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## MEASURING ADOLESCENT COPING STRATEGIES: A REVALIDATION OF THE ADOLESCENT COPING ORIENTATION FOR PROBLEM EXPERIENCES

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### ABSTRACT

*Over 1500 high school students responded to 54 items from Patterson and McCubbin's (1987) Adolescent Coping Orientation for Problem Experiences (A-COPE), which measures adolescent coping behaviours. Confirmatory Factor Analysis (CFA) was used to test and modify a model developed from an extensive literature review. The Adolescent Coping Strategies Scale (ACSS) emerged from the revalidation process and measures 10 first order coping strategies and three second or higher order factors. For researchers focussing on the use of coping mechanisms among adolescents, the ACSS promises to be a very useful instrument. It has sound construct validity and good reliability, as demonstrated by goodness-of-fit indices and squared multiple correlations.*

**Keywords:** Adolescence, Adolescent Coping Strategies Scale (ACSS), Coping, Confirmatory Factor Analysis

### WHAT IS COPING?

Coping refers to "the person's cognitive and behavioural efforts to manage (reduce, minimise, master, or tolerate) the internal and external demands of the person-environment transaction ... appraised as taxing or exceeding the person's resources" (Folkman, Lazarus, Gruen, & DeLongis, 1986, p. 572). The range of perspectives on coping with stress includes Lazarus' (1977) cognitively-oriented theory of coping, Selye's (1956) physiological perspective, Kobasa's (1979) transactional orientation, and the attributional perspectives of Bandura (1986), de Charms (1968), Rotter (1966), and Abramson, Seligman, and Teasdale (1978). Lazarus (1977) emphasised the importance of perceptions in determining and dealing with problems and identified the following coping mechanisms (some more appropriate than others depending on the situation): reappraisal, direct action on the stressor, using defence mechanisms, and direct control of one's

own emotions (Lazarus, 1977). In Selye's earlier work (e.g., Selye, 1956), the focus was on resistance and flight. In his later writings (e.g., Selye, 1979), however, he advocated pursuing valued life goals, positive thinking, and decisive action. Similar themes characterised the works of (a) Kobasa (1979) who associated a sense of challenge, commitment, and control with coping, (b) Bandura (1986) who focused on the importance of believing in one's own ability, de Charms (1968) and Rotter (1966) who emphasised taking responsibility for one's own actions, and (d) Abramson et al. (1978) who advocated developing a sense of personal power.

### COPING STRATEGIES AND THEIR EFFECTIVENESS

Lazarus and his associates (e.g., Folkman, Lazarus, Gruen, & DeLongis, 1986; Lazarus, 1974, 1993) identified two broad categories of coping: problem-focused coping that seeks to bring about

ameliorative change in the problem, and emotion-focused coping that focuses not on changing the problem but on altering the way one attends to, interprets, and feels about the problem (Thoits, 1986). Folkman, Lazarus, Gruen, & DeLongis (1986) reported that people typically use both types of coping in almost all stressful encounters. Problem-focused coping strategies range from "aggressive interpersonal efforts to alter the situation" to "cool, rational, deliberate efforts to problem solve" (p. 572), while emotion-focused strategies include "distancing, self-controlling, seeking social support, escape-avoidance, accepting responsibility, and positive reappraisal" (p. 572).

Other studies on coping have distinguished between positive (adaptive) and negative (maladaptive) coping strategies. Maddi (1981) classified coping strategies into two domains: avoidance coping and transformational coping. Avoidance coping was characterised by pessimistic cognitive appraisals and evasive actions and was regarded as being essentially negative. In contrast, transformational coping involved the use of more optimistic appraisals and deliberate actions to alter or reduce the impact of the stress-producing events and was regarded as being essentially positive. Jorgensen and Dusek (1990) also reported two major coping styles that were labelled "salutary effort" and "stress palliation." Salutary effort was considered to be more adaptive than stress palliation, with salutary coping including such strategies as making decisions, seeking social support, and talking about problems with one's family. Palliative coping included such strategies as verbal aggression, use of alcohol, and minimising the importance of the problem.

In an Australian study, Frydenberg and Lewis (1991) also distinguished between

positive and negative coping strategies and identified three styles of coping. Dealing with the problem and reference to others were regarded as functional, or effective, coping styles, while a group of strategies dealing with emotional responses were labelled as nonproductive coping and judged to be dysfunctional. Dealing with the problem involved "working at solving the problem while remaining optimistic, fit, relaxed, and socially connected" (p. 40). Reference to others involved using "peers, professionals, or deities" as problem-solving resources. Finally, nonproductive coping was seen as comprising a range of emotionally focused, nonproductive, avoidance-oriented coping strategies (e.g., worrying, engaging in wishful thinking, releasing tension, ignoring the problem, and keeping to oneself).

### MEASURING ADOLESCENT COPING STRATEGIES

A considerable number of inventories measure adolescent coping strategies within a multidimensional framework. Table 1 matches strategies from some inventories.

The coping subscales from these instruments appeared to fit into five main categories: Positively Addressing the Problem, Minimising the Problem, Avoiding the Problem, Emotional Responses to the Problem, and Seeking Social Support in Addressing the Problem. However, all of the inventories did not have subscales in all of these categories. For example, Tero and Connell's (1984) Academic Coping Inventory included subscales relating to Positively Addressing the Problem, Avoiding the Problem, and Emotional Responses to the Problem but did not include the categories of Minimising the Problem and Seeking Social Support in Addressing the Problem. Despite such variations in the specific orientations of

Table 1. Comparisons of subscales used to measure coping strategies

CATEGORIES	Plutchik (1980): Styles of Coping.  (Rim, 1987)	Tero & Connell (1984): Academic Coping Inventory  (Manzicopoulos, 1990)	Vitaliano et al. (1985): Ways of Coping Checklist (Revision)	Folkman & Lazarus (1985): Ways of Coping Checklist	Folkman et al. (1986): Ways of Coping (Revised)	Patterson & McCubbin (1987): A-COPE	Spinto et al. (1988): Kidcope  (Spinto et al., 1991)	Moos (1990): Coping Responses Inventory - Youth Form  (Verduyse & Chandler, 1992)	Madden et al. (1990): Ways of Coping with Sport	Frydenberg & Lewis (1993): Adolescent Coping Scale	Synthesized Coping Subscales
POSITIVELY ADDRESSING THE PROBLEM	Mapping  Replacement	Positive coping	Problem-focused	Problem-focused  Focusing on the positive	Planful problem-solving  Positive reappraisal	Developing self-reliance  Seeking spiritual support  Engaging in a demanding activity	Problem solving	Logical analysis  Taking problem-solving action  Positive reappraisal	General problem-focused  Focusing on the positive  Increased effort and resolve	Focus on solving the problem  Focus on the positive  Seek spiritual support  Work hard and achieve	Attempting to solve the problem  Focusing on the positive  Seeking spiritual support  Working hard
MINIMISING THE PROBLEM	Minimisation  Suppression  Reversal			Detachment	Distancing	Being humorous	Resignation  Cognitive restructuring	Resignation/acceptance	Detachment	Ignore the problem	Detachment

Table 1 (cont.). Comparisons of subscales used to measure coping strategies

CATEGORIES	Plutchik (1980): Styles of Coping.	Tero & Connell (1984): Academic Coping Inventory	Vitaliano et al. (1985): Ways of Coping Checklist (Revision)	Folkman & Lazarus (1985): Ways of Coping Checklist	Folkman et al. (1986): Ways of Coping (Revised)	Patterson & McCubbin (1987): A-COPE	Spinto et al. (1988): Kidcope	Moos (1990): Coping Responses Inventory - Youth Form	Madden et al. (1990): Ways of Coping with Sport	Frydenberg & Lewis (1993): Adolescent Coping Scale	Synthesized Coping Subscales
AVOIDING THE PROBLEM	Substitution	Denial coping	Avoidance  Wishful thinking	Keep-to-self  Wishful thinking	Escape-avoidance	Avoiding problems	Social withdrawal  Wishful thinking  Distraction	Cognitive avoidance  Seeking alternative awards	Denial  Wishful thinking	Keep-to-self  Wishful thinking  Seek relaxing diversions  Physical recreation	Avoiding the problem  Seeking diversions
EMOTIONAL RESPONSES TO THE PROBLEM	Fault-finding or blame	Projection coping  Anxiety amplification	Blamed self	Self-blame	Tension-reduction  Confrontive coping	Ventilating feelings	Emotional regulation  Blaming others  Self-criticism	Emotional discharge	Emotionality	Tension-reduction  Self-blame  Worry  Not coping	Emotional discharge/ Tension reduction  Self-blame
SEEKING SOCIAL SUPPORT IN ADDRESSING THE PROBLEM	Seeking succorance		Seeks social support	Seeks social support	Seeks social support	Developing social support  Solving family problems  Investing in close friends  Seeking professional support	Social support	Seeking guidance and support	Seeks social support	Social support  Invest in close friends  Seek to belong  Social action  Seek professional help	Seeking family support  Seeking support from friends  Seek professional help

individual questionnaires, the overriding impression is that the categories appearing in the left-hand column of Table 1 adequately embraced all or most of the subscales in the inventories surveyed. The right hand column represents a synthesised overview of the coping strategies measured by these instruments.

Collectively, the inventories described in Table 1 represent a wide body of expert opinion and data on the identification and grouping of adolescent coping strategies and provide a good frame of reference for the construction and refinement of any subsequent coping inventories. However, taken individually and considered in terms of such criteria as content, reliability, and validity, many of the scales have limitations. For example, in relation to content, only two of the scales come close to covering adolescent coping strategies with anything like the thoroughness that the synthesised scales suggest is possible. The two scales that appeared to give the best coverage to adolescent coping strategies are Patterson and McCubbin's (1987) A-COPE and Frydenberg and Lewis' (1993) ACS.

### Psychometrics

Statistical procedures were used in the development of the inventories developed by Vitaliano, Russo, Carr, Maiuro, and Becker (1985), Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986), Patterson and McCubbin (1987), and Frydenberg and Lewis (1993). Vitaliano et al. (1985) used principal components analysis with varimax rotation and a combination of factor analytical and rational approaches to identify six coping subscales. Folkman, Lazarus, Gruen, & DeLongis (1986) used factor analysis with oblique rotation to derive eight coping subscales. Patterson and McCubbin used the principal components with varimax

rotation method of factor analysis to identify 12 factors in their Adolescent Coping Orientation for Problem Experiences (A-COPE). More recently, Plancherel and Bolognini (1995) reported that eight factors emerged from a factor analysis of the A-COPE with only six of twelve being identified from the original scale. Finally, the 18 subscales in Frydenberg and Lewis' Adolescent Coping Scale (ACS) were derived through a succession of factor and conceptual analyses that were applied to 2041 coping statements generated by 643 15-18-year-olds (Frydenberg & Lewis, 1991).

Most of the researchers have presented information about the reliability of their instruments, but some shortfalls were evident. Madden, Summers, and Brown (1990) reported a high alpha coefficient for the Ways of Coping with Sport Checklist but did not include data about the reliability of their subscales. Mantzicopoulos (1990) presented test-retest reliability coefficients for the subscales of Tero and Connell's (1984) Academic Coping Inventory but did not present internal consistency data for the instrument taken as a whole. Some researchers (e.g., Mantzicopoulos, 1990; Spirito, Stark, & Williams, 1988; Zuckerman, 1989) reported reliability in terms of test-retest data, but the majority (e.g., Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Madden et al., 1990; Patterson & McCubbin, 1987; Verduyse & Chandler, 1992; Vitaliano et al., 1985) relied on tests of internal consistency. Among the researchers reviewed, the only ones to assess reliability through both internal measures and test-retest measures were Frydenberg and Lewis.

With regard to the size of the reliability coefficients, most researchers reported low to satisfactory results, mainly between .50 and .80. Very few reliability coefficients reached .90, although

Madden et al. (1990) obtained an internal consistency rating of .91 for the Ways of Coping with Sport Checklist. Other adequate reliability results were obtained by Vitaliano et al. (1985) whose internal consistency reliabilities for the subscales of the Ways of Coping Checklist (Revised) ranged from .73 to 0.88 ( $M = .80$ ). Several inventories had subscale reliability coefficients that averaged around .70. For example, Frydenberg and Lewis (1993) reported alphas ranging from .62 to .87 ( $M = .73$ ) on the specific form of the ACS, and from .54 to .84 ( $M = .71$ ) on the general form. Test-retest reliabilities for the same subscales were marginally lower, ranging from .49 to .82 ( $M = .68$ ) on the specific form, and from .44 to .84 ( $M = .69$ ) on the general form. Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen's (1986) alpha coefficients for the Ways of Coping (Revised) subscales ranged from .61 to .79 with a mean of .70, and the alphas on Patterson and McCubbin's A-COPE subscales ranged from .50 to .75 also with a mean of .70. Plancherel and Bolognini (1995) reported alpha coefficients between .52 and .75 with mean of .68 for their use of the A-COPE. Mantzicopoulos (1990) reported reliability coefficients ranging from .64 to .75 ( $M = .69$ ) for the subscales of Tero and Connell's (1984) Academic Coping Inventory. Similar findings applied to the subscales of Moos' (1990) Coping Responses Inventory with alpha coefficients ranging from .69 to .79 (Verduyse & Chandler, 1992). Although the reliability coefficients in the preceding studies generally appear to be satisfactory, there are a number of studies in which the reliability results were low and inadequate. For example, the test-retest correlations for the subscales of Spirito et al.'s (1988) Kidcope ranged from .13 to .80 ( $M = .52$ ) over a one-week period and from .16 to .64 ( $M = .39$ ) over a two-week period.

There is a plethora of instruments for

measuring coping strategies in adolescents. However, when instruments are considered in relation to research objectives and the conventions of scale construction, it is apparent that most of them are limited in some way with the possible exception of the Frydenberg and Lewis (1993) ACS, either in terms of their theoretical orientation or conceptualisation, or in terms of such criteria as content, focus, validity, and reliability. This study aims to overcome some of the shortfalls noted by developing an instrument to measure adolescent coping mechanisms using Confirmatory Factor Analytic (CFA) procedures that have advantages over conventional exploratory techniques. Briggs and Cheek (1986), Daniel (1989), Gorsuch (1983), and Hoyle (1991) have enumerated the advantages of CFA over conventional methods.

## METHOD

### Sample

Data were collected from 1620 students attending six secondary schools in a large provincial city in South-East Queensland. The schools comprised two co-educational state schools, two single-sex nonchurch independent schools, and two single-sex catholic schools, thus giving representation to the three major systems of secondary education in Queensland, Australia. Full details of the distribution of the sample by school, year level, and sex are presented in Table 2.

### Instrumentation

The items administered consisted of the 54 coping strategy items from Patterson and McCubbin's (1987) A-COPE. For each item, students were asked to indicate with a number ranging from 1 (meaning "I never behave in this way") to 7 (meaning "I always behave in this way") the extent to which they used each of the coping strategies listed. The wording of the items corresponds with



Table 3. The ACSS: Subscales (10), items (26), and squared multiple correlation coefficients following final CFA

Subscales/Items	Stand. Loadings	Sq. Mult. Correlns
<b>I IMPROVING MYSELF</b>		
25 Try to get more organised and sort out my priorities	.74	.54
27 Work hard on school work or school projects	.71	.50
13 Try to improve myself (e.g. get my body in shape, get better marks, etc.)	.61	.38
<b>II FOCUSING ON THE POSITIVE</b>		
15 Try to think of the good things in life	.68	.47
45 Try to see the good things in a difficult situation	.67	.45
<b>III SEEKING SPIRITUAL SUPPORT</b>		
44 Pray	.83	.69
23 Go to church	.82	.68
<b>IV BEING HUMOROUS</b>		
20 Joke and keep a sense of humour	.87	.76
3 Try to be funny and make light of it all	.60	.36
<b>V SEEKING DIVERSIONS</b>		
37 Go to a movie	.70	.49
3 Go shopping and buy things I like	.64	.41
<b>VI EMOTIONAL DISCHARGE</b>		
49 Say mean things to people	.79	.63
19 Get angry and yell at people	.71	.51
28 Blame others for what's going wrong	.68	.47
<b>VII USING DRUGS</b>		
24 Use drugs (not prescribed by a doctor)	.92	.84
46 Drink alcohol (e.g., beer, wine, liquor)	.90	.81
42 Smoke	.85	.73
<b>VIII SEEKING FAMILY SUPPORT</b>		
41 Do things with my family	.82	.68
31 Talk to my mother about what bothers me	.66	.44
50 Talk to my father about what bothers me	.54	.30
<b>IX SEEKING SUPPORT FROM OTHERS</b>		
18 Say nice things ("warm fuzzies") to others	.66	.44
30 Try to help other people solve their problems	.63	.39
35 Try to keep up friendships or make new friends	.59	.34
29 Spend time with someone I care about	.58	.33
<b>X SEEKING PROFESSIONAL SUPPORT</b>		
34 Seek professional counselling (not from a teacher or a school counsellor)	.76	.58
6 Talk to a teacher or counsellor at school about what bothers me	.68	.46

Table 4. Estimated correlation matrix

	QC25	QC27	QC13	QC15	QC45	QC44
QC25	1.00					
QC27	-.51	1.00				
QC13	.45	.46	1.00			
QC15	.34	.34	.35	1.00		
QC45	.45	.32	.25	.46	1.00	
QC44	.23	.20	.17	.24	.29	1.00
QC23	.19	.24	.11	.21	.21	.68
QC20	.20	.12	.16	.22	-.29	-.03
QC3	.07	.01	.13	.16	.17	.00
QC37	.05	.05	.13	.18	.15	.02
QC11	.07	.10	.19	.28	.12	.06
QC49	-.14	-.11	-.09	-.12	-.13	-.10
QC19	-.13	-.11	-.08	-.08	-.12	-.05
QC28	-.07	-.04	-.02	-.01	-.05	-.00
QC24	-.19	-.22	-.16	-.11	-.18	-.13
QC46	-.15	-.18	-.13	-.11	-.10	-.17
QC42	-.20	-.22	-.16	-.11	-.14	-.15
QC41	.34	.41	.28	.39	.40	.30
QC31	.28	.28	.22	.32	.29	.23
QC50	.22	.23	.15	.21	.23	.14
QC18	.27	.27	.27	.40	.30	.25
QC30	.31	.31	.27	.33	.37	.18
QC35	.29	.30	.29	.29	.32	.11
QC29	.22	.20	.22	.32	.25	.14
QC34	.13	.15	.14	.23	.15	.20
QC6	.23	.26	.18	.28	.23	.21
	QC23	QC20	QC3	QC37	QC11	QC49
QC23	1.00					
QC20	.08	1.00				
QC3	-.02	.52	1.00			
QC37	.09	.27	.20	1.00		
QC11	.11	.14	.14	.45	1.00	
QC49	-.07	-.08	.04	.11	.02	1.00
QC19	-.06	-.06	.03	.07	.09	.55
QC28	-.03	-.04	.07	.10	.08	.55
QC24	-.08	.06	.08	.11	.05	.19
QC46	-.11	.12	.12	.21	.06	.23
QC42	-.13	.06	.13	.17	.11	.20
QC41	.34	.14	.06	.16	.21	-.14
QC31	.18	.06	.04	.07	.10	-.13
QC50	.14	.05	.01	.10	.03	-.08
QC18	.29	.24	.15	.21	.30	-.12
QC30	.18	.24	.17	.19	.20	-.11
QC35	.13	.29	.20	.23	.24	-.08
QC29	.11	.19	.09	.27	.27	-.02
QC34	.29	.06	.02	.21	.22	.04
QC6	.27	.04	.03	.12	.19	-.12

	QC19	QC28	QC24	QC46	QC42	QC41
QC19	1.00					
QC28	.49	1.00				
QC24	.21	.12	1.00			
QC46	.25	.10	.83	1.00		
QC42	.21	.11	.78	.77	1.00	
QC41	-.15	-.06	-.28	-.26	-.24	1.00
QC31	-.09	-.04	-.25	-.26	-.21	.52
QC50	-.13	-.06	-.09	-.12	-.13	.44
QC18	-.07	-.05	-.06	-.06	-.02	.44
QC30	-.03	-.03	-.03	-.00	-.01	.32
QC35	-.07	-.01	-.07	.00	-.01	.31
QC29	.02	.01	.09	.16	.13	.26
QC34	.02	.09	.20	.14	.10	.27
QC6	-.08	-.02	.00	-.06	-.08	.31
	QC31	QC50	QC18	QC30	QC35	QC29
QC31	1.00					
QC50	.44	1.00				
QC18	.29	.19	1.00			
QC30	.26	.15	.40	1.00		
QC35	.19	.14	.40	.35	1.00	
QC29	.20	.11	.36	.41	.33	1.00
QC34	.20	.26	.27	.22	.11	.26
QC6	.28	.29	.26	.25	.12	.21
	QC34	QC6				
QC34	1.00					
QC6	.51	1.00				

Table 5. Intercorrelation matrix for the ten first order factors

	1	2	3	4	5	6	7	8	9
2	.76								
3	.34	.42							
4	.25	.43	.02						
5	.19	.40	.12	.38					
6	-.19	-.19	-.09	-.07	.16				
7	-.29	-.21	-.17	.12	.19	.28			
8	.60	.69	.43	.15	.28	-.20	-.35		
9	.63	.78	.35	.44	.57	-.12	.00	.62	
10	.35	.44	.41	.08	.39	-.01	.12	.51	.48

factor focuses on Seeking Social Support in Addressing the Problem. Interestingly, support from peers did not load either with support from family, professionals, and spirituality or with positively addressing the problem.

The intercorrelations between the three higher order factors suggest that adolescents who positively address their problems also seek social support ( $r = .40$ ), but no relationship exists between positively addressing problems and responding emotionally as a coping mechanism ( $r = -.05$ ). Of interest is the finding that adolescents who respond emotionally to problems tend not to seek social support ( $r = -.26$ ) when they are probably the ones who most need support.

The Adolescent Coping Strategies Scale has sound construct validity and item reliability as demonstrated by the goodness of fit indices, squared multiple correlations, and higher order factor analysis. The use of the three higher

Table 6. Factor loadings and intercorrelation matrix for the three higher order factors

	Factor 1	Factor 2	Factor 3
<b>FACTOR 1</b>			
Subscale 9	.61		
Subscale 4	.55		
Subscale 2	.52		
Subscale 5	.42		
Subscale 1	.39		
<b>FACTOR 2</b>			
Subscale 7		.55	
Subscale 6	-.05	.34	
<b>FACTOR 3</b>			
Subscale 10			.64
Subscale 8			.42
Subscale 3	.40	-.26	.35

Note. \_\_\_\_\_ indicates the intercorrelations between the factors.

order factors to formulate scale scores is strongly recommended as opposed to computing scores for the 10 subscales. The use of the ACSS by researchers interested in assessing adolescent coping strategies appears warranted. However, further research is needed on the three scales to establish test-retest reliability and to evaluate other aspects of its validity.

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