Stability and consistency of coping in adolescence: A longitudinal study

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This study analyzed stability and consistency of coping among adolescents. The objectives were twofold: a) to analyze temporal stability and cross-situational consistency of coping responses after a 17- month interval, taking into account gender, age and type of stressor. b) To analyze the relative weight of contextual versus dispositional factors in predicting future coping. A cohort of 341 adolescents (51% girls and 49% boys aged between 12 and 16) were assessed twice by means of the Coping Responses Inventory - Youth. The results indicated that the coping responses were quite stable over time at the group level, but with important within-subject differences. Girls showed slightly more stability than boys. Among the girls, Avoidance coping showed as much stability as consistency and Approach coping showed more stability than consistency. Among the boys, the coping used at Time 1 barely predicted that used at Time 2; in contrast, among the girls, the type of coping used in the past, especially Avoidance coping, predicted the coping that would be used in the future.

La estabilidad y consistencia del afrontamiento en la adolescencia: un estudio longitudinal. Este estudio analiza la estabilidad y consistencia del afrontamiento en la adolescencia. Sus objetivos son: a) analizar la estabilidad temporal y la consistencia situacional del afrontamiento tras un período de 17 meses, teniendo en cuenta el sexo, la edad y el tipo de estresor. b) Analizar el peso relativo de factores disposicionales vs contextuales en la predicción del afrontamiento futuro. Una cohorte de 341 adolescentes (51% chicas y 49% chicos) con edades comprendidas entre los 12 y los 16 años fueron evaluados dos veces mediante el Coping Responses Inventory – Youth. Los resultados indicaron una buena estabilidad temporal a nivel de grupo, pero con importantes variaciones intra-individuales. Las chicas mostraron una estabilidad ligera mayor que los chicos. En ellas el afrontamiento de tipo evitativo demostró tanta estabilidad como consistencia y el de aproximación más estabilidad que consistencia y el de aproximación baja estabilidad y baja consistencia. En las chicas las respuestas de afrontamiento usadas en el pasado, especialmente las de evitación, tienen poder predictivo sobre las que usarán en el futuro. En los chicos esta capacidad predictiva es inferior.

The invariability of coping answers over time and across situations is a controversial topic in Psychological Assessment. The term coping refers to the set of internal and external actions that individuals carry out voluntarily and consciously in order to face stressors appraised as threatening to their psychological homeostasis. According to Moos, Holahan and Beutler (2003) there are two main perspectives in the conceptualization of coping: dispositional coping and contextual coping. Dispositional coping emphasizes the stable factors of personality that influence the coping styles. Contextual coping emphasizes the variability of coping depending on the type of stressor to be faced. From the dispositional perspective of coping it is assumed that people can develop habitual ways to cope with stressing situations, therefore a pattern of stable answers or styles of coping may be observed. These coping styles may influence new situations (Carver & Scheier, 1994). From this approach it is assumed that coping is temporally stable and cross-situationally consistent. As stated by Ptacek, Pierce and Thompson (2006) temporal stability implies the favoring of a certain strategy at two different moments «assuming that the two stressors are similar to one another... To be cross-situationally consistent in coping, a person should cope in a similar way when faced with different classes of stressors, whether or not they are experienced at different times» (p. 1138).

This controversy is especially relevant in adolescence as it is a period of great changes and new stressors which force teens to restructure the coping strategies used until then. Several studies have analyzed both the temporal stability and the cross-situational consistency of coping in adolescence. Compas, Forsythe and Wagner (1988a) analyzed temporal stability and cross-situational consistency in coping over an interval of 4 weeks with a sample of undergraduates. They found moderate temporal stability in response to the same stressor, and low consistency across two different types of stressor. Compas, Malcarne and Fondacaro

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(1988b) studied coping consistency after a 9-month interval in a sample of children and young people. They found correlations of .26 for emotion-focused answers and .35 for problem-focused answers. Moos (1993) investigated coping stability at a 12-15 month interval in a sample of 254 adolescents and concluded that coping scales were moderately stable over time. Boys showed slightly less stability than girls (average rs for boys= .29, average rs for girls= .34). Cognitive Avoidance and Emotional Discharge strategies were slightly more stable among boys (r= .46 and r= .39, respectively) than among girls (both rs= .27). Logical Analysis and Seeking Guidance strategies were somewhat more stable among girls (rs= .31 and .41, respectively) than among boys (rs= .17 and .22, respectively). Terry (1994) carried out a three-wave longitudinal design study with 243 students in order to examine the effects of both stable and situational influences on coping responses. She concluded that both stable and situational factors are influential in the prediction of coping, and that there was a degree of cross-situational stability in coping. The author stated that «current conceptualizations of coping should acknowledge the fact that there is a component in the use of any particular coping response that reflects the person's predisposition to use the specific strategy» (p. 907).

The one-year longitudinal study by Herman-Stahl, Stemmler and Petersen (1995) with 603 adolescents in Grades 6-11, concluded that adolescents cope with stress in a flexible and dynamic way and therefore, the coping consistency at this period can be questioned. Although they found an age effect for approach coping, there was no clear developmental pattern.

Frydenberg and Lewis (1994, 1997, 2000) carried out a series of longitudinal studies on coping stability which were especially interesting for our purpose. The analysis of the coping patterns of 178 students indicated a stable hierarchy of preferred coping strategies regardless of the problem, and at the same time, significant differences were found in the way students coped with different concerns. The authors concluded that «these findings support a conceptualization of coping that includes general and problem specific coping styles» (Frydenberg & Lewis, 1994, p. 45). In a 5year longitudinal study with 168 adolescents aged between 12 and 16 the authors found that of the 17 strategies assessed, 12 of these displayed significant change over time. Of strategies that varied, 5 remained stable between the ages of 12 and 14 but increased significantly at 15 and 16 years old. Three strategies decreased between 12 and 14, after which the usage remained relatively stable. The remaining strategy showed a developmental pattern which was lower at 14 than at 12 and 16 (Frydenberg & Lewis, 1997, 2000).

The four-year longitudinal study by Seiffge-Krenke and Klessinger (2000) with 194 early adolescents revealed that 39% of the adolescents did not vary their coping styles after a 1 year period, 37 % changed their style of coping and the remainder showed flexible coping behavior. In a longitudinal study of 112 adolescents aged between 14 to 21 years (Seiffge-Krenke & Beyers, 2005) coping behavior was assessed at five points in time. Results indicated a linear increase over time of Active coping (searching for information or support) and Internal coping (cognitive processes related with the stressor). Nevertheless, Withdrawal coping (efforts to avoid the stressor and to release emotional tension) showed stability over time.

Griffith, Dubow and Ippolito (2000) analyzed the consistency of coping through three different types of stressors: peer, family and academic stressors. They found moderate levels of consistency across situations and demonstrated that adolescents use more avoidance strategies when facing family stressors and more approach strategies when confronting school achievement stressors and problems with friends. Aupperle (1995) with a sample of 20 young people indicated that when faced with the death of a sibling the use of cognitive avoidance tends to increase. Adolescents reported less use of problem-solving and greater use of escapeavoidance and positive reappraisal when coping with traumatic sibling death than when coping with minor stressors. He also pointed out that the use of the problem solving strategy increased with age.

Jaser et al. (2007), with a sample of 73 adolescents between the ages of 10 and 16, found moderate consistency in coping responses and similar mean levels of coping across two situations: peer stress and family stress.

The different nomenclatures of coping dimensions (active / passive; problem-focused/emotion-focused; approach / avoidance; active / internal / withdrawal) and the lack of hierarchy in coping responses hinder the direct comparison of results of different studies, as has been highlighted recently by other authors (Skinner, Zimmer-Gembeck, 2007). But taken together, it could be concluded that both stability and consistency in coping was among low and moderate in adolescence.

The main goal of this study was to analyze, by means of a longitudinal design, the stability and the consistency of coping responses among Spanish adolescents. The specific objectives of this study were twofold: a) to analyze temporal stability and cross-situational consistency of coping answers after a 17- month interval taking into account gender, age and type of stressor; b) To analyze the relative weight of contextual vs. dispositional factors in predicting future coping. Specifically, this second objective focuses on to determine which of these two variables had greater predictive power of the type of coping used at Time 2: whether the type of coping used by adolescents in Time 1 (dispositional coping) or the stressor expressed in Time 2 (contextual coping or coping specificity). Based on prior findings and with regards the first objective, we expected that Spanish adolescents would be moderately stable and consistent in reporting coping responses, following the pattern found in others countries. With respect the second objective, we hypothesized that the stressor explained in Time 2 would have a greater explanatory power of the type of coping used in Time 2 than the type of coping used in Time 1, since the literature suggests that coping involves an important component of specificity according to the type of stressor (Lazarus & Folkman, 1984).

Method

Participants

The participants were 341 students at compulsory secondary school (51% girls and 49% boys) aged between 12 and 16 at Time 1 and between 13 and 17 at Time 2 (mean age at Time 1: 13.1, SD = .90; mean age at Time 2: 14.6, SD = .89). The students were recruited from different schools in Barcelona and surrounding area and were selected by means of a convenience sampling method. Participants were principally Caucasian (98%). Based on the nine-point Hollingshead's (1975) occupational index, the mean occupational status of the parents was 5.4 (parents with

skilled and semi-skilled job, small business owners, sales workers, electricians, mechanics, operators, etc). Between the first and the second administration, 3% of the initial group was lost for various reasons (change of school, non-attendance on the day of the test administration and unreliable protocol).

Measures

The Spanish adaptation (Forns, Amador, Kirchner, Gómez, Muro, & Martorell, 2005) of Coping Responses Inventory-Youth Form (CRI-Youth, Moos, 1993) was employed to assess coping strategies and type of stressor reported by adolescents. Subjects were required to describe the most important problem or stressing situation experienced in the last twelve months, and to score on a 4-points Likert scale (from 0= «no, not at all» to 3= «yes, fairly often») the frequency with which they had used each one of the 8 coping strategies that the test assesses: Logical Analysis, Positive Reappraisal, Seeking Guidance, Problem Solving, Cognitive Avoidance, Acceptance-Resignation, Seeking Alternative Rewards and Emotional Discharge. The first four strategies were considered as approach coping and the latter four as avoidance coping. The psychometric properties of the Spanish version of CRI-Youth revealed two second-order factors: Approach and Avoidance. Cronbach's alpha for approach dimension was .68 and for avoidance dimension .55. The internal consistency for the current study was alpha=. 75 for approach coping and .64 for avoidance coping. These consistency indexes are in agreement with alphas reported by the coping literature about CRI-Youth, and are due to the non-overlapping of the content of the items on each scale (Moos, 1993).

Procedure

The head teachers were contacted and the sessions programmed. Verbal consent to conduct the study was sought from the school authorities, parents' associations and participants. Students were informed that the aim of the study was to assess the ways in which adolescents cope with their problems. The confidentiality of the data was guaranteed. All adolescents agreed voluntarily to take part in the study. CRI-Youth was applied at Time 1 and after a 17-month interval it was applied again by expert psychologists.

The problems explained by the adolescents in the CRI-Youth at Time 1 and Time 2 were coded according to their content, which identified the main focus of the problem (kappa between coders= .85), following the criteria stipulated by Forns, Amador, Kirchner, Martorell, Zanini y Muro (2004). The different type of stressor cited by adolescents of the present study were: «relationship problems», «problems in school achievement», «diseases and accidents», «suicides and deaths of relatives or friends», «victimization», «parents' divorce» and «self-guilt».

The participants who described the same problem or stressor in Time 1 and Time 2 were coded as G1. The participants who described different problems in Time 1 and Time 2 were coded as G2.

Data analysis

Descriptive statistics (mean and standard deviations) of coping strategies in Time 1 and Time 2 were calculated for the whole group, and separated according to gender. In order to analyze the coping stability and consistency, Pearson correlations and repeated measure analyses were used. Gender, age and equality/inequality of the stressor between Time 1 and Time 2 were introduced as between-subjects factors in the repeated measure analyses. Z test was employed to contrast differences between correlation coefficients. Optimal scaling regressions (CATREC analysis) were carried out to analyze the explicative power of coping used in Time 1 and of the stressor reported in Time 2 (independent variable) on the coping used in Time 2 (dependent variable).

Results

Coping stability and consistency

Repeated measures test and Pearson correlations were used to prove coping stability and consistency. The repeated measures tests were used to determine group stability and the Pearson correlation was used to determine within- individual stability. To analyze both stability and consistency of coping answers is necessary to control the type of stressor that has elicited such responses. The stability implies the constancy of coping answers in front of the same stressor at different temporal moments. The consistency implies the constancy of coping answers in front of the different stressors, whether or not they are experienced at different times. In order to control the influence of the stressor, participants were divided into two sub-groups. A sub-group was composed of those adolescents who expressed the same type of stressor at Time 1 and Time 2 (G1). The other sub-group was composed of those adolescents who expressed different types of stressors at Time 1 and Time 2 (G2). Table 1 shows the means and standard deviations on the scales of the CRI-Youth at Time 1 and Time 2, according all group, gender and according whether to the stressor has been controlled or not.

Repeated measures tests were employed in order to contrast differences between the mean magnitudes of the two sets of scores. The mean score of each one of the scales of the CRI-Youth at Time 1 and at Time 2 were introduced as intra-subject variables, and gender, age and the equality/inequality of the stressor between Time 1 and Time 2 were introduced as between-subject factors. No main effects were observed on any scale of the CRI-Youth, except in Seeking Rewards, F(1, 336)= 4.10, p=.04 and on Avoidance coping, F(1, 336)= 4.83, p=.03. Both means decreased at Time 2.

This data indicates that the use of coping was similar at Time 1 and Time 2. Neither a significant gender \times coping interaction nor a significant type of stressor \times coping interaction was observed. Age had an interaction effect with Avoidance coping, *F* (4, 336)= 4.32, *p*= .03, and marginally with Seeking Rewards, *F* (4, 336)= 3.33, *p*= .07. In both cases the means decreased at Time 2. These data suggest that approach coping is somewhat more stable over time than avoidance coping, which tends to decrease at Time 2, probably due to the greater age of the participants.

Table 2 shows the results of the Pearson correlations for all group and for gender. In order to analyze the influence of the stressor on the stability of coping answers, correlations have been conducted independently for the group of adolescents who had mentioned the same type of stressor at Time 1 and Time 2 (G1) and for those who had mentioned different stressors (G2).

The coefficients tended to be higher when the stressor was the same at Time 1 and at Time 2 (coping stability) than when it was different (coping consistency). Between- gender comparative analysis (see table 2) highlighted the fact that when the stressor remained stable at both times (G1) the girls showed a more stable use of Seeking Guidance than the boys, and with a marginal probability level, a more stable use of Problem Solving and Approach coping. When the stressor varied between Time 1 and Time 2 (G2), girls showed a more stable use of Avoidance coping than boys, and with a marginal probability level, a more stable use of Acceptation-Resignation, Seeking Rewards, and Emotional Discharge.

Additionally, the differences in correlations for each gender were analyzed. Among girls correlations tended to be higher when the stressor was the same (G1) than when it was different (G2), although only Seeking Guidance reached significant differences (z= 1.77, p= .03) and with a more marginal probability level, Problem Solving (z= 1.49, p= .07). Among boys, the differences between the coefficients of G1 and G2 were lower. The only significant difference, with a marginal level of probability, corresponded to Seeking Rewards (z= 1.32, p= .09), but it is possible that the small sample size influenced these results.

Predictors of coping strategies used at Time 2

In relation to the second objective, to determine predictor factors of the coping used at Time 2, ten categorical regressions (CATREG analysis) were computed in order to verify which of these two variables had greater explanatory power of the coping strategies used at Time 2: whether the coping strategies used at Time 1 (coping consistency) or the stressor expressed by adolescents at Time 2 (coping specificity). As dependent variables each one of the strategies of the CRI-Youth at Time 2 was introduced; and as independent variables, both the corresponding coping strategies of Time 1 and the stressors reported by respondents at Time 2. Coping strategies at Time 1 and coping strategies at Time 2 were introduced as numeric variables, and the stressors of Time 2 were introduced as nominal variable. The different types of stressor cited by adolescents were: «relationship problems», «problems in school achievement», «diseases and accidents», «suicides and deaths of relatives or friends», «victimization», «parents' divorce»

	Means	s and SD of coping stra	7 tegies at Time 1 and T	<i>Table 1</i> Time 2 for all, for girls	and for boys. Influence	ce of stressor	
		No control	of stressor	Same stressor in T	Time 1 and Time 2	Different stressor in	Time 1 and Time 2
		Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Coping strategies	Group	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
	All	9.78 (4.18)	10.07 (4.04)	10.55 (3.51)	10.21 (4.22)	9.60 (4.32)	10.03 (4.01)
Logical Analysis	Girls	10.04 (4.04)	10.35 (4.05)	11.24 (2.75)	10.92 (3.44)	9.67 (4.29)	10.19 (4.21)
	Boys	9.48 (4.36)	9.71 (4.05)	9.22 (4.42)	8.85 (5.24)	9.52 (4.37)	9.85 (3.78)
Positive Reappraisal Seeking Guidance Problem Solving Cognitive Avoidance	All	9.16 (4.13)	8.69 (4.07)	8.65 (3.82)	8.32 (3.36)	9.29 (4.20)	8.78 (4.22)
	Girls	9.33 (4.10)	8.72 (4.34)	8.88 (3.69)	8.58 (3.40)	9.47 (4.22)	8.76 (4.56)
	Boys	8.96 (4.20)	8.66 (3.74)	8.24 (4.11)	7.85 (3.32)	9.09 (4.21)	8.81 (3.81)
	All	7.36 (4.36)	8.09 (4.23)	7.74 (4.73)	8.67 (4.39)	7.26 (4.26)	7.95 (4.19)
Positive Reappraisal Seeking Guidance Problem Solving Cognitive Avoidance Acceptation Resignation	Girls	8.26 (4.26)	8.86 (4.30)	8.59 (4.69)	9.89 (4.08)	8.16 (4.13)	8.66 (4.34)
C C	Boys	6.25 (4.27)	7.03 (3.86)	6.12 (4.49)	6.40 (4.12)	6.26 (4.21)	7.14 (3.87)
Problem Solving	All	9.50 (4.43)	9.66 (4.36)	9.91 (4.61)	9.58 (4.08)	9.40 (4.38)	9.68 (4.43)
	Girls	9.65 (4.30)	9.99 (4.45)	10.36 (4.56)	10.23 (3.70)	9.42 (4.23)	9.99 (4.62)
C C	Boys	9.33 (4.52)	9.19 (4.31)	9.02 (4.70)	8.35 (4.57)	9.38 (4.57)	9.34 (4.20)
Cognitive Avoidance	All	9.00 (4.08)	8.43 (4.11)	8.92 (3.78)	8.96 (4.02)	9.10 (4.16)	8.30 (4.13)
	Girls	9.13 (4.06)	8.61 (4.20)	9.52 (3.92)	9.33 (3.72)	9.00 (4.09)	8.42 (4.31)
0	Boys	8.99 (4.16)	8.19 (4.03)	7.82 (3.32)	8.28 (4.56)	9.22 (4.26)	8.17 (3.93)
Problem Solving Cognitive Avoidance Acceptation Resignation Seeking Rewards	All	7.81 (3.89)	7.43 (4.30)	7.73 (3.95)	7.93 (4.41)	7.83 (3.88)	7.30 (4.28)
	Girls	7.87 (3.98)	7.46 (4.23)	7.75 (3.99)	8.14 (4.15)	7.91 (4.02)	7.15 (4.29)
	Boys	7.74 (3.74)	7.49 (4.37)	7.71 (3.98)	7.54 (4.94)	7.75 (3.73)	7.48 (4.28)
	All	6.49 (4.50)	5.25 (4.04)	6.90 (4.35)	5.85 (4.06)	6.39 (4.54)	5.10 (4.03)
Seeking Rewards	Girls	6.47 (4.45)	5.35 (4.02)	7.29 (4.18)	6.13 (4.07)	6.21 (4.56)	4.98 (4.06)
	Boys	6.52 (4.29)	5.24 (3.89)	6.14 (4.70)	5.34 (4.09)	6.59 (4.53)	5.25 (4.01)
	All	5.38 (4.06)	5.78 (4.19)	5.99 (4.01)	6.60 (3.99)	5.23 (4.06)	5.57 (4.22)
Seeking Guidance Problem Solving Cognitive Avoidance Acceptation Resignation Seeking Rewards Emotional Discharge	Girls	6.35 (4.11)	6.97 (4.28)	7.04 (3.68)	7.61 (3.96)	6.14 (4.22)	6.76 (4.34)
	Boys	4.17 (3.64)	4.33 (3.62)	3.99 (3.91)	4.76 (3.40)	4.21 (3.63)	4.20 (3.65)
Approach responses	All	35.91 (12.36)	36.56 (12.54)	36.88 (11.59)	36.76 (11.84)	35.65 (12.56)	36.51 (12.72)
	Girls	37.39 (11.47)	37.73 (12.91)	39.06 (10.42)	39.57 (9.74)	36.81 (11.98)	37.60 (13.61)
	Boys	34.15 (13.16)	34.40 (11.98)	32.51 (12.79)	31.16 (13.81)	34.45 (13.09)	35.29 (11.56)
	All	28.95 (10.92)	26.94 (11.46)	29.91 (10.70)	29.40 (11.93)	28.69 (10.98)	26.28 (11.27)
Avoidance responses	Girls	30.04 (11.14)	29.10 (11.56)	31.62 (10.46)	31.32 (11.37)	29.51 (11.39)	27.60 (11.55)
•	Boys	27.63 (10.38)	24.75 (10.96)	26.50 (10.59)	25.88 (12.39)	27.83 (10.51)	24.78 (10.79)

		(02).	Z test for corre	elation's differe	ences	2 (01) and	nen it is unie		ind Time 2
Pearson correlation between Time 1 and Time 2 Differences between correlations Z te								test	
Same stressor at Time 1 and Time 2 (G1)			Different stressor at Time 1 and Time 2 (G2)			Between G1 Girls/Boys		Between G2 Girls/boys	
l n= 71	Girls n= 46	Boys n= 25	All n= 287	Girls n= 153	Boys n= 134	Z	р	Z	р
.34**	.35*	.25	.28***	24**	33***	.42	.34	.82	.21
.20	.24	.13	.25***	.29***	.20*	.44	.33	.81	.21
48***	.54***	.19	.25***	.29***	.15	1.57	.05	1.23	.11
.32**	.43**	.06	.16*	.21*	.10	1.53	.06	.94	.17
.31**	.28*	.34*	.22***	.21*	.23**	.25	.40	.09	.47
.30*	.31*	.28*	.23***	.30***	.14	.13	.45	1.41	.07
.35**	.30*	.43*	.25***	.32***	.16	.62	.27	1.42	.07
51***	.46**	.43*	.43***	.45***	.30**	.24	.41	1.46	.07
47***	.55***	.22	.31***	.37***	.24**	1.51	.06	1.20	.11
44***	.42*	.42*	.38***	.46***	.27**	.00	.50	1.84	.03
	Sam a 1 n= 71 34** .20 18*** 32** 31** .30* 35** 51*** 47*** 44***	Pearson Same stressor at Tin and Time 2 (G1) Girls n= 46 34** .35* .20 .24 18*** .54*** 32** .43** .31** .28* .30* .31* .35** .30* .51*** .46** .47*** .55*** .44*** .42*	Pearson correlation betw Same stressor at Time 1 and Time 2 (G1) Ine 71 Girls n= 46 Boys n= 25 34** .35* .25 .20 .24 .13 18*** .54*** .19 32** .43** .06 31** .28* .34* .30* .31* .28* .30* .31* .28* .35** .30* .43* .51*** .46** .43* .47*** .55*** .22 .44*** .42* .42*	Pearson correlation between Time 1 and Same stressor at Time 1 Differ and Time 2 (G1) Ine 71 Girls n= 46 Boys n= 25 All n= 287 34** .35* .25 .28*** .20 .24 .13 .25*** .20 .24 .13 .25*** .8*** .54*** .19 .25*** .32** .43** .06 .16* .31** .28* .34* .22*** .30* .31* .28* .23*** .30* .31* .28* .23*** .51*** .46** .43* .43*** .47*** .55*** .22 .31*** .42* .42* .38*** .38***	Pearson correlation between Time 1 and Time 2 Different stressor at Time 1 and Time 2 (G2) Ine 71 Girls n= 46 Boys n= 25 All n= 287 Girls n= 153 34** .35* .25 .28*** 24** .20 .24 .13 .25*** .29*** .8*** .54*** .19 .25*** .29*** .32** .43** .06 .16* .21* .30* .31* .28* .23*** .30*** .30* .31* .28* .23*** .30*** .35** .30* .43* .25**** .32*** .46** .43* .43*** .45*** .47*** .55*** .22 .31*** .37*** .44*** .42* .42* .38*** .46***	Pearson correlation between Time 1 and Time 2 Same stressor at Time 1 and Time 2 (G1) Different stressor at Time 1 and Time 2 (G2) In = 71 Girls n= 46 Boys n= 25 All n= 287 Girls n= 153 Boys n= 134 34** .35* .25 .28*** 24** .33*** .20 .24 .13 .25*** .29*** .20* .8*** .54*** .19 .25*** .29*** .15 .32** .43** .06 .16* .21* .10 .31** .28* .23** .30*** .14 .35** .30* .43* .25*** .32*** .16 .51*** .46** .43* .43*** .45*** .30** .47*** .55*** .22 .31*** .37*** .24** .42* .42* .38*** .46*** .27**	Pearson correlation between Time 1 and Time 2 Different stressor at Time 1 and Time 2 (G2) Same stressor at Time 1 (G1) Different stressor at Time 1 and Time 2 (G2) Betwee Girls/ and Time 2 (G1) Different stressor at Time 1 and Time 2 (G2) Betwee Girls/ and Time 2 (G1) Different stressor at Time 1 and Time 2 (G2) Betwee Girls/ 34** .35* .25 .28*** .24** .33*** .42 .20 .24 .13 .25*** .29*** .20* .44 18*** .54*** .19 .25*** .29*** .15 1.57 .32** .43** .06 .16* .21* .10 1.53 .31** .28* .23*** .30*** .14 .13 .35** .30* .43* .25*** .32*** .30** .24 .47*** .46** .43* .43*** .45*** .30** .24 .47*** .42* .22 .31***	Differences between Time 1 and Time 2 Differences between G1 Girls/Boys Same stressor at Time 1 Girls n= 46 Boys n= 25 All n= 287 Girls n= 153 Boys n= 134 Z p 34** Bifferent stressor at Time 1 Between G1 Girls/Boys and Time 2 (G1) Z p 34** Between G1 Girls/Boys 34** Different stressor at Time 1 Between G1 Girls/Boys 34** Different stressor at Time 1 Between G1 Girls/Boys 34** Different stressor at Time 1 Between G1 Girls/Boys Colspan="4">C p Different stressor at Time 1 Between G1 Girls/Boys Different stressor at Time 1 Stressor at Time 1 Different stressor at Time 1 Between G1	Differences between Time 1 and Time 2 Differences between correlations Z Same stressor at Time 1 and Time 2 (G1) Different stressor at Time 1 and Time 2 (G2) Between G1 Girls/Boys 34** .55 .25 .28 .24 .33 .81 18*** .54*** .19 .25*** .29*** .15 1.57 .05 1.23 31** .28* .34* .22*** .21* .23** .25 .40 .09 .30* .31* .28* .23*** .30** .14 .13

* *p*<.05; ** *p*<.01; *** *p*<.001

<i>Table 3</i> Categorical regressions of Time 1 coping strategies and Time 2 stressors (independent variables) on the coping strategies at Time 2 (dependent variables)									
	Independent variables								
Coping Strategies Time 2 Dependent variables	Coping Time 1				5	Coping Time 1 + stressor Time 2			
	Group	R ² Adjusted	Beta	F	R ² Adjusted	Beta	F	R ² Adjusted total	
T .: A Iviala	All	.08	.28	30.44***	0.4	26	25.74***	.11	
Logical Analysis	Girls	.06	.26	14.46**	.02	25	13.30**	.08	
	Boys	.07	.29	15.42**	.06	36	22.78**	.13	
	All	.05	.24	21.95***	.02	23	20.54***	.08	
Positive Reappraisal	Girls	07	.30	17.85**	02	.21	8.75**	.06	
	Boys	.07	.20	6.85*	.04	37	22.78**	.10	
	All	.08	.29	31.63***	.01	21	16.92***	.09	
Seeking Guidance	Girls	.11	.32	22.66**	.05	30	20.40**	.16	
Stening Street	Boys	.02	.16	4.24*	.02	32	15.66**	.04	
	A11	02	15	7 86*	06	- 31	23 38***	08	
Drohlem Solving	Girls	.02	17	5 37*	08	- 36	24 78**	12	
1100iciii 5017ing	Boys	.08	.10	1.70	.01	40	24.72**	.09	
	A 11	05	23	10 37***	01	- 22	17 80***	06	
Comitive Avoidance	Girls	.05	.23	12.52	02	22	17 43**	.00	
Cognitive Avoidance	Boys	04	.23	8.17*	.02	18	4.96**	.02	
		05			05	10	10 40***		
A	Ali	.05	.22	10 65**	.05	18	12.42***	.08	
Acceptation - Resignation	Boys	.09	.29	3 51	.09	.54	20.18	.10	
	воуз	.02	.1.7	5.51	.02	.31	15.10	.04	
	All	.06	.26	21.74***	.03	14	6.58***	.07	
Seeking Rewards	Girls	.09	.33	20.75**	.02	30	17.22**	.12	
	Boys	.05	.18	4.81*	.02	34	16.67**	.06	
	All	.19	.43	77.65***	.03	11	4.87**	.21	
Emotional Discharge	Girls	.17	.43	43.60**	.02	26	16.07**	.19	
-	Boys	.04	.28	13.46**	.08	.31	16.15**	.13	
	All	.10	.31	36.09***	.06	25	22.31***	.16	
Approach coping	Girls	.15	.36	26.06**	.05	27	14.95**	.18	
	Boys	.06	.22	8.11*	.05	36	20.98**	.11	
	Δ11	16	41	50 15***	03	- 11	4.2*	17	
Avoidance coping	Girls	21	53	53 13**	.05	- 31	21 44**	27	
	Boys	.04	.29	12.98**	.08	.34	16.61**	.12	

and «self-guilt». These analyses were conducted for the whole group and independently for girls and for boys. See table 3.

The variance explained in the coping strategies used at Time 2 by the independent variables was generally low in the case of boys and never surpassed 13%. Among girls, the variances explained for the independent variables were higher, reaching 27% of the variance for Avoidance coping, 19% for Emotional Discharge and 18% for Approach coping. For the most part, the strategies used by the girls at Time 1 had slightly more predictive power of the strategies used at Time 2 than the stressor reported at Time 2. Among boys, few differences were observed regarding the explanatory power of the two independent variables. These data may indicate that for girls coping has a slightly more dispositional than contextual component.

Discussion

The first objective of this study was to analyze the temporal stability and the consistency of coping answers among adolescents. The results of repeated measures tests (group stability and consistency) indicated that coping remains quite stable over time in the ages analyzed, even when the stressor to face was different. Approach coping was somewhat more stable than avoidance coping which showed a decline with time, probably due to the fact that the participants were older at the second administration of the test. This finding, in main lines, was congruent with results reported by Hampel and Petermann (2005) who pointed out that developmental changes were not observed in problem-focused coping, conceptually similar to approach coping, but were observed in some emotion-focused coping strategies, specially in resignation and distraction/recreation, this last very similar to that of Seeking Alternative Rewards. Amirkhan and Auyeung (2007) stated that Avoidance coping declined with age. Our data partially agree with the results of Compas et al. (1988b) who pointed out that problem-focused coping was relatively stable, whereas emotionfocused coping (conceptually similar to avoidance coping) was less stable. However, while these authors noted an increase with age in avoidance coping, our study noted a decrease.

Based on the results of correlations we concluded that the within-individual stability of coping over a 17- month interval was between low and moderate. For both genders one of the most stable strategies was Emotional Discharge. These results, in main lines, are similar to those reported by Moos (1993) after an interval of about 12 to 15 months and also to those of Compas et al. (1988b) after a 9-month interval. Girls showed slightly more stable self-reported coping answers than boys. These results are similar to those found by Moos (1993) and by Erickson, Felton and Steiner (1997) also using the CRI-Youth. Specifically, girls denoted more stable Avoidance coping and Seeking Guidance than boys. Coping stability in girls, especially that of avoidance coping, could have a significant impact at psychopathological level, as the bibliography indicates that there is a link between avoidance coping and psychological symptomatology.

The results of the correlations and those of the repeated measures tests were different; this would indicate that although at grouplevel coping remained stable over time, there was considerable variability among individuals. This variability among individuals in their degree of coping consistency was noted by Compas et al. (1988a) when affirming that some individuals display more stability in coping than others.

Similar to previous findings (e.g., Compas et al., 1988a; Compas et al., 1988b; Jaser et al., 2007) the consistency of coping answers across stressors was between low and moderate, but with some differences according to gender. In our study the girls showed more consistency than the boys in their use of avoidance coping when faced to different types of stressors. These results could suggest that girls, rather than boys, may have their own preferred method to cope across stressors. Moreover, our results highlighted the fact that among the girls avoidance coping showed as much temporal stability as cross-situational consistency, while approach coping showed more stability than consistency. Among the boys, avoidance coping denoted more stability than consistency, and approach coping both, low stability and low consistency. These results, in main lines, are similar to those reported by Compas et al. (1988a) when they concluded that coping had moderate stability in response to the same stressor over time and low consistency across two different types of stressors. Our results are also in agreement with those of Spirito, Stark, Gil and Tyc (1995) who pointed out that some coping strategies are used in a similar way across different stressors, while others vary from stressor to stressor. It could be concluded that coping has both a specific and a general component as reported by Frydenberg and Lewis (1994).

The second objective of our study was focused on predicting the coping that would be used at Time 2. It should be noted that the possibility to predict which coping strategies would be used after 17 months is low to moderate, and depends both on the specific type of strategy and on the gender of participants. In general, Avoidance coping was more predictable than that of Approach, and the most predictable strategy was Emotional Discharge. Most of the time, the coping strategies which would be used in future were more predictable for girls than for boys. Among girls avoidance coping was especially predictable and 27% of its variance can be explained. It is also important to highlight the fact that the greatest contribution to this variance is due to the avoidance coping used in the past; which means that the strategies girls had previously used were a slightly more powerful predictor of the coping strategies they would use in the future than the current stressor.

This data may indicate that among girls coping could have a certain stylistic or dispositional component, especially avoidance coping. Our results were not totally in agreement with those provided by Stewart and Schwarzer (1996) for whom the majority of coping responses were almost unpredictable. According to our data, Emotional Discharge, Approach coping and Avoidance coping in girls explained between 18% and 24% of the coping that would be used in the future, percentages which are not negligible. The influence of avoidance coping used in the past on the avoidance coping to be used in the future may have therapeutic implications, on account of the relation between the use of coping and psychological well-being. (González-Barron, Montoya-Castilla, Casullo, & Bernabéu, 2002). This repetition of patterns of coping may increase girls' vulnerability when facing stressing situations.

In short, coping in adolescence remains quite stable over a 17- month period at group level but with considerable individual differences. Consistency across stressors is between low and moderate. Some coping strategies denote more specificity and others are more general o stylistic. Girls showed slightly more stability in approach coping and more consistency in avoidance coping than boys. The coping to be used in the future is more predictable in girls than in boys.

This study has certain limitations. One refers to the small size of the group which reported the same stressor at Time 1 and Time 2; this fact may lead to a type II error and does not allow generalizations, only estimations. Another limitation of our study is that, although the type of stressor has been controlled (i.e., relationship problems, problems at school, health problems...) the personal inner experience that a subject may have when facing the same stressor over time could be different, since the problems are rarely repeated under exactly the same circumstances, neither internal nor external. Likewise, in retrospective self-report, there is a tendency to see the past through the filter of the present, which may affect the stability found in our study. Finally, the consistency across-stressors analyzed in our study involved a temporal element because these stressors occurred at two different temporal moments. Therefore, it can be added to the effect of variability of the stressor, the effect of elapsed time. In fact, any consistency results reported should be tempered with the admission that temporal differences occur simultaneously.

Despite these limitations, this work has certain strong points: it is one of the few existing longitudinal studies about Spanish adolescents analyzing the stability of the coping answers and which covers a relatively wide space of time. Likewise, the sample used was quite broad and allowed differentiation of the results according to gender. Another strong point is having analysed predictive variables of coping to determine whether coping has a more contextual or stylistic component. This research fills an important gap in the study of the stability of coping in Spanish teenagers.

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References

- Amirkhan, J., & Auyeung, B. (2007). Coping with stress across the lifespan: Absolute vs. relative changes in strategy. *Journal of Applied Developmental Psychology*, 28(4), 298-317.
- Aupperle, D.R. (1995). Sibling death in adolescence: The relationship of coping responses to adjustment, stressor type and age. *Dissertation Abstracts International Section-B Sciences and Engineering*. 56(2B): 1098.
- Carver, C.S., & Scheier, M.F. (1994). Situational coping and coping dispositions in a stressful transaction. *Journal of Personality and Social Psychology*, 66(1), 184-195.
- Compas, B.E., Forsythe, C.J., & Wagner, B.M. (1988a). Consistency and variability in causal attributions and coping with stress. *Cognitive Therapy and Research*, 12(3), 305-320.
- Compas, B.E., Malcarne, V.L., & Fondacaro, K.M. (1988b). Coping with stressful events in older children and young adolescents. *Journal of Consulting and Clinical Psychology*, 56, 405-411.
- Erickson, S., Feldman, A.S., & Steiner, H. (1997). Defense reactions and coping strategies in normal adolescents. *Child Psychiatry and Human Development*, 28, 45-57.
- Forns, M., Amador, J.A., Kirchner, T., Gómez, J., Muro, P., & Martorell, B. (2005). Psychometric properties of the Spanish version of the Moos Coping Responses Inventory for Youth. *Psychological Reports*, 97, 777-789.
- Forns, M., Amador, J.A., Kirchner, T., Martorell, B., Zanini, D., & Muro, P. (2004). Sistema de codificación y análisis diferencial de los problemas de los adolescentes. *Psicothema*, 16(4), 646-653.
- Frydenberg, E., & Lewis, R. (1994). Coping with different concerns: Consistency and variation in coping strategies used by adolescents. *Australian Psychologist*, 29(1), 45-49.
- Frydenberg, E., & Lewis, R. (1997). Coping with stresses and Concerns during Adolescence. A longitudinal Study. Paper presented at the Annual Meeting of the American Educational Research Association Conference (Chicago, IL, March 24-28, 1997)
- Frydenberg, E., & Lewis, R. (2000). Teaching Coping to Adolescents: When and to Whom? *American Educational Research Journal*, 37(3), 727-745.
- González- Barrón, R., Montoya-Castilla, I., Casullo, M., & Bernabéu, J. (2002). Relación entre estilos y estrategias de afrontamiento y bienestar psicológico en adolescentes. *Psicothema*, 14(2), 363-368.

- Griffith, M.A., Dubow, E. F., & Ippolito, M.F. (2000). Developmental and cross-situational differences in adolescents' coping strategies. *Journal* of Youth and Adolescence, 29, 183-204.
- Hampel, P., & Petermann, F. (2005). Age and Gender Effects on Coping in Children and Adolescents. *Journal of Youth and Adolescence*, 34(2), 73-83.
- Herman-Stahl, M., Stemmler, M., & Petersen, A.C. (1995). Approach and avoidant coping: Implications for adolescent health. *Journal of Youth* and Adolescence, 24, 649-665.
- Hollingshead, A.B. (1975). Four factor index of social status. Unpublished manuscript, Yale University, New Haven, CT.
- Jaser, S.S., Champion, J.E., Reeslund, K.L., Keller, G., Merchant, M.J., Benson, M., & Compas, B.E. (2007). Cross-situational coping with peer and family stressors in adolescent offspring of depressed parents. *Journal of Adolescence*, 30, 917-932.
- Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal and coping. New York, Springer.
- Moos, R., Holahan, C.J., & Beutler, L.E. (2003). Dispositional and contextual perspectives on coping: Introduction to the special issue. *Journal of Clinical Psychology*, *59*, 1257-1259.
- Moos, R. (1993). Coping responses inventory Youth-form. Professional Manual. Odessa, Florida: PAR Psychological Assessment Resources.
- Ptacek, J.T., Pierce, G.R., & Thompson, E.L. (2006). Finding evidence of dispositional coping. *Journal of Research in Personality*, 40, 1137-1151.
- Seiffge-Krenke, I., & Beyers, W. (2005). Coping Trajectories from Adolescence to Young Adulthood: Links to Attachment State of Mind. *Journal of Research on Adolescence*, 15(4), 561-582.
- Seiffge-Krenke, I., & Klessinger, N. (2000). Long-Term Effects of Avoidant Coping on Adolescent's Depressive Symptoms. *Journal of Youth and Adolescence*, 29(6), 617-629.
- Skinner, E.A., & Zimmer-Gembeck, M.J. (2007). The development of Coping. Annual Review of Psychology, 58, 119-144
- Spirito, A., Stark, L.J., Gil, K.M., & Tyc, VL. (1995). Coping with everyday and disease related stressors by chronically ill children and adolescents. *Journal* of the American Academy of Child and Adolescent Psychiatry, 34, 283-290.
- Stewart, S.M., & Schwarzer, R. (1996). Stability of coping in Hong Kong Medical Students: A longitudinal Study. *Personality and Individual Differences*, 20, 245-255.
- Terry, D.J. (1994). Determinants of coping: The role of stable and situational factors. Journal of Personality and Social Psychology, 66, 895-910.