Teresa Kirchner,¹ Ph.D.; Maria Forns,¹ Ph.D.; and Susana Mohíno,² Ph.D.

Psychological Adjustment in a Forensic Sample: Relationship with Approach- and Avoidance-Coping Typologies

Abstract: Most studies that relate coping strategies with psychological symptoms usually consider a single coping dimension. This means that interpretation of the results is unclear and only partially true as subjects activate different types of coping strategies simultaneously when faced with a stressor. The objective of the present study is to analyze the relationships between coping and psychopathology in young inmates, taking into account the number of approach and avoidance answers simultaneously. The results show that the inmates with above-average scores in avoidance coping and below average in those of approach (coping responses inventory—adult form, [CRI-A]) show higher symptomatology (MMPI-2) than the inmates who obtain above-average scores in both avoidance and approach strategies. It can be deduced that it is not the high use of avoidance coping that is related to psychopathology, but rather the combined use of many avoidance strategies and few approach strategies. The convenience of jointly taking into account both types of coping is discussed.

KEYWORDS: forensic science, forensic psychopathology, psychological adjustment, coping patterns, approach coping, avoidance coping

Most studies concerning the relationship between coping strategies and mental health have highlighted that avoidance and emotion-focused strategies have a negative effect on psychological adjustment, while approach and problem-focused strategies have a beneficial effect (1–5). Nevertheless, the relationship between coping and mental health is unstable and the results of the studies are not always in agreement. Some authors have failed to find a relationship between problem focused or approach coping and mental health, as would be expected, given that these types of coping are thought to have a beneficial effect on psychological distress (6–10). Moreover, as Vollrath et al. (11) point out, there are also prospective studies that report an increase of anxiety and threatening feelings in conjunction with the use of problemfocused strategies. In other words, they obtained the opposite effect. Similar results were reported by Aldwin and Revenson (12).

The relationship between emotion focused or avoidance coping and psychopathology appears to be more stable, and has been reported by numerous studies. However, other studies have found no such relationship, or even the opposite effect (see Aldwin (13) and Compas et al. (14), for a review).

This lack of consensus has led some authors to conclude that "it does not seem to be evident which coping strategies should be considered as helpful and which as maladaptive for mental health" ((11), p. 1079). A similar position was adopted by Aldwin (13), who argued that the relationship between psychological symptoms and coping strategies is highly complex and that reductionist methods are not suitable for dealing with it.

One of the causes of this lack of consensus could be that most studies relating coping and psychopathology have considered one coping dimension only. In our view, studies that explore the independent effects of the different dimensions of coping are mere approximations to what is a complex interaction between stressor, approach coping, avoidance coping, and outcomes. Given that people usually use approach and avoidance strategies simultaneously with respect to the same stressor (15), to determine independently the relationship between each of these dimensions and mental health may then be masking the results. Hence, some authors have suggested that merely using many approach strategies does not protect against psychopathology, but rather that it is the ratio between such strategies and avoidance ones, which should be determined (16,17).

Herman-Stahl et al. (18) and Steiner et al. (19) analyze the connection between coping and psychopathology considering both dimensions of coping simultaneously. This technique enables researchers to determine the relationship between coping and mental health in a more precise and accurate way.

The aim this study was to analyze the association between psychopathology and different combinations of approach and avoidance coping in a sample of young prison inmates. The loss of liberty is a situation that increases stress levels and, consequently, the use of coping strategies (13,20–22). According to Jones (23), the degree of stress among prisoners in the United States is 3.6 times greater than that among the general population. Furthermore, working with a prison population allows subjects to be unified with respect to a common stressor: the loss of liberty and its consequences or antecedents. In this way, it is possible to control, to some extent, the effect of the stressor on the coping strategies used, as the type of stressor partly determines which specific coping strategies are used (3,24).

Another objective of the present study was to relate the use of approach and avoidance coping to a wide range of psychological symptoms. Indeed, another limitation revealed by the literature on coping and mental health is the limited range of psychopathology

¹Department of Personality, Assessment and Psychological Treatment, Faculty of Psychology, University of Barcelona, Passeig de la Vall d'Hebron, 131, 08035 Barcelona, Spain.

²Institute of Legal Medicine of Barcelona, Ronda Sant Pere, 35 baixos, 08010 Barcelona, Spain.

Received 11 Feb. 2006; and in revised form 4 Aug. and 2 Dec. 2006; accepted 24 Dec. 2006; published 13 April 2007.

considered, as most studies focus only on the relationship between coping and anxiety and/or affective disorders.

The main hypotheses to be tested in our study were the following (1) given that approach strategies are related to better mental health, and avoidance strategies to a greater number of psychological symptoms, those prisoners who use many avoidance strategies and few approach ones will show higher levels of self-reported psychopathology, as compared with the other combinations of coping styles; (2) for the same reason, the lower levels of self-reported psychopathology will correspond to the group using many approach strategies and few avoidance ones; and (3) considering approach and avoidance coping simultaneously will enable a more accurate analysis of the relationship between coping and psychological symptomatology than would correlational techniques that only consider a single coping focus.

Methods

Participants

The analyzed group comprised 101 male prisoners from a young offenders unit in Barcelona (Spain). The average age of the subjects was 19.89 (SD = 1.46; range 18–25). Seventy-eight percent had only a basic educational level and had not completed secondary schooling. The remainder included subjects who had completed some secondary or high school courses, and those who had vocational training. Subjects were serving sentences for various crimes, ranging from violent or aggravated robbery to homicide or attempted murder. Subjects were chosen nonprobabilistically as consecutive cases from the advanced level of the prison. They all volunteered to take part in the study and the anonymity of the data collected was guaranteed throughout.

Measures

Coping strategies were evaluated using the Spanish version (25) of the coping responses inventory—adult form (CRI-A; Moos (15)). The CRI-A assesses eight coping strategies of which four belong to approach coping (logical analysis, positive reappraisal, seeking guidance and support, and problem solving) and four to avoidance coping (cognitive avoidance, acceptance–resignation, seeking alternative rewards, and emotional discharge). This study considered the sum of the four approach strategies as approach-coping dimension and the sum of the four avoidance strategies as avoidance-coping dimension. The internal consistency for these two dimensions can be considered adequate: Cronbach's α was 0.74 for approach dimension and 0.62 for avoidance dimension. These alpha indices are slightly higher than those obtained by Steiner et al. (19) also using the CRI (see Mohíno et al. (25), for a review).

The level of psychopathology was assessed using the Spanish adaptation (26) of the MMPI-2 (27). The scales used for this study were the 10 basic scales: hypochondriasis (Hs), depression (D), hysteria (Hy), psychopathic deviate (Pd), paranoia (Pa), mascu-

linity–femininity (MF), psychasthenia (Pt), schizophrenia (Sc), hypomania (Ma) and social introversion (Si). The subscales of Harris and Lingoes (28) were also used to obtain a more detailed analysis of the specific components of the basic scales that establish differences between the four groups of subjects. The MMPI-2 was chosen as it is a test with a broad scope in terms of evaluating clinical behavior; the aim here was to compensate for the lack of data regarding the relationship between coping and severe disorders. The internal consistency can be considered adequate. Cronbach's α was 0.74 for the 10 basic scales and 0.91 for all scales.

Procedure

The necessary permission was obtained from the prison authorities. Similarly, prisoners were invited to participate as volunteers in the study and were assured that the data obtained would remain anonymous; they were also given the assurance that neither their participation nor the test results would have any bearing on their custodial situation. To ensure the reliability of the data obtained, the tests were applied in pairs of subjects. This enabled the responses to the self-report questionnaires to be controlled, and allowed clarification to be given in the event that the young offenders needed help with understanding certain items. Tests were administered in a counterbalanced order within the prison unit and by an experienced forensic psychologist.

Results

Establishing Coping Groups

On the basis of a mean split on each coping dimension (approach M = 44 and avoidance M = 37), subjects were grouped into four coping groups. Subjects with scores above the mean on both approach and avoidance were assigned to group 1 (n = 38), termed "broad." Subjects with scores above the mean on approach and below the mean on avoidance were assigned to group 2 (n = 17), termed "approach." Group 3, termed "avoidant," was composed of subjects (n = 15) with scores below the mean on approach and above the mean on avoidance. Finally, group 4, "narrow," comprised those subjects (n = 31) with scores below the mean on both approach- and avoidance-coping dimensions. To make comparisons easier, we have used the same nomenclature as Steiner et al. (19). There were no significant differences between the groups on the coping dimension that they share: groups 1 and 2 share high-approach dimension, groups 3 and 4 share low-approach dimension, groups 1 and 3, high-avoidance dimension, and groups 2 and 4, low-avoidance dimension (see Table 1).

Differences between the four groups were not observed in a series of potentially contaminating variables: age (F(3,98) = 0.576, p = 0.632), number of brothers/sisters (F(3,98) = 0.334, p = 0.801), child battering ($\chi^2 = 1.918$, p = 0.590), civil state ($\chi^2 = 8.940$, p = 0.177), number of children ($\chi^2 = 9.384$, p = 0.153), time spent in prison (F(3,98) = 1.323, p = 0.272),

 TABLE 1—Descriptive statistics for each group on the approach and avoidance coping: T contrast.

	Σ Approach Coping		Σ Avoidance Coping		T Contrast			
Coping Groups	Mean	SD	Mean	SD	Approach Items	Avoidance Items		
(1) Broad	52.55	6.51	45.18	5.90	Group 1 versus Group 2	Group 1 versus Group 3		
(2) Approach	51.35	5.70	30.35	5.63	$T = 0.655, p = 0.516^{\circ}$	T = 0.081, p = 0.935		
(3) Avoidant	33.73	7.04	45.33	6.28	Group 3 versus Group 4	Group 2 versus Group 4		
(4) Narrow	34.46	6.28	28.09	5.07	T = 0.360, p = 0.721	$T = 1.428, p = 0.160^{\circ}$		

MMPI-2 Basic Scales	Coping Groups											
	Broad Group (1): High Approach+High Avoidance $(n = 38)$		Approach Group (2): High Approach+Low Avoidance $(n = 17)$		Avoidant Group (3): Low Approach+High Avoidance $(n = 15)$		Narrow Group (4): Low Approach+Low Avoidance $(n = 31)$		MANOVA Wilk's $\Lambda = 0.565, p < 0.01$		Post hoc	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F(3,97)	р	η^2	Tukey
(1) Hs	53.84	10.55	55.29	10.06	60.4	13.37	52.84	14.03	1.44	0.237	0.04	NS
(2) D	50.05	9.12	51.53	11.46	64.67	11.31	52.32	10.52	7.64	0.000	0.19	3>1,2,4
(3) Hy	47.55	8.66	52.71	9.90	56.20	12.95	50.10	12.30	2.61	0.056	0.08	3>1
(4) Pd	61.55	8.82	65.00	9.57	66.47	9.65	62.35	9.50	1.31	0.274	0.04	NS
(5) Mf	43.63	10.66	48.65	8.67	49.53	11.67	44.87	9.25	1.81	0.151	0.05	NS
(6) Pa	64.79	12.76	67.47	14.85	78.27	12.13	61.26	11.82	6.22	0.001	0.16	3 > 1,4
(7) Pt	58.55	11.89	55.65	8.64	67.53	10.54	54.32	10.78	5.32	0.002	0.14	3>1,2,4
(8) Sc	64.34	10.58	63.00	10.70	72.87	11.73	58.19	10.44	6.43	0.001	0.17	3>4
(9) Ma	68.50	8.35	65.94	13.69	68.47	8.63	63.65	10.18	1.55	0.206	0.05	NS
(10) Si	50.74	7.27	51.06	5.85	60.60	8.53	49.81	9.37	7.01	0.000	0.18	3>1,2,4,

TABLE 2-Mean T scores and SD on MMPI-2 basic scales for each coping group: MANOVA contrast.

Hs, hypochondriasis; D, depression; Hy, hysteria; Pd, psychopathic deviate; Mf, masculinity–femininity; Pa, paranoia; Pt, psychasthenia; Sc, schizophrenia; Ma, hypomania; Si, social introversion.

institutional adjustment (number of disciplinary infractions: F(3,97) = 0.731, p = 0.536), level of studies (F(3,97) = 1.119, p = 0.345), ethnic group ($\chi^2 = 17.092$, p = 0.146), criminal history ($\chi^2 = 8.927$, p = 0.178), cognitive level (F(3,98) = 0.712, p = 0.547), and substance abuse history (alcohol: $\chi^2 = 1.281$, p = 0.973; cannabis: $\chi^2 = 5.425$, p = 0.491; hallucinogens: $\chi^2 = 2.318$, p = 0.888; amphetamines: $\chi^2 = 4.880$, p = 0.559; cocaine $\chi^2 = 8.687$, p = 0.192; heroin: $\chi^2 = 6.518$, p = 0.368).

To test Hypotheses 1 and 2, the mean *T* score obtained by each of the four groups on the basic scales of the MMPI-2 and on Harris–Lingoes' subscales were calculated and the differences between them were compared. Despite the small sample size, the four groups showed equal variance (Levene's test, p > 0.05) and equal covariance (M Box = 323.46, p > 0.05), and therefore parametric statistics were used. The validity of the results obtained for each of the four coping groups on the MMPI-2 was verified using Gough's (29) F - K index. None of the groups exceeded the criterion $F - K \ge 15$ established for the Spanish version of the MMPI-2.

Based on the Wilk's λ criterion ($\Lambda = 0.565$, p < 0.01), the MANOVA test revealed significant differences between coping groups on the following scales of the MMPI-2: depression, paranoia, psychasthenia, schizophrenia, and social introversion (see Table 2). Depression scale reached the highest effect size ($\eta^2 = 0.19$).

The post hoc Tukey contrast test showed that the "avoidant" group obtained the highest means in almost all the basic scales of the MMPI-2: on the D scale it differed significantly from all the remaining groups, on Pa scale it differed significantly from the "broad" and "narrow" groups; on the Pt scale it differed from all the remaining groups; on the Sc scale it differed from the "narrow" group and, with lower probability levels, from both the "broad" group (p = 0.051) and the "approach" group (p = 0.052); finally, the "avoidant" group differed significantly from all the other groups on the Si scale (see Table 2). Given that the sample was relatively small, to determine the magnitude of differences between groups the effect size using Cohen's (30) d statistic was calculated. The differences between the "avoidant" group and the remaining coping groups reached very high d values, ranging from a minimum value of d = 0.76 (Sc scale with respect to the "broad" group) to a maximum value of d = 1.43 (D scale with respect to the "broad" group). The remaining coping groups showed very similar means and conformed homogenous subsets on Tukey's HSD range test.

The results of the MANOVA for the Harris-Lingoes' subscales $(\Lambda = 0.457, p = 0.05)$, were as follows: for the components of depression the most important differences between the groups were found for D1 (subjective depression) and D5 (rumination) (F(3,97) = 50.64, p < 0.005; F(3,97) = 6.78, p < 0.001, respectively). For the paranoia scale the subscales that differentiated most between groups were Pa2 (hypersensitivity) followed by Pa1 (persecutory ideas) (F(3,97) = 7.15, p < 0.001; F(3,97) = 3.32,p < 0.05, respectively). For the schizophrenia scale the subscales Sc5 (lack of self-control) and Sc6 (strange sensory experiences) showed the highest probability levels (F(3, 97) = 5.84, p < 0.005; F(3,97) = 5.46, p < 0.005, respectively), although the remaining subscales also reached probability levels of p < 0.05. Finally, for the social introversion scale, Si1 subscale (shyness) showed the greatest differences between groups (F(3, 97) = 4.80, p < 0.005). In all cases the "avoidant" group had the highest means (Tukey's post hoc test: p < 0.01 in all cases). Pa2 and D5 obtained the highest effect size ($\eta^2 = 0.19$ and $\eta^2 = 0.17$, respectively).

The results obtained on the MMPI-2 basic scales by the four groups were compared with standardized scores of Spanish males. It can be seen in Table 2 that the "broad" group obtained a notably elevated score on the Ma scale (T = 68.50), which characterizes behaviors such as extraversion, creativity, energy, and over activity. The "approach" group obtained T = 67.47 on the Pa scale, which covers behaviors such as reserve, mistrust, suspiciousness, and control. The "avoidant" group scored higher than the general population on almost all the scales, while the "narrow" group had no $T \ge 65$ on any of the scales.

Use of Correlations for Relating Coping with Psychopathology

Hypothesis 3 stated that the classification system used in this study would enable a more accurate analysis of the relationship between coping and psychopathology than that provided by studies that analyze a single dimension of coping by means of correlations. To test our hypothesis, approach- and avoidance-coping, dimensions were correlated separately with each one of the basic scales of the MMPI-2. The results (see Table 3) indicated a negative relationship between the approach coping and the D scale and a positive and significant relationship between the avoidance-coping and scores on the Pa, Pt, Sc, Ma, and Si scales. In all cases, the magnitude of the correlation coefficients was low. On the basis of these results, it could be concluded that the use of

TABLE 3—Pearson's correlation matrix between MMPI-2 basic scales and approach and avoidance dimensions of CRI-A, respectively.

CRI-A		MMPI-2 Basic Scales										
	Hs	D	Ну	Pd	MF	Ра	Pt	Sc	Ma	Si		
Approach Avoidance	$-0.038 \\ 0.145$	-0.220^{*} 0.125	$-0.113 \\ 0.073$	- 0.098 -0.025	-0.077 0.105	$-0.066 \\ 0.221^*$	$-0.021 \\ 0.270^{**}$	0.003 0.352**	0.142 0.231*	- 0.164 0.143		

***p*<0.01.

**p*<0.05.

Hs, hypochondriasis; D, depression; Hy, hysteria; Pd, psychopathic deviate; MF, masculinity–femininity; Pa, paranoia; Pt, psychasthenia; Sc, schizophrenia; Ma, hypomania; Si, social introversion.

approach strategies are not related to psychological symptomatology, except negatively with the D scale. In addition, it could also be concluded that the use of avoidance strategies is associated with elevated scores on the scales known as the "psychotic tetrad" and on the Si scale.

The data provided by these correlations would be only partially true, because as much the "avoidant" group as the "broad" one used avoidance coping above the mean; however, only the "avoidant" group shown psychopathological symptoms. The same phenomenon occurs with the "avoidant" and the "narrow" groups. Both groups used approach coping below the mean, but only the "avoidant" group shown depressive symptomatology. These data support the hypothesis that studies that analyze a single coping dimension by means of correlations obtain less-precise results with regard to the relationship between coping and psychopathology.

Discussion

The clearest finding of this study is that inmates who report using relatively greater amounts of avoidance than of approach coping are those who present the highest levels of self-reported psychopathology, as compared both with the remaining inmate groups and with the MMPI-2 normative population for Spanish males. Specifically, these subjects differ from the other groups of inmates in that they present higher scores on the scales assessing depression, paranoia, psychasthenia, schizophrenia, and social introversion. Compared with the normative population of Spanish males, this group obtained symptomatic scores on the Pd, Pa, Pt, Sc, Ma, and D scales of the MMPI-2. A more detailed analysis provided by the Harris-Lingoes' subscales enables us to conclude that the "avoidant" subjects show a greater trend toward excessive rumination and subjective feelings of depression. Similarly, they describe themselves as being more hypersensitive and as having more persecutory ideas than their peers; they also show less selfcontrol and have had a greater number of strange sensory experiences. Finally, they acknowledge themselves to be more timid than their fellow inmates.

Another conclusion is that simultaneously considering the two coping focuses allows a more accurate analysis of the complex relationship between approach coping, avoidance coping, and psychopathology than the consideration of one single coping focus. Effectively, on the basis of the correlations conducted as part of the this study to prove Hypothesis 3, it could be concluded that subjects who use a high degree of avoidance coping report greater symptomatology than those who use a low degree. This conclusion may only be partially true as the "broad" group also used a high degree of avoidance coping but presented no symptomatology (except in Ma scale). In a similar vein, from the correlations carried out it could be concluded that the low use of approach coping is associated with depression. Once again, these results may only be partially true as the "narrow" group showed a low degree of approach coping (exactly the same extent as the "avoidant" group) and reported no depressive symptomatology.

The results obtained in a population of young Spanish inmates are broadly similar to those reported by Herman-Stahl et al. (18), and Steiner et al. (19), and confirm the first hypothesis, whereby subjects who report using relatively greater amounts of avoidance than of approach coping obtain higher scores on the scales that assess psychopathology. Nevertheless, this study did not provide evidence to suggest that the "approach" group reports significantly fewer symptoms than all other groups. This discrepancy with respect to the findings of Herman-Stahl et al. (18) and Steiner et al. (19) may be due to several factors, such as the different age of the subjects in the respective samples, their different cultural level, and the intrinsic and particular characteristics of inmate population.

The fact that the relatively lower use of approach strategies in the "narrow" group was not associated with symptomatology, but that this association was present in the "avoidant" group suggests that it is not the low use of approach strategies *per se* that characterizes profiles with symptomatology but rather the lower use of approach strategies combined with the higher use of avoidance strategies. In a similar vein, Hovanitz and Kozora (31) argue that "... psychotic psychopathologies were better characterized by high amounts of maladaptive coping than by low amounts of adaptive coping," (p. 774).

These results allow us to conclude that a high reliance on avoidant coping, coupled with little on approach coping, is characterized by high scores on scales measuring psychological symptomatology. However, if the reliance on avoidant coping is accompanied by a high use of approach coping then the association with psychological symptomatology is less clear. These results suggest that the use of avoidance strategies may be counteracted by the use of approach strategies. This is a conclusion that has been reached by authors such as Steiner et al. (19), who argue that "by creating a typology which combined approach and avoidance coping simultaneously [...] the general negative associations of avoidance coping would be mitigated by the presence of approach coping" (p. 327). It would also support the findings of Vitaliano et al. (16), whereby relative problem-focused scores were more clearly associated with the absence of depression than raw problem-focused scores. In other words, approach alone does not protect against psychopathology, and as our data suggest, avoidance alone does not constitute a risk factor. All these conclusions would explain why some correlational studies have found a relationship between approach coping and psychological symptomatology while others have not.

The correlation most often reported in the scientific literature between avoidance coping and depression was not found in our sample. This result may be due to the effect described by Vitaliano et al. (32): emotion-focused coping was positively related to depression when a stressor was appraised as changeable. It is likely that the loss of liberty was appraised by the young inmates as a nonchangeable stressor, and this reaffirms the important role played by the appraisal of the problem when it comes to choosing coping strategies.

With respect to the correlations between avoidance coping and the scales of the psychotic tetrad of the MMPI-2, but not with respect to the scales of the neurotic triad, our results are consistent with those of Hovanitz (9), one of the few authors to have used the basic scales of the MMPI to assess psychological symptomatology. This author indicated that avoidance coping among men was related to elevated scores on the psychotic scales of the MMPI; in contrast, the Hs scale does not reveal any differences between the various types of coping. The findings of this study are also in line with the report by Lachar (33), which found that greater amounts of less adaptive coping were reported by subjects with elevated psychotic scales as opposed to subjects with high scores on neurotic scales. This is probably due to the fact that the greater degree of disorganization characteristic of people with severe syndromes is reflected in the use of coping strategies that are largely ineffective and unsuitable in the given situation.

This study has some limitations, i.e., the relatively young age of the inmates, the influence of the confinement in the type of observed behaviors, and the fact that the psychopathology is selfreported and there is not a formal diagnostic characterization. Also, the small-size sample made difficult to delimit more groups, as it would be desirable. To generalize these results it would be necessary to determine whether the same phenomenon occurs in less-specific populations than that used in this study. The goal of a future study is to verify if these four coping groups differ in an objective data: self-harming behavior during the imprisonment.

Identifying groups of young inmates with less-effective coping strategies and, therefore, having a greater risk of psychopathology would enable the development of more specific training programs in coping strategies for those who are deprived of their liberty.

Acknowledgment

This research was supported in part by a grant obtained from Ministry of Education and Science, CICYT, and FEDER. Reference: SEJ2005-09144-C02-01/PSIC.

References

- 1. Billings AG, Moos RH. The role of coping responses and social resources in attenuating the stress of live events. J Behav Med 1981;4:139–57.
- Fields L, Prinz RJ. Coping and adjustment during childhood and adolescence. Clin Psychol Rev 1997;17:937–76.
- Griffith AM, Dubow EF, Ippolito MF. Developmental and cross-situational differences in adolescents' coping strategies. J Youth Adolesc 2000;29:183–204.
- Jorgensen RS, Dusek JB. Adolescent adjustment and coping strategies. J Pers 1990;58:503–13.
- Seiffge-Krenke I. Causal links between stressful events, coping style, and adolescent symptomatology. J Adolesc 2000;23:675–91.
- Chan DW. Coping with depressed mood among Chinese medical students in Hong Kong. J Affect Disord 1992;4:109–16.
- Coyne JC, Aldwin C, Lazarus RS. Depression and coping in stressful episodes. J Abnorm Psychol 1981;90:439–47.
- Endler NS, Parker JD, Butcher JN. A factor analytic study of coping styles and the MMPI-2 content scales. J Clin Psychol 1993;49:523–7.
- Hovanitz CA. Life event stress and coping style as contributors to psychopathology. J Clin Psychol 1986;42:4–41.

- Parker GB, Brown LB. Coping behaviors that mediate between life events and depression. Arch Gen Psychiatry 1982;39:1386–91.
- Vollrath M, Alnaes R, Torgersen S. Coping and MCMI-II symptom scales. J Clin Psychol 2003;59:1305–14.
- Aldwin CM, Revenson TA. Does coping help? A reexamination of the relation between coping and mental health. J Pers Soc Psychol 1987;53:337–48.
- Aldwin CA. Stress, coping and development: an integrative perspective. New York: Guilford Press, 1994.
- Compas BE, Connor-Smith JK, Saltzman H, Thomsen AH, Wadsworth ME. Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. Psychol Bull 2001;127:87– 127.
- Moos RH. Coping responses inventory. CRI-adult form manual. Odessa, FL: Psychological Assessment Resources Inc, 1993.
- Vitaliano PP, Maiuro RD, Russo J, Becker J. Raw versus relative scores in the assessment of coping strategies. J Behav Med 1985;10:1–18.
- Vitaliano PP, Russo J, Maiuro RD. Locus of control, type of stressor, and appraisal within a cognitive-phenomenological model of stress. J Res Pers 1987;21:224–37.
- Herman-Stahl MA, Stemmle M, Petersen AC. Approach and avoidant coping: implications for adolescent mental health. J Youth Adolesc 1995;24(6):649–65.
- Steiner H, Erickson SJ, Hernandez NL, Pavelski R. Coping styles as correlates of health in high school students. J Adolesc Health 2002;30: 26–35.
- Blaauw E, Kerkhof A. Suicides in police custody in the Netherlands. In: Kosky RJ, Eshkevari HS, Goldney RD, Hassan R, editors. Suicide prevention. The global context. New York: Plenum Press, 1998:131–7.
- McKay HB, Jaywardene CH, Reedie PB. The effects of long term incarceration and a proposed strategy for future research. Ottawa, ON: Solicitor General of Canada, 1979.
- Zamble E, Porporino FJ. Coping imprisonment and rehabilitation: some data and their implications. Crim Justice Behav 1990;17:53–70.
- Jones DA. The health, risks and imprisonment. Lexington, MA: Lexington Books, 1976.
- Compas BE, Davis GE, Forsythe CJ, Wagner BM. Assessment of major life events during adolescence: the adolescent perceived events scale. J Consult Clin Psychol 1987;55:534–41.
- Mohíno S, Kirchner T, Forns M. Coping strategies in young male prisoners. J Youth Adolesc 2004;33:41–9.
- Avila A, Jiménez F. MMPI-2 manual Spanish adaptation. Madrid: TEA Ediciones, 1999.
- Butcher JN, Dahlstrom WG, Graham JR, Tellegen A, Kaemmer B. MMPI-2: manual for administration and scoring. Minneapolis, MN: University of Minnesota Press, 1989.
- Harris RE, Lingoes JC. Subscales for the MMPI: an aid to profile interpretation. San Francisco, CA: Department of Psychiatric (Mimeographed Materials), University of California at San Francisco, 1955.
- Gough HG. The F minus K dissimulation index for the MMPI. J Consult Psychol 1950;14:408–13.
- Cohen J. Statistical power analysis for the behavioral sciences. New York: Academic Press, 1977.
- Hovanitz CA, Kozora E. Life stress and clinically elevated MMPI scales: gender differences in the moderating influence of coping. J Clin Psychol 1989;45:766–77.
- Vitaliano PP, DeWolfe DJ, Maiuro RD, Russo J, Katon W. Appraisal changeability of a stressor as a modifier of the relationship between coping and depression: a test of the hypothesis of fit. J Pers Soc Psychol 1990;59:582–92.
- Lachar D. Prediction of early US Air Force freshman cadet adaptation with MMPI. J Consult Psychol 1974;21:404–8.

Additional information and reprint requests: Teresa Kirchner, Ph.D.

Faculty of Psychology

University of Barcelona

Passeig de la Vall d'Hebron

131 08035 Barcelona

Spain

E-mail: tkirchner@ub.edu