

COPING ASSESSMENT IN ADOLESCENTS

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ABSTRACT

The aim of this work was to obtain an abridged form of the Adolescent Coping Scale (Spanish version) that included items representative of the various factorial dimensions identified as stable. The scale (80 items) was administered to 800 Argentine adolescents. Factor analyses, principal axes and oblimin solution, were performed. An abridged scale was obtained, consisting of 46 items that were grouped into 11 dimensions: Cognitive Redefinition, Self-Blame, Fatalism, Evasion Through Amusement, Problem-Focused Coping (which includes requests for information and action), Evasion Through Physical Activity, Emotional Support, Emotional Discharge and Somatization, Anxiety, Isolation, and No Action. The reliability coefficients were found to be satisfactory.

Lazarus developed the Ways of Coping Checklist (WCC) in the 1970s. It was based on the transactional model of stress, which posited two types of coping: problem-focused and emotional regulation (Lazarus, 1991). This instrument has always had a drawback: the number of factors obtained changes from one sample to the next or from one stressor to another (Parker & Endler, 1992). This seems to be a common problem with the measurement of coping, however, and thus it underscores an unresolved issue: disposition versus situation. Researchers have been advised to adjust the WCC to the specific context of their study in order to attain maximum pairing between stress experiences and types of coping.

Coping with stress should be different at the various stages of life. During adolescence, boys and girls face several challenges, such as forming bonds with peers, differentiating themselves from their family, and moving on to an adult identity. Frydenberg and Lewis (1990) de-

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signed a coping questionnaire, the Adolescent Coping Scale, in order to identify coping strategies used to deal with stress during adolescence. It is based on the WCC, and it provides information on 18 strategies grouped into three basic coping styles: problem-solving, relations with others, and unproductive. Pereña and Seisdedos produced a Spanish version of the scale in 1997.

In the present study, the Spanish version of the scale was administered. It proved to be extremely long; adolescents grew tired of it and became restless. In addition, the large number of dimensions made theoretical interpretation difficult. Further, the internal consistency of some of the dimensions was extremely low.

The aim of this work was to produce an abridged version of the scale, which would include items representative of the various factorial dimensions identified as stable. It was expected that the results would correspond to the dimensions proposed in the model by Billings and Moos (1981; Moos & Billings, 1982), who divided coping processes into three categories (assessment-focused, problem-focused, and emotions-focused), thus providing a valuable theoretical approach (Schwarzer & Schwarzer, 1995).

METHOD

Subjects

The Spanish version of the Adolescent Coping Scale (80 items) was administered to 800 males and females aged 13–15 years. They were from middle-class families and attended secondary schools in the city of Buenos Aires, Argentina. They rated each item on a scale ranging from 1 (it never happens to me) to 5 (it happens very often), with a sixth problem-irrelevant option (Waller, 1989; Ben Porath, Waller, & Butcher, 1991; Richaud de Minzi & Sacchi, 2001).

Statistical Analysis

Exploratory factor analyses were carried out following the principal axis method, oblimin rotation. The anti-image correlation matrix, Kaiser-Meyer-Olkin adequacy sample measure (KMO), and Bartlett's test of sphericity had been calculated previously in order to assess the possibility of a factor analysis of items. Satisfactory results were obtained, since the matrix diagonal ranged between .63 and .93, with a mean of .83; other values indicating partial correlation were around 0. On the other hand, KMO was equal to .86 and the test of sphericity was equal to 14879.93, $p = .000$.

RESULTS

In accord with Frydenberg and Lewis, for the first factor analysis the cut criterion to determine the number of factors was set at 18. That notwithstanding, it was found that Factor 18 had an eigenvalue of .44, which was a sign of overfactoring. In addition, at least three factors proved obviously residual.

In view of these results, items showing greater weight in the most clearly defined factors were analyzed. At the same time, 14 items that did not have sufficient weight in any of the 18 factors were dropped. Lastly, 46 items were selected and factor analyzed, with an eigenvalue equal to 1 as the cut criterion to determine the number of factors. The result was 12 factors, one of them being residual. The correlation matrix had already been studied, resulting in satisfactory values (diagonal of anti-image matrix between .54 and .82 with a mean of .81 and partial correlation values nearing 0, $KMO = .81385$ and test of sphericity = 6823.8518, $p = .000$). Taking these results into account, all 46 items were factor analyzed, this time to 11 factors. The factors were determined using an empirical criterion, namely on the basis of items with weights equal to or greater than .30, because the statistical criterion (Stevens, 1986) was very low (i.e., weight equal to .18 using the .01 significance level) due to the sample size.

The following coping dimensions were obtained: Cognitive Redefinition (Factor 1); Self-Blame (Factor 2); Fatalism (Factor 3); Evasion Through Amusement (Factor 4); Problem-Focused Coping (Factor 5), which includes requests for information and action; Evasion Through Physical Activity (Factor 6); Emotional Support (Factor 7); Emotional Discharge and Somatization (Factor 8); Anxiety (Factor 9); Isolation (Factor 10); and No Action (Factor 11). (See Table 1.)

Table 1 shows that several items (e.g., 34, 38, 40, 60, and 72) were factorially complex (i.e., they had weights of .30 or above on more than one factor). Nevertheless, correlations between oblique factors were not high, which indicates satisfactory independence among them.

The internal consistency of items corresponding to each factor was analyzed. Cronbach's alphas ranged from .56 to .73 (see Table 1).

Items corresponding to these factors were analyzed from the point of view of Billings and Moos's model, which is based on the scarcely exact division of coping into problem-focused, emotion-focused, and appraisal-focused. Within these three wide categories, they define nine dimensions: Logical Analysis, Cognitive Redefinition, and Cognitive Evasion (appraisal-focused coping); Seek Information or Advice, Take Problem-Solving Action, and Develop Alternative Rewards (problem-

Table 1

Factor Analysis of the Abridged Form of the Adolescent Coping Scale
(Oblique Solution)

Items	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
51. Try to have joyful approach to life	.67	-.07	.16	.12	.18	.18	.26	-.03	.23	.06	-.11
33. Look on the bright side of things	.60	-.02	.16	.18	.32	.18	.20	-.06	.19	.01	-.04
77. Presume that things will go better	.54	.10	.23	.12	.11	.15	.26	.03	.21	-.05	-.07
38. Take into account different points of view	.34	.07	.10	.11	.32	.18	.16	.11	.28	.11	-.04
66. Blame oneself	.03	.78	.06	-.05	.06	.00	.10	.25	.08	.23	.12
48. Feel guilty	.04	.76	.08	.01	.14	.07	.06	.25	.12	.25	.12
12. Find fault in oneself	-.06	.44	.07	-.00	.12	-.04	.18	.29	.13	.23	.13
14. Let God see to the problem	.05	.00	.73	-.00	-.02	.03	.05	.02	-.03	.08	.11
68. Ask God to look after oneself	.29	.10	.64	-.11	.07	.11	.14	.03	.15	-.08	-.05
50. Read a holy or religious book	.12	.04	.47	-.16	.13	.21	.02	.07	.11	.00	.00
25. Wish for a miracle to happen	.19	.21	.39	.05	.04	.01	.26	.18	.04	.08	.06
35. Go out and enjoy oneself	.16	.04	.06	.60	.16	.17	.15	.10	-.00	.06	.23
5. Meet friends	.00	-.00	-.06	.47	.20	.10	.25	.08	.18	-.07	-.00
75. Spend more time with one's boyfriend or girlfriend	.23	.08	.05	.47	.15	.19	.27	.26	.07	.04	.00
41. Engage in a particular intimate relationship	.18	.06	.07	.30	.22	.23	.28	.17	.12	.13	.02
32. Ask for help and advice	.28	.15	.12	.15	.70	.26	.26	.16	.12	-.07	-.11
16. Ask qualified people for advice	.12	.09	.02	.14	.57	.21	.16	.08	.13	-.10	-.07

Table 1 continues

Table 1 (continued)

Items	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
71. Seek support from others	.33	.01	.11	.21	.56	.21	.23	.11	.18	-.22	-.15
19. Talk to other people in order to back each other	.25	.04	.12	.29	.52	.08	.27	.12	.19	-.13	-.13
72. Think of different ways to solve the problem	.36	.19	.11	.04	.42	.14	.26	.15	.32	.17	-.24
20. Work at solving the problem to the best of one's ability	.18	.11	.03	.17	.41	.18	.22	.04	.31	.21	-.26
2. Focus on the cause of the problem	-.01	.11	-.08	.06	.36	.13	.12	.08	.23	.17	-.26
54. Go to the gym	.10	.04	.11	.16	.19	.62	.07	.10	.09	-.00	.09
36. Keep fit and healthy	.27	-.06	.11	.13	.17	.58	.28	-.16	.21	.05	-.07
18. Play sports	.17	.01	.08	.13	.17	.56	.17	-.13	.15	-.00	.02
34. Seek professional help or advice	.10	.09	.14	-.04	.32	.37	-.02	.22	.08	.03	.11
24. Pay more attention to the relationship with others	.22	.06	.11	.21	.26	.15	.55	.15	.24	.03	-.03
60. Improve one's personal relationship with others	.36	.14	.11	.21	.23	.19	.52	.15	.28	-.00	-.12
6. Make a good impression on people	.14	.12	.11	.18	.12	.10	.49	.06	.18	.15	-.11
42. Care and concern for one's relationship with others	.21	.11	.10	.20	.19	.15	.46	.10	.14	.01	-.08
79. Concentrate on one's work	-.03	.20	.02	.14	.06	-.05	.07	.64	.02	.16	.16

Table 1 continues

Table 1 (continued)

Items	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
63. Eat, drink or sleep more than usual	.01	.25	.02	.19	.14	.05	.09	.52	.08	.15	.09
78. Have headaches or stomachaches	.00	.32	.14	-.08	.09	-.01	.17	.51	.04	.03	.14
9. Cry or scream	.02	.25	.13	.08	.14	-.04	.22	.50	.02	.08	.09
74. Feel anxious about the future of the world	.20	.08	.14	.05	.13	.18	.11	.15	.55	.07	-.04
4. Worry about one's future	.11	.06	.02	.09	.15	.07	.25	-.12	.52	.05	-.15
58. Worry about what may happen to oneself	.36	.19	.12	.05	.14	.12	.26	.05	.52	.05	-.13
40. Worry about the current situation	.24	.22	.11	-.01	.35	.11	.33	.13	.47	.08	-.31
67. Not allow others to know how one feels	.09	.37	.10	-.00	-.10	-.02	.05	.16	.09	.60	.19
49. Keep others from learning what one is worrying about	.08	.29	.08	-.00	-.08	.05	.12	.16	-.01	.59	.16
13. Keep one's feelings to oneself	-.08	.15	.03	.02	-.16	-.15	.08	.06	.05	.41	.18
31. Avoid being with people	-.09	.16	.03	-.12	-.02	.15	-.14	.22	-.04	.36	.27
11. Ignore the problem	-.03	.05	.02	.07	-.09	.04	-.04	.01	-.10	.12	.54
26. Simply give up	-.08	.18	.04	.03	-.06	.01	-.07	.29	-.03	.12	.53
29. Put the problem out of one's mind	-.08	.13	.00	.06	-.08	.09	-.11	.14	-.02	.17	.50
43. Hope that the problem will sort itself out	.04	.08	.17	.08	-.04	.09	.00	.14	-.20	.08	.48
Eigenvalue	5.09	2.91	1.56	1.52	1.20	1.06	.72	.65	.61	.53	.41
Explained variance (%)	12.5	7.6	4.7	4.6	4.0	2.9	2.8	2.7	2.5	2.3	2.2
Cronbach's α	.65	.70	.62	.56	.73	.64	.62	.64	.62	.60	.60

Table 2

Factors/Items from the Abridged Form of the Adolescent Coping Scale (ACS)
Corresponding to Billings and Moos's Coping Dimensions

Abridged ACS	Billings & Moos's Coping Dimensions								
	Logical Analysis	Cognitive Redefinition	Cognitive Evasion	Seek Information	Action	Alternative Rewards	Affective Regulation	Resigned Acceptance	Emotional Discharge
F1	38	33, 51	77						
F2									12, 48, 66
F3			50					14, 25, 68	
F4			35			5, 41, 75			
F5	72			16, 19, 32, 71	2, 20				
F6				34		18, 36, 54			
F7						24, 60	6, 42		
F8									9, 63, 78, 79
F9								4, 40, 58, 74	
F10							13, 31, 49, 67		
F11			11, 29, 43						26

focused coping); Affective Regulation, Resigned Acceptance, and Emotional Discharge (emotion-focused coping). Factors found in the present study correspond to Billings and Moos's dimensions, as shown in Table 2.

DISCUSSION

This paper offers an abridged version of Frydenberg and Lewis's Adolescent Coping Scale, comprising 46 items and providing information on 11 dimensions of coping: Cognitive Redefinition, Self-Blame, Fatalism, Evasion Through Amusement, Problem-Focused Coping (which includes requests for information and action), Evasion Through Physical Activity, Emotional Support, Emotional Discharge and Somatization, Anxiety, Isolation, and No Action. Correlation among scales was low, which confirms their distinctiveness.

The Adolescent Coping Scale poses a problem which had already come up in Lazarus's WCC, as well as in all measurements of coping that are based on several factors (Schwarzer & Schwarzer, 1995). Such measures do not take into account theoretical interconnections between scales. Social support, for example, which the WCC rates as an independent strategy (but actually serves an array of purposes such as solving problems, obtaining information, and calming fears), is treated by Carver, Scheier, and Weintraub (1989) as both problem-focused and emotions-focused. This paper has taken factors that Frydenberg and Lewis call Social Support and Seeking Professional Help and included them in Factor 5 (Problem-Focused Coping), while the one they term Seeking Belonging has been linked to Factor 7 (Emotional Support). Two additional factors noted by Frydenberg and Lewis—Concentrating on Problem-Solving and Making an Effort to Achieve Success—have also been included in Factor 5 (Problem-Focused Coping).

The factor that Frydenberg and Lewis term Worrying has been called Anxiety here. Investing in Close Friends and Searching for Relaxing Activities have been summarized in Factor 4 (Evasion Through Amusement). Wishful Thinking, Lack of Coping, and Asking for Spiritual Advice were not included as such in the present Argentine analysis, but Tension Reduction, Ignoring the Problem, Self-Blame, Keeping It to Oneself, Seeing the Positive Side of Things, and Physical Relaxation corresponded to Emotional Discharge, No Action, Self-Blame, Isolation, Cognitive Redefinition, and Evasion Through Physical Activity. Social Action was not included because the items connected with it did not have a weight of .30 or above on any of the factors. This may

be due to the fact that this kind of activity is not very common among adolescents in Argentina.

Lastly, reliability coefficients found for the abridged Spanish version of the Adolescent Coping Scale (Frydenberg & Lewis, 1997) were satisfactory. It is important to keep in mind what Schwarzer and Schwarzer (1995) noted in connection with coping questionnaires: internal consistency is not always an adequate standard. Their rationale was that high stability is not desirable since individuals are expected to adapt their coping responses to the requirements of each particular situation.

In sum, an abridged form of the Adolescent Coping Scale has been developed. It seems to make more theoretical sense, at least in this study's Argentine sample, and it has demonstrated satisfactory internal consistency. Further, its administration is shorter—reducing adolescent boredom, which enhances validity—with no decrease in reliability.

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