawing from Lazarus' transactional approach to stress and coping in the sport context, athletes' reported coping strategies have been assessed using the Ways of Coping Checklist (WCC; Folkman and Lazarus, 1985). Using a modified version of the WCC, Crocker (1992) explored how competitive athletes coped with the most stressful situations produced in their sport in the three previous weeks. Madden and his colleagues (Madden, Kirkby, and McDonald, 1989; Madden, Summer, and Brown, 1990) and Haney and Long (1995) have also constructed instruments drawing from Folkman and Lazarus' WCC. However, problems with this questionnaire have emerged in the literature, such as uncertainties regarding its factorial validity and the observance of limited subscale internal consistency when the WCC was administered across different sport samples (Crocker, 1992).

More recently, Crocker and his colleagues adopted Carver, Scheier, and Weintraub's (1989) COPE inventory for use in sport settings (Boufaard and Crocker, 1992; Crocker and Graham, 1995). Based on theoretical grounds and empirical observations, this modified COPE (or MCOPE, consisting of 13 subscales) measures both coping styles as dispositions and coping strategies in a specific situation. Crocker and Graham (1995) provided initial support of the factorial stability of the MCOPE. Eklund et al. (1998) confirmed desirable psychometric properties of a 10 - subscale MCOPE when administered in regard to athletes' coping responses to performance slumps.

Also pulling from Lazarus and Folkman's theory, Kim and her colleagues have recently developed a sport-relevant and stressor-specific coping measure named the Approach to Coping in Sport Questionnaire (ACSQ; Kim and Duda, 1997; Kim, 1999; Kim, Duda, and Ntoumanis, 2003). The ACSQ assesses athletes' cognitive, affective and behavioural coping efforts to manage and/or counter psychological difficulties which could result in performance impairment during competitive events.

The initial version of the ACSQ was composed of a total of 78 items which were formulated and selected based on previous theoretical and empirical work on coping strategies (Carver et al., 1989; Folkman and Lazarus, 1980, 1985; Crocker, 1992), and athletes' responses to open-ended questions regarding how they typically handle psychological difficulties while performing. Additionally, several sport psychologists generated more items based on their expertise and experience working with athletes in challenging competitive situations. All preliminary items were conceptually classified according to 13 specific types of coping strategies (i.e., active/planning, mental skill,

seeking emotional/social support, seeking instrumental/social support, turning religion, behavioral disengagement, behavioral risk, positive reinterpretation, acceptance, focus on and venting emotions, denial, wishful thoughts, and blaming).

A total of 275 Korean intercollegiate athletes completed the initial version of the ACSQ to examine its factorial structure (Kim and Duda, 1997). Internal consistency coefficients did not support strong reliability across the 13 subscales (alpha coefficients ranged from .49-.83 with an average of .66). Exploratory factor analysis was then conducted to examine the factorial structure of the ACSQ-Korean. Six categories of coping emerged: Active Planning/Cognitive Restructuring ($\alpha = .78$), Emotional Calming ($\alpha = .76$), Mental Withdrawal ($\alpha = .72$), Seeking Social Support ($\alpha = .70$), Turning to Religion ($\alpha = .83$), and Behavioral Risk ($\alpha = .69$). These subdimensions were consonant with previous findings regarding the classification of coping strategies (Crocker, 1992; Folkman and Lazarus, 1988).

The initial (78 item) version of the ACSQ was also administered to 311 male and female U.S. intercollegiate athletes (Kim, 1999). Results of an exploratory factor analysis revealed a six factor structure that was consistent with what was observed in the Korean sample. The internal reliabilities of the subscales in the US sample ranged from .70 to .79 (see Kim, 1999).

The revised 32 - item ACSQ-Korean was administered to a subsequent sample of 404 Korean college-level athletes (314 males and 90 females; M age = 20.87 ± 1.32 years) involved in various sports (e.g., soccer, basketball, baseball, handball, archery, tennis, golf, swimming, wrestling, and track and field) to examine its factorial validity (Kim et al., 2003). The results of a confirmatory factor analysis supported the

hypothesized six-factor structure of the ACSQ-Korean. Preliminary evidence regarding the construct validity of the instrument was also provided. Specifically and aligned with Lazarus' theory (Lazarus, 1966; Lazarus and Folkman, 1984), cognitive appraisals of the stressor (i.e., perceived controllability over the stressful situation) positively predicted the use of active/problem-focused coping strategies as assessed via the ACSQ-Korean. The use of withdrawal/avoidance coping strategies did not relate to a perceived lack of control but rather to the level of stress experienced during competition. A greater frequency of experienced stressors during competition corresponded inversely to perceived control over the stressors. All in all, these latter findings suggest that a certain type of stress does not directly result in a certain type of coping response. In contrast, it appears that employed coping strategies tend to be a result of how the person appraises the overall stressful conditions in question (Parkes, 1986).

The first aim of the present study was to examine the psychometric properties of a Spanish version of the Approach to Coping in Sport Questionnaire (ACSQ, Kim and Duda, 1997; Kim, 1999; Kim et al., 2003). Specifically, we determined the factorial validity of the ACSQ-Spanish via CFA and the internal reliability of the subscales.

We also examined, in a preliminary way, the convergent and the concurrent validity of the instrument. With respect to the latter, we attempted to replicate the work of Kim and colleagues (Kim 1999; Kim et al., 2003) and determine the degree to which the frequency of stressful situations experienced (in this case, the frequency of psychological difficulties experienced during competition) predicted the reported use of more active/problem-focused coping behaviors

and withdrawal/avoidance coping strategies. According to Lazarus and Folkman (1984), high stress individuals would be expected to use more avoidance and withdrawal coping strategies. The reverse relationship was predicted for the reported employment of active/problem-focused strategies.

An examination of convergent validity entails a test of whether a measure correlates well with other measures that are assumed to measure the same or conceptually similar constructs. In this work, we determined the interrelationships between scores on the ACSQ-Spanish and scores on the dimensions of the Athletic Coping Skills Inventory-28 (ACSI-28; Smith et al, 1995). The ACSI-28 was designed to assess psychological coping skills within the sport domain. The questionnaire is considered to be a trait measure and targets psychological coping skills deemed to be necessary to positive, sustained athletic performance. Research on major league baseball players in the U.S. has substantiated this assumption (Smith and Christensen, 1995). The ACSQ-28 comprises 7 subscales measuring coping with adversity, peaking under pressure, goal setting/mental preparation, concentration, freedom from worry, confidence and achievement motivation, and coachability. Evidence regarding the convergent validity of the ACSI-28 is summarized in Smith et al. (1995). Although it has been argued that the ACSI-28 assesses coping effectiveness (i.e., the extent to which the person in question is using psychological skills functionally; Crocker et al., 1998), there is a presumed association with reported coping choice. That is, once again pulling from Lazarus and Folkman's conceptualization of the coping process, more active/problem-solving coping strategies (assessed via the ACSQ-Spanish) should be positively correlated with scores of the ACSI-28

subscales. In contrast, scores on the Mental Withdrawal subscale of the ACSQ-Spanish were expected to be negatively associated with ACSI-28 subscale scores.

A second purpose of the current study entailed an exploratory examination of cultural differences in coping strategies measured by the ACSQ across three similar groups of athletes from different cultural backgrounds. Based on previous work in the general psychology (Mechanic, 1974; Lazarus and Folkman, 1984; Cross, 1995; Ahmoissau and Trommsdorff, 1996) and sport psychology (Anshel, Williams, and Hodge, 1997; Ntoumanis and Biddle, 1998) literatures, we expected the reported coping behaviors employed to counter psychological difficulties encountered in sport competition to vary among Spanish athletes and previously assessed comparable groups of U.S. and Korean athletes (Kim and Duda, 1997; Kim, 1999; Kim et al., 2003).

Method

Subjects and Procedures

Spanish sample. The sample was composed of 190 athletes ($n = 152$ males and $n = 35$ females). Participants represented various sports such as handball, golf, basketball, cycling, volleyball, hockey, rugby, badminton, water polo, karate, Taekwondo, and soccer. The players were between 12 to 39 years of age (NOTE: only one athlete was 12 years old; 77% were between 16 and 23 years of age and 90% were between 16 and 27 years old) with a mean age of 21.2 years ($SD = 4.4$ years). The participants had participated in their sport an average of 9.9 years ($SD = .45$) and competed an average of 8.2 years ($SD = 4.5$). As a group, they engaged in an average of 5 days of sport training per week ($SD = 1.3$) and spent an average of 2-3 hours per training session.

US and Korean Samples. Four hundred and four Korean (male, $n = 314$; female $n = 70$) and 318 American (male $n = 170$; female $n = 148$; Caucasian $n = 244$; African American $n = 44$; Hispanic $n = 10$; others and unidentified $n = 20$) intercollegiate athletes involved in various sport events (i. e., soccer, basketball, baseball, handball, archery, tennis, golf, swimming, wrestling, and track and field) completed the questionnaires. The mean age of participants was 20.87 ± 1.23 years in the case of the Korean athletes and 19.69 ± 1.3 years for the US athletes. The average number of years the athletes had competed in their sports was 8.57 ± 2.81 years for the Korean athletes and 10.1 ± 4.06 years for the US athletes.

Permission to participate in the study was obtained from the athletes and their coaches. The test administration was coordinated by members of the research team who met with coaches to explain the purposes of the study, and provide them with instructions about how to administer the survey. The tests were administered by either members of the research team or the coaches, according to written instructions provided to them. It took, on average, 20 minutes for the athletes to complete the multi-section inventory.

Measurements

Psychological difficulties. The participants were asked how often they experienced negative psychological feelings and thoughts such as over arousal, performance worries, loss of concentration, lack of confidence, and frustration while engaged in important competition in the past 6 months. They responded on a 5-point scale (1 = «Never experienced» to 5 = «Always experienced»). It is important to note that none of the athletes indicated that they never experienced each of the negative feelings and

thoughts. A composite score was calculated and the internal reliability of these five characteristic indicators of overall psychological difficulties was .64. Although this Cronbach's alpha was lower than the recommended .70 for psychological scales (Nunnally and Berstein, 1994), the observed alpha could be considered acceptable for a scale with a limited number of items (N=5; Hair, Anderson, Tatham, and Black, 1998). Further, the item total correlations ranged from .35 to .46 and all inter-item correlations were significant, suggesting that the targeted negative feelings and thoughts were difficulties inter-related. Thus, the composite score was retained for further analyses.

Coping strategies. The Spanish translation of the 32 item Approach to Coping in Sport Questionnaire (ACSQ; Kim, 1999; Kim and Duda, 1997; Kim et al., 2003) was utilized to measure participants' coping strategies employed during competition to deal with psychological difficulties encountered. Three native Spanish speakers with a specialization in sport psychology independently translated the English ACSQ version into Spanish. Translation discrepancies between the three translated forms were discussed in order to develop an initial Spanish version of the questionnaire. A pilot study was carried out in order to test the adequacy of the questionnaire for use with Spanish athletes. The pilot version of the ACSQ-Spanish was administered to a group of 15 Spanish university athletes from different sports. No problems were found in their understanding of the instructions and items. Thus, the translated version ACSQ was administered to the 190 athletes that participated in the study.

The 32 - item ACSQ comprises 6 subscales (i.e., Active Planning/Cognitive Restructuring, Emotional Calming, Mental Withdrawal, Seeking Social Support,

Turning to Religion, and Behavioral Risk). In the current study, however, one subscale of the ACSQ (i.e., Turning to Religion) was not included. This was done because we observed some refusal among several of the athletes to answer some of the items from the scale in an initial pilot study. So, in the current administration, this scale was excluded from the questionnaire. Response to the ACSQ are provided on a scale ranging from 1 = «Never Used» to 5 = «Did Always»

Coping Skills. The Athletic Coping Skills Inventory-28 (Smith et al., 1995) was employed to measure psychological coping skills within a sport context. It comprises seven subscales that measure coping with adversity, peaking under pressure, goal setting/mental preparation, concentration, freedom from worry, confidence and achievement motivation, and coachability. Each subscale is composed of four items responded to on a 4-point scale labeled 1 (almost never), 2 (sometimes), 3 (often), and 4 (almost always). An exemplary item includes, «When I feel myself getting too tense, I can quickly relax my body and calm myself». Support for the validity and reliability of this instrument has been provided in the literature (Smith et al., 1995).

Results

Descriptive Statistics and Cultural Differences in Coping Strategies

The means and standard deviations for each of the ACSQ subscales and for experience of Psychological Difficulties for the present sample of Spanish athletes and across two other cultural groups previously sampled (i.e., Korean and American athletes) are presented in Table 1. The Spanish athletes tended to report more frequent use of Active Planning/Cognitive Restructuring and Emotional Calming strategies when

ACSQ subscales	Spanish (N = 190)		Korean (N = 401)		American (N = 311)	
	M	SD	M	SD	M	SD
Psychological Difficulties	2.74	.64	3.70	.88	3.69	.83
Active Planning/ Cognitive Restructuring	3.41	.67	3.31	.60	3.70	.65
Emotional Calming	3.41	.62	3.01	.66	3.76	.60
Mental Withdrawal	1.82	.65	2.24	.68	2.09	.69
Seeking Social Support	3.00	.87	2.30	.75	3.03	.90
Behavioral Risk	2.25	.72	2.67	.78	2.91	.90
Turning to Religion	N/A	N/A	2.47	.96	2.58	1.01

Table 1. Means and Standard Deviations of the ACSQ Subscales and Psychological Difficulties across Cultural Groups.

encountering psychological difficulties during competition. The least utilized coping strategy for this group was to attempt to mentally withdraw from the situation.

One-way MANOVA revealed there were significant group differences in reported coping strategy employment, Wilks' ($\lambda = .60$, $F(10, 1790) = 52.79$, $p = .0001$). Results of follow-up ANOVAs revealed significant differences in all five subscales (i.e., Emotional Calming, Active Planning/Cognitive Restructuring, Mental Withdrawal, Behavioral Risk, and Seeking Social Support) of the ACSQ across cultural groups [$F_s(2, 902) = 45.29, 102.44, 36.98, 44.89,$ and 134.71 , $p < .001$, respectively]. Duncan's multiple range tests (Duncan, 1955 cf. Montgomery, 1991) were utilized to examine which cultural group(s) were significantly different from the other group(s). Results showed that the Korean athletes reported significantly lower mean scores than the two other groups of athletes on the Emotional Calming, Active Planning/Cognitive Restructuring and Seeking Social Support coping subscales.

The US athletes reported significantly greater use of Emotional Calming, Active Planning/Cognitive Restructuring, Behavioral Risk, and Seeking Social Support coping strategies compared to the Korean and Spanish athletes. The Spanish athletes indicated that they used Behavioral Risk and Mental Withdrawal coping strategies least often when compared to the other cultural groups. In terms of the employment of Mental Withdrawal coping strategies, there was no significant difference between the Korean and the US athletes.

Internal consistency. Cronbach's alphas for the five scales of the ACSQ - Spanish ranged from .64 (Behavioral Risk) to .78 (Mental Withdrawal and Seeking Social Support). With the exception of the Behavioral Risk scale, all the others scales exhibited coefficients over .70 (see Table 2).

Factorial validity. The stability and applicability of the proposed underlying factor structure of the ACSQ-Spanish (See Figure 1) was investigated by conducting a confirmatory factor analysis (CFA) using AMOS Version 4.0 (Arbuckle, 1997;

	U.S.	Korean	Spanish
Active Planning/Cognitive Restructuring	.72	.74	.74
Emotional Calming	.77	.70	.71
Mental Withdrawal	.72	.70	.78
Seeking Social Support	.79	.70	.78
Behavioral Risk	.76	.71	.64
Turning to Religion	.70	.71	N/A

Table 2. Alpha Coefficients of Subscales across Cultural Groups.

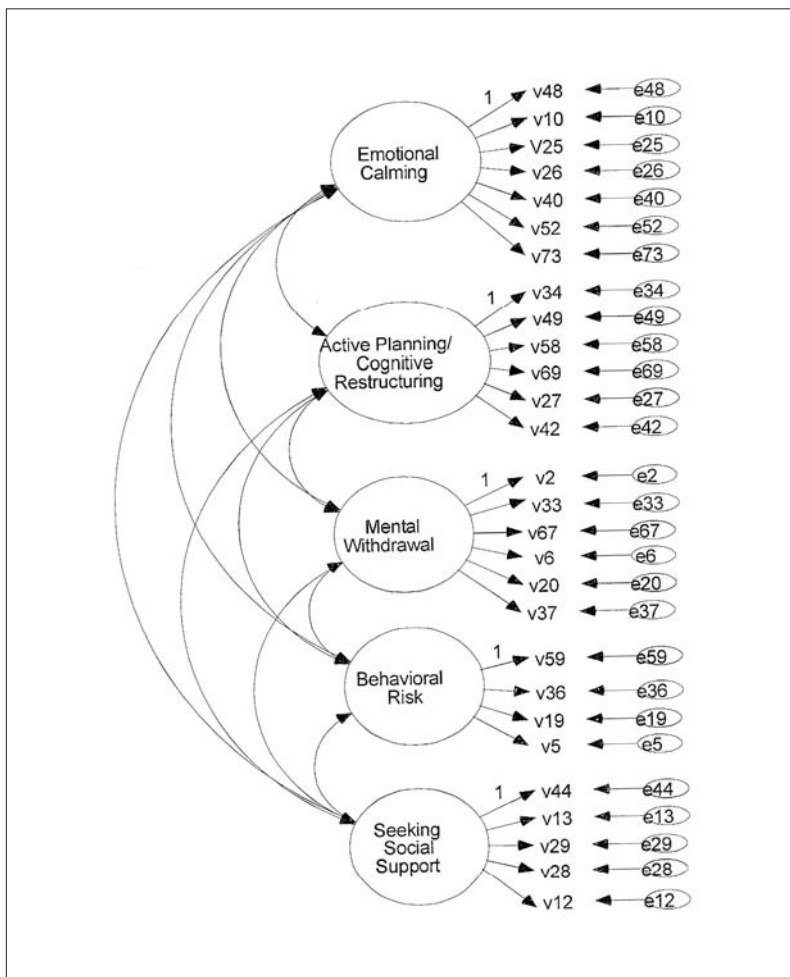


Figure 1. The proposed model of the ACSQ-Spanish.

Arbuckle & Wothke, 1999). The maximum likelihood estimation method was utilized to produce the covariance matrix. Then, a number of fit indices were employed to determine the model fit.

Specifically, as suggested by Hu and Bentler (1995, 1999), Tucker-Lewis index (TLI), the comparative fit index (CFI), the standardized root mean squared residual (SRMR) and the root mean square error of approximation (RMSEA) were used to determine the adequacy of the ACSQ measurement model. These are the most sensitive indices for models with mis-specified factor loadings. SRMR and RMSEA are indicative of the extent of unaccounted variance in the model and TLI and CFI measure the proportionate improvement in fit of the target model against a more restricted, nested baseline model. Utilizing the Maximum Likelihood method, suggested cutoff values are close to .95 for TLI and CFI, near to .08 for SRMR, and .06 for RMSEA with a 90 % confidence interval (CI) (Hu and Bentler, 1999).

Before testing the hypothesized underlying structure of the ACSQ, the multivariate normal distribution of responses to the ACSQ-Spanish were examined utilizing standardized Mardia's coefficient of multivariate kurtosis (West, Finch, and Curran, 1995). Results revealed the data violated a multivariate normal distribution assumption as they were marked by multivariate kurtosis = 112.31, $p < .05$. Thus, the bootstrapping approach to remedy non-normality of the data was employed (Efron, 1992, cf. West et al., 1995; Byrne, 2001). This bootstrapping technique to improve non-normality of data calculates the parameter estimates of interest from an empirical sampling distribution (i.e., from the observed sample) rather than the theoretical distribution of classical test statistics such as (χ^2 and normality tests (Mooney and Duval, 1993).

Results of the CFA revealed a rather weak fit to the data; CFI = .85, TLI = .83, RMSEA = .056 (90 % confidence interval = values of .047-.064) and SRMR = .073. All items loaded significantly on each hypothesized factor with a critical value greater than 2.0 at $p < .05$. Although the TLI and CFI indices were unsatisfactory, RMSEA and SRMR met the recommended values. Modification indices (MI) were examined to see where the model could be improved. MI's suggested that allowing some of the manifest indicators within the same constructs to covary with their error terms (i.e., between V10 and V25, V33 and V67) would improve the fit of the model. In addition, item 12 (i.e., «If my parents were at the competition, I talked to them about how I was feeling») appeared to be somewhat problematic as it emerged as the least frequently used strategy among participants (i.e., 85% of participants indicated they never used it). Therefore, we decided to drop item 12 from the Seeking Social Support dimension. Then, CFA was conducted on the modified ACSQ-Spanish.

Results for the revised model showed somewhat improved goodness of fit indices, CFI = .90, TLI = .88, RMSEA = .048 (90 % confidence interval = values of .038-.057), and SRMR = .068. Although the observed CFI and TLI fit indices were not still satisfactory the RMSEA and SRMR supported the adequacy of the model. Hu and Bentler (1999) contend, however, that the TLI tends to over-reject true-population models in studies entailing small sample sizes ($N \leq 250$). Considering the limited sample size in the current study ($N = 190$), the resulting goodness-of-fit indices were not surprising and collectively, should be considered as preliminary support for the factorial validity of the ACSQ - Spanish.

Interrelationships between scales. Among the Spanish athletes, a significant, positive

association was revealed between the Active Planning/Cognitive Restructuring, Emotional Calming, Seeking Social Support, and Behavioral Risk subscales. The use of Mental Withdrawal strategies was positively correlated with the employment of Behavioral Risk strategies (Table 3).

Concurrent validity. Preliminary evidence regarding the concurrent validity of the ACSQ-Spanish was determined by examining the relationships between reported coping strategy use and the frequency of psychological difficulties experienced during competition. In Table 3, we can see that a higher frequency of psychological difficulties corresponded to a greater use of Mental Withdrawal coping strategies and Seeking Social Support when encountering such difficulties in competition.

Convergent validity. The convergent validity of the ACSQ-Spanish was investigated by considering the observed correlations between subscales of this instrument and scores on the ACSI-28 (Smith et al., 1995) (Table 4). Taking into account the content of each subscale, it would be expected to find significant correlations between scores on the Emotional Calming subscale of the ACSQ and the Concentration and Coping with Adversity subscales of the ACSI - 28. Table 4 shows that reported Emotional Calming correlated positively and significantly with all ACSI subscales except the Freedom from Worry subscale. As was predicted, Active Planning was significantly and positively correlated with Goal Setting / Mental Preparation and also positively associated with Confidence / Achievement Motivation, Concentration Coping with Adversity, and Peaking under Pressure. Unexpectedly, Active Planning was negatively associated with Freedom from Worry although it should be mentioned that the observed correlation was low ($r = -.18$).

Both the Behavioural Risk and Seeking Social Support subscales of the ACSQ - Spanish were positively correlated with the Goal Setting / Mental Preparation. Significant negative associations were found between the Mental Withdrawal subscale and all ACSI subscales.

Discussion

The first aim of this study was to examine the validity and reliability of the ACSQ-Spanish (Kim & Duda, 1997; Kim, 1999; Kim et al., 2003). Derived from the ACSQ - English and ACSQ-Korean, this instrument was conceptually grounded in the transactional model of stress and coping (Lazarus and Folkman, 1984; Lazarus, 2000) and measures athletes' reported cognitive, affective and behavioral efforts to confront psychological difficulties that are experienced in competition. In contrast to what has been the case for a number of coping strategy instruments employed in the sport literature (Crocker et al., 1998), this instrument measures athletes' responses to a particular stressor (i.e., the experience of psychological difficulties) in a specific environment and time frame (i.e., during the competition).

Based on confirmatory factor analysis results, the factorial validity of the ACSQ - Spanish appeared to be fairly strong. Among the various goodness-of-fit indices examined, the SRMR and RMSEA particularly provided evidence for an acceptable fit between the data and the proposed measurement model. This occurred after removing V12 - an item originally proposed to measure Seeking Social Support. As suggested above, V12 (*«If my parents were at the competition, I talked to them about how I was feeling»*) was not utilized by the large majority of the athletes in this sample as a coping strategy. The problems with this item might be

Variables	1	2	3	4	5	6
Psychological Difficulties	-					
Active Plan./Cog. Restruct.	-.04	-				
Emotional Calming	.09	.67**	-			
Mental Withdrawal	.34**	-.03	.02	-		
Seeking Social Support	.20**	.39**	.36**	.05	-	
Behavioral Risk	.03	.28**	.20**	.20**	.21**	-

Table 3. Simple Correlations between the Experience of Psychological Difficulties and Subscales of the ACSQ-Spanish.

	Emotional Calming	Active Plan./ Cog. Restruct.	Mental Withdrawal	Behavioral Risk	Seeking Social Support
Goal Setting / Mental Preparation	.42**	.44**	-.17*	.21**	.25**
Confidence / Achievement Motivation	.38**	.33**	-.31**	.05	.02
Coachability	.31**	.11	-.18*	-.14	.18*
Concentration	.41**	.34**	-.18*	.07	.03
Coping with Adversity	.52**	.40**	-.31**	.04	.04
Peaking under Pressure	.25**	.33**	-.19**	.03	-.12
Freedom from Worry	-.07	-.18*	-.20**	-.06	-.17*

Note: * $p < .05$, ** $p < .01$.

Table 4. Correlations between ACSQ and ACSI-28 Subscales.

particular to the characteristics of the participants in the current study. Although this sample was involved in sport at high competitive level, the present group athletes participated in their sport in voluntary, social clubs. In such settings and given the age of these athletes (i.e., the large majority was in their late adolescence or early adult years), it is likely that parents were not present during much of their competitive sport outings.

The internal consistency values for the ACSQ - Spanish scales are adequate, with the exception of Behavioral Risk scale which emerged slightly below the recommended

.70. Given the number of items in this subscale, however (i.e., number of items = 4), the observed internal reliability could be considered acceptable (Nunnally & Bernstein, 1994; Hair, et al., 1998).

In general, the correlations among the subscales of the ACSQ - Spanish and the ACSI-28 subscales supported the convergent validity of the instrument. More specifically, the Emotional Calming subscale of the ACSQ (which measures the employment of various mental skills such as breathing, refocusing, and visualization) was positively associated with all subscales of the ACSI-28

except scores on the Freedom from Worry subscale. This latter finding suggests that, among the present sample of Spanish athletes, the emotional calming strategies used were not related to the degree of athletes' concerns regarding their performance. Scores on the Active Planning/Cognitive Restructuring subscale were found to be negatively correlated with the Freedom from Worry subscale scores and positively linked to all the other subscales of the ACSI-28 except the Coachability subscale. With respect to the first association, it should be noted that the observed correlation was low but still contrary to what was hypothesized. It might have been the case that the Spanish athletes who tended to employ active, cognitive-related coping strategies were indeed those competitors who were more likely to be plagued by competition-related worries. In terms of the latter correlation, it may be that these athletes are also the ones who tend to be a bit more challenging (perhaps due to their competition-related worries?) for the coach.

As was predicted, scores on the Mental Withdrawal subscale of the ACSQ were negatively associated with all subscales of the ACSI-28. Although the observed correlation coefficients for all these relationships were significant, perhaps implying that some scales of the ACSQ measure similar constructs to the subscales comprising the ACSI-28, it should be emphasized that the strength of these relationships was somewhat weak. That is, the present findings suggest limited redundancy between the two instruments. This is not surprising as the ACSQ is a stressor-specific measurement, whereas the ACSI-28 tends to measure psychological skills in terms of overall sport-related personal tendencies.

The low albeit positive correlation between the Seeking Social Support and the

Coachability subscales ($r = .18$) makes sense as the coach is one of the main sources of social support for athletes. The negative association between scores on the Seeking Social Subscale and Freedom from Worry subscale ($r = -.17$) can be explained by considering that athletes who look for social support during competition might be the same athletes who especially take into account the opinions of significant others. In essence, they can be the athletes who are more concerned about what others think about their performance.

The observed relationships between the subscales on the ACSQ-Spanish and reported experience of psychological difficulties generally supported the concurrent validity of the instrument. As suggested in the coping literature, if the participants experience too much stress (which seemingly is beyond their control), they are more likely to turn to emotional focused and avoidance coping strategies (Folkman & Lazarus, 1984). The observed positive associations between the reported experience of psychological difficulties and use of Mental Withdrawal ($r = .34$) and Seeking Social Support ($r = .20$) strategies were consonant with the predictions stemming from the work of Folkman and Lazarus. That is, it is reasonable to expect that athletes who report a high frequency of psychological difficulties during competition would be more likely to employ Mental Withdrawal coping strategies. This finding suggests that these athletes think that there is little they could do to change the situation (perhaps due to its regular occurrence), so they accept the circumstance at hand and try to remove themselves psychologically. Moreover, in terms of the latter observed association, athletes who experience repeated psychological difficulties might be more prone to turn the assistance of others for encouragement and emotional relief. In

subsequent work it would be interesting to test the interplay between the experiences of psychological stressful circumstances, perceptions of control over such a stress and reported coping strategies (Kim and Duda, in press).

The second aim of the study was to explore, in an exploratory manner, cultural differences in the use of coping strategies among athletes who played at similar competitive levels but were from different cultural backgrounds (i.e., Korean, US, and Spanish participants). Cultural variation emerged with respect to how the athletes reported they dealt with their psychological difficulties experienced during competition. The Korean athletes indicated that they less frequently used, when compared to their US and Spanish counterparts, Emotional Calming, Active Planning/Cognitive Restructuring and Seeking Social Support strategies. The US participants were found to more frequently use, when contrasted with the Korean and Spanish athletes, all the coping strategies tapped in the ACSQ other than the Mental Withdrawal coping strategy. In terms of the employment of Behavioural Risk and Mental Withdrawal coping strategies, the Spanish athletes reported the lowest mean scores compared to the Korean and US athletes and thus implying that they tended not to use such strategies to manage their psychological difficulties during competition. These revealed cultural differences in the use of coping strategies provide support for the proposed influence of culture on the way individuals handle stressful situations (Mechanic, 1974; Lazarus & Folkman, 1984; Cross, 1995; Ahmoïssau and Trommsdorff, 1996; Anshel, et al., 1997; Ntoumanis and Biddle, 1998). The Korean culture is viewed as a collectivistic culture where strong hierarchical interpersonal relationships exist and groups goals are

emphasized over personal goals (Triandis, 1996). Thus, it could be argued that because of such cultural characteristics, Korean athletes might tend to use less personally-initiated active and problems focused coping strategies, which could be considered as a selfish or self-centred actions to deal with their stress. Rather, we might expect Korean athletes to use more team-oriented approaches or follow what the leader tells them to do as «group coping strategies». However, the Korean athletes were low in the reported use of Seeking Social Support. In the case of the Spanish athletes, their low scores on the Behavioral Risk scale suggest that they are quite conservative in their employment of coping strategies. That is, it appears that they are less likely to try, than their Korean and US counterparts, new options or very risky alternatives when facing difficulties during competition. The low scores of the Spanish competitors with respect to the Mental Withdrawal scale imply that, as a group, they are quite realistic and willing to be engaged with the situation when things are not going their way. This finding suggests that they are fighters who are willing to persist rather than withdraw from psychological demanding circumstances in competitive events.

The US athletes reported most frequent use of all coping strategies Mental Withdrawal coping responses. As Triandis (1996) has indicated, the US is a more individualistic culture and individual-related goals tend to receive more emphasis than group goals. Thus, it makes sense that athletes with such a cultural background would learn to take more active actions to deal with their difficulties (Ahmoïssau and Trommsdorff, 1996).

Another possible interpretation of the observed cultural differences in the use of coping strategies might stem from different interpretations of psychological difficulties experienced during competition. As suggested

in cross-cultural research on stress and coping (Mechanic, 1974; Lazarus and Folkman, 1984), individuals' capability to deal with stressors would be highly associated with the efficacy of the solutions that their culture provides and the skills they developed. So within each cultural group, each individual will be influenced by the person's appraisal of the situation as well as by the resources available, the use of which may be encouraged or discouraged by cultural values and norms. Future systematic research is needed to further our understanding of how such cultural values and norms might intertwine with the

tendency to use different coping strategies in athletic settings.

In summary, based on the present findings, the ACSQ– Spanish appears to be a useful measurement tool regarding the assessment of coping strategies employed in response to psychological difficulties which can lead to performance debilitation during competition among Spanish athletes. Certainly though, more systematic research is warranted regarding the psychometric properties of the ACSQ-Spanish. Such work should provide greater insight into stress and coping processes among sport competitors from this cultural group.

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