

COPING STRATEGY INDICATOR: RELIABILITY AND VALIDITY OF THE SPANISH ADAPTATION AND ITS RELATIONSHIP WITH PERSONALITY AND AFFECTIVITY DISPOSITIONS

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1. Introduction:

Lazarus and Lazarus (1984) argue that coping is a situational and specific construct, different from human adaptation. Costa, Somerfield, & McCrae (1996) on the other hand maintain that coping and adaptation form part of a continuous intimately related to structural aspects such as personality dispositions. The debate remains open.

2. Objectives:

This investigation has two objectives: (1) to study the psychometric properties of our Spanish adaptation of the **CSI** and (2) to analyze the relationship between the CSI and different personality and affectivity dispositions.

3. Method

3.1. Participants:

The sample consisted of 163 undergraduate college students of the *University of Barcelona*, of which 148 are women (90.8%) and 15 are men (9.2%). Their age ranged from 18 to 46, and their average age was of 22.62 years (S.D. = 4.22) (see Table 1).

Descriptive	N	Min.	Max.	Mean	S.D.
Age	163	18	46	22.62	4.224

3.2. Measures:

The CSI was translated using an iterative back translation method (Berry, 1980; Brislin, 1980) whereby first the American questionnaire was translated into Spanish. Then, the Spanish version was translated back into English and the original and back-translated items were compared for non-equivalence of meaning. This iterative process of translation and back-translation was continued until no semantic differences were noticed between both questionnaire forms (Brislin, 1980).

To investigate the validity of the CSI, we administered the following measures of coping, personality, and affectivity: *Social Problem Solving Inventor-Revised, short form* (SPSI-RS), *NEO Five Factor Inventory* (NEO-FFI), *Positive and Negative Affect Schedule* (PANAS), and *Satisfaction with Life Scale* (SWLS).

Coping Strategy Indicator (CSI). The CSI is a situational measure of coping. That is, the person responds to the items of the questionnaire for a stressful event that occurred to him or her in the last six months. The CSI consists of three scales, each of which evaluates one of the following general coping strategies: *Problem Solving* (PS); *Seeking Support* (SS), and *Avoidance* (AV). In the American questionnaire, the reliability (alpha coefficient) for these scales is .93 (SS), .89 (PS) and .84 (AV) (Amirkhan, 1990). Further evidence supporting the reliability and validity of the CSI is reported in Amirkhan (1990, 1994).

Social Problem Solving Inventor-Revised, short form (SPSI-RS). The SPSI-RS consists of five major scales that measure two problem orientation dimensions and three problem solving proper dimensions. These scales are *Positive Problem Orientation* (PPO), *Negative Problem Orientation* (NPO), *Rational Problem Solving* (RPS), *Impulsive/Carelessness Style* (ICS) and *Avoidance Style* (AS). Further evidence supporting the reliability and validity of the SPSI-RS is reported in D'Zurilla, Nezu & Maydeu-Olivares (2002).

NEO Five Factor Inventory (NEO-FFI). The NEO-FFI is an instrument designed to evaluate the main personality dimensions derived from the *Big Five Model*. The five broad personality dimensions measured by this questionnaire are *Neuroticism* (N), *Extroversion* (E), *Openness to Experience* (O), *Agreeableness* (A), and *Conscientiousness* (C). Further evidence supporting the reliability and validity of the NEO-FFI is reported in Costa & McCrae (1999).

Positive and Negative Affect Schedule (PANAS). The PANAS consists of two broad scales that measure *Positive Affect* (PA) and *Negative Affect* (NA). In this research we used the trait version of the questionnaire where participants reported how they generally felt. Further evidence for reliability and validity evidence of the PANAS is reported in Watson et al. (1988), and, for the Spanish version, in Sandin et al. (1999).

Satisfaction with Life Scale (SWLS). This instrument evaluates the general self-perception respect to the degree of satisfaction with the present life of the subject. Further evidence supporting the reliability and validity of the SWLS are reported by Diener, Emmons, Larsen, Griffin (1985).

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Table 2
Correlations, Means, Standard Deviations, and Alpha coefficients for the Coping Strategy Indicator.

	PS	SS	AV
PS	1.00		
SS	.33 **	1.00	
AV	-.17 *	-.09	1.00
Mean	26.64 (25.89 - 27.39)	27.96 (27.13 - 28.79)	18.45 (17.89 - 19.01)
S.D.	4.88	5.41	3.63
Alpha	.88 (.84 - .91)	.92 (.90 - .94)	.67 (.60 - .75)

Notes: N=163. CSI scales: PS=Problem Solving, SS=Seeking Support, AV=Avoidance; 95% Confidence Intervals for means and alpha coefficients are shown in parentheses. S.D.: Standard Deviation. All correlation coefficients are significant. **p < 0.05, *p < 0.01.

Table 3
Matrix of factor loadings of the Coping Strategy Indicator.

Item	Factor I	Factor II	Factor III	h ²
c7	.834			.73
c1	.823			.72
c23	.815			.67
c12	.800			.66
c32	.753			.60
c31	.742			.64
c24	.732			.55
c12	.692			.49
c19	.668		.255	.52
c5	.642			.48
c25	.576			.36
c29		.785		.66
c16		.726		.54
c15		.705		.56
c33	.255	.690		.54
c2		.689		.50
e9		.676		.46
c3		.671		.49
e17		.647		.42
e8		.579		.39
c20		.536		.33
e11		.527		.28
c28			.653	.43
c21	-.273		.600	.43
e10			.536	.39
c30			.526	.33
e13			.524	.30
c27	.252		.470	.29
e6	-.308		.392	.27
e18		-.253	.388	.22
e4		-.287	.383	.23
e22			.366	.17
e26		-.286	.266	.15
Eigen	8.190	3.929	2.684	
% Var.	20.02	16.18	8.66	

Notes: Extraction Method: Principal Components; Rotation Method: Varimax. The factorial load with values smaller at .25 has been suppressed.

4. Results:

Table 2 presents the correlations, means, standard deviations, and alpha coefficients for the CSI scales. As shown in this table, the internal consistency (alpha coefficients) for the *Problem Solving* (PS) and *Seeking Support* (SS) scales is quite good (Alphas of .88 and .92, respectively), but for the *Avoidance* (AV) scale it is only acceptable (Alpha: .67). Also, table shows that the different CSI scales are moderately inter-correlated; see the moderate and significant correlation between PS and SS (.33) and the low but significant correlation between PS and AV (-.17).

As in Amirkhan (1990), we carried out an *exploratory factorial analysis* on the items of the CSI using SPSS v.11.5. Table 3 shows the matrix of factor loadings obtained. This is rather similar to those reported by Amirkhan (1990). In general, the different items show an acceptable communality index (h²), except for items c26, c22, c18, c4, c6, c11 and c27, which have a quite low communality.

Table 5
Correlations, Means, Standard Deviations, and Alpha coefficients for the different personality and affectivity tests and its relation with the CSI.

	N	E	O	A	C	PA	NA	SWLS
PS		-.31 **	.18 *22 **	-.32 **	-.28 **
SS		..	.27 **21 **	-.16 *	..
AV		.27 **	-.16 **	..	-.16 *	..	.22 **	-.42 **
Mean	22.54	32.45	31.12	33.25	31.32	22.68	10.92	11.61
S.D.	7.99	6.05	5.55	4.91	6.44	4.43	6.23	3.37
Alpha	.83	.76	.65	.62	.78	.60	.82	.79

Notes: N=163. CSI scales: PS=Problem Solving, SS=Seeking Support, AV=Avoidance; NEO-FFI scales: N=Neuroticism, E=Extroversion, O=Openness to Experience, A=Agreeableness, C=Conscientiousness. PANAS scales: PA=Positive Affect, NA=Negative Affect. SWLS: Satisfaction with Life scale. S.D.: Standard Deviation. All correlation coefficients are significant. **p < 0.05, *p < 0.01.

Table 4 displays the correlation coefficients between the CSI and the SPSI-RS. In general, significant correlations are observed in this table, ranging from low to moderate, between many of his scales. Thus, the CSI-PS correlates positively with the *Rational Problem Solving* (RPS) and *Positive Problem Orientation* (PPO) scales of the SPSI-RS. Moreover, this scale correlates negatively with the *Avoidance Style* (AS), *Impulsive/Carelessness Style* (ICS) and *Negative Problem Orientation* (NPO) scales of the SPSI-RS. On the other hand, the CSI-SS scale correlates positively with the PPO and RPS scales, and negatively with the AS scale of the SPSI-RS. Finally, the CSI-AV scale correlates positively with the AS, and negatively with the RPS scale of the SPSI-RS.

Finally, table 5 shows the descriptive statistical for the NEO-FFI, PANAS and SWLS, as well as their correlation with the different scales of the CSI. In general, the reliability coefficients (alpha coefficients) shown by the different scales of the instruments used is acceptable. On the other hand, it is observed that the PS scale of the CSI is the one that presents a greater number of correlations with the different instruments used, followed by the AV and the SS scales.

5. Discussion:

The observed results indicate that our Spanish adaptation of the **Coping Strategy Indicator** has adequate psychometric properties, similar to those reported in the American form (1990, 1994). Likewise, it is observed a clear relationship between the coping styles and the different personality and affectivity dispositions evaluated. These findings suggest that the situational coping strategies evaluated by the CSI have a clear relationship with many of the personality and affectivity disposition considered in this study. These results give support to previous findings (Costa, Somerfield, & McCrae, 1996; Suls, David, & Harvey, 1996; and Zeidner & Endler, 1996).

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