

# Coping and defence mechanisms: What are we assessing?

Laurentiu P. Maricutoiu<sup>1</sup> and Danut I. Crasovan<sup>2</sup>

<sup>1</sup>Department of Psychology, West University of Timisoara, Romania

<sup>2</sup>Post-Graduate Research Center COMMSCIE, West University of Timisoara, Romania

**T**he present research study addresses the disparity between theoretical considerations and empirical evidence regarding the relationships between coping strategies and defence mechanisms. Self-reported measures of coping and defences were administered to a Romanian adult sample ( $N = 542$ ; 74.53% female, mean age = 31.28). Using structural equation modelling, models that assumed independence between coping and defences were compared with models that assumed the existence of relationships between the two concepts. Findings identified strong relationships between coping and defences, indicating large common variance between the two concepts. Furthermore, results suggested that coping and defences can be classified into two independent types of adaptation processes. Results of this research study suggested that coping and defences are facets of common adaptation processes.

**Keywords:** Coping strategies; Defence styles; Adaptation processes; Factor analysis.

In any moment, people have to deal with situations that produce negative self-views and negative emotions. The theories about how people handle these situations have been describing various behaviours, conscious and unconscious processes and mechanisms that regulate emotions. Of all perspectives, researchers and practitioners focused primarily on two concepts: coping strategies and defence mechanisms (Suls, David, & Harvey, 1996). Although coping and defences are psychological mechanisms that help the individual deal with adverse events (Cramer, 1998), it is unclear whether they represent similar or different phenomena. From a psychiatric perspective, coping and defences are synonymous in the 4th edition of the *Diagnostic and statistical manual of mental disorders* (DSM-IV; American Psychiatric Association [APA], 1994). On the other hand, the two concepts have evolved independently, and the developments of one topic are ignored by the other (Erickson, Feldman, & Steiner, 1997). The relationship between coping and defences was addressed by theoretical (Cramer, 1998; Kramer, 2010a) and empirical studies (Erickson et al., 1997; Grebot, Paty, & Dephanix, 2005), but a definite conclusion as to whether they are independent or non-independent constructs is still missing.

This uncertainty has negative effects on the transfer of new knowledge from one concept to the other and makes it difficult to aggregate similar findings from different perspectives. For example, literature reviews have indicated that the use of problem-solving coping strategies associated with better overall adjustment of HIV patients (Moskowitz, Hult, Bussolari, & Acree, 2009) and diabetes patients (Duangdao & Roesch, 2008), or with positive overall health outcomes of the general adult population (Penley, Tomaka, & Wiebe, 2002). However, empirical evidence did not provide a clear picture regarding the defence styles that are describing adaptive strategies which are similar with problem-solving coping strategies. As a result of this, health professionals that use defence mechanisms models in their practice will find it difficult to use research results on coping strategies.

The aim of the present research is to provide new and more compelling evidence regarding the relationships between coping scales and defence questionnaires. By achieving this objective, we will provide an integrated perspective that will allow for the transfer of new findings from one concept to the other. To achieve this objective, we used a large adult sample, and we tested the relationships through structural equation models. To the best of

Correspondence should be addressed to Laurentiu P. Maricutoiu, Department of Psychology, West University of Timișoara, 4 Vasile Pârvan Blvd., Room 504, 300223 Timișoara, Romania. (E-mail: lmaricutoiu@socio.uvt.ro).

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our knowledge this approach is novel to the literature and should be able to provide more reliable conclusions to the controversy regarding the relationships between coping and psychological defences.

### Coping strategies and defence styles

The coping strategies (or coping mechanisms) originate in the social cognitive theory of stress elaborated in 1966 by Lazarus (2000). Coping strategy refers to “an organizational construct used to encompass the myriad actions individuals use to deal with stressful experiences” (Skinner, Edge, Altman, & Sherwood, 2003, p. 217). In their review, Skinner et al. (2003) showed that coping theories are focusing primarily on how people respond rationally and actively to objective problems while the passive and avoidant reactions are less frequent in coping taxonomies. For this reason, some authors suggested that coping research did not yield results helpful to clinical practice (Sommerfield & McCrae, 2000). Psychological studies identified more than 400 ways of coping (Skinner et al., 2003), which can be classified using different criteria, and the most frequent categories include coping focused on problem solving, coping focused on seeking support, and acceptance as a coping strategy (Skinner et al., 2003).

The ego defence mechanisms were first theorised by Sigmund Freud (and detailed by Anna Freud), who described them as unconscious processes that help the ego deal with external and internal threats that produce anxiety (Cramer, 2000). Academic psychologists studied the unconscious defensive processes in experimental settings and found weak empirical evidence in their support (Sommerfield & McCrae, 2000). As a consequence the interest of academic psychologists towards the study of defence mechanisms diminished (Cramer, 2000). Notwithstanding the weak experimental support for the manifestation of defence mechanisms, clinical psychologists continued to use the concept of defence, and developed self-reported and observer-reported methods for assessing defence mechanisms (Cramer, 1998). Contemporary perspectives distinguish between defence mechanisms (theoretical explanations of intra-psychic dynamics) and defence styles, as behavioural forms of defence mechanisms (Bond, 2004; Skodol & Perry, 1993; Thygesen, Drapeau, Trijsburg, Lecours, & de Roten, 2008). The progress in the field of defence mechanisms theory and research led to their inclusion in the DSM-IV, as an optional axis and a glossary for a hierarchy of defences. The DSM-IV glossary for a hierarchy of defences contains descriptions for 30 defence mechanisms, grouped in seven levels (APA, 1994; Skodol & Perry, 1993). Despite this success, defence mechanisms were excluded from the 5th version of the *Diagnostic and statistical manual of mental disorders* (APA, 2013; Vaillant, 2012).

### Theoretical considerations on the relationships between coping and defences

Theoretical analyses of the conceptual differences between coping and defence mechanisms concluded the two constructs “could not be differentiated on the basis of outcome” (Cramer, 1998, p. 940) and “the criteria of functionality and adaptiveness do not fundamentally differentiates defences from coping” (Kramer, 2010a, p. 217). Cramer (1998) argued that coping and psychological defences are similar because (a) both protect the individual from negative emotions and (b) both aim at restoring comfortable level of psychological functioning. In contrast, other theoretical perspectives suggested that defensive behaviours are emerging when coping fails (Haan, 1977; cited by Kramer, 2010a). Therefore, empirical studies should advance our understanding and practice by determining the relationships between coping and psychological defences.

Although coping and defences have similar goals, theorists suggested criteria for distinguishing between them. Differences between coping and defences can be identified in terms of the conscious/unconscious processes involved, the issue of intentionality, the hierarchical nature of the psychological processes, the situational/dispositional character of each construct (Cramer, 1998; Kramer, 2010a), or the manipulation/revision of one's mental attitudes (Miceli & Castelfranchi, 2001). In our opinion, the differences between coping and psychological defences can be advocated by theoretical criteria, but it is difficult to decide in favour of their independence without confirmation from empirical studies.

### Empirical evidence of the relationships between coping and defences

As mentioned previously, there is little empirical evidence of the relationships between coping and defence (Cramer, 1998; Erickson et al., 1997; Kramer, 2010a). The few studies that investigated these relationships have found couple moderate correlations (values between .30 and .50), but their conclusions were contradictory. Some researchers treated evidence of associations as inconclusive and suggested that coping scales and defence questionnaire are not interchangeable (Vickers & Hervig, 1981), or attributed the relationships between coping and defences to research artifacts (Callahan & Chabrol, 2004). Others (Erickson et al., 1997; Grebot, Paty, & Dephanix, 2005) interpreted the correlations between coping and defences as evidence of partial overlap between the two concepts and encouraged further research.

In our opinion, previous correlational studies did not reach a general conclusion regarding the overlap between coping and defences because researchers had to summarise a large number of correlation coefficients. This

situation is known as the “multiple hypothesis testing” issue (Shaffer, 1995), and it increases the chances of committing a Type I error (rejecting the null hypothesis when it should be accepted). Therefore, one should maintain a minimum rate of Type I error in order to produce a valid, general conclusion regarding the relationships between coping and defences. Some research studies overpassed the multiple hypothesis testing issue by using multivariate statistical methods such as exploratory factor analysis (Muris, Merckelbach, & Bogels, 1995) or canonical correlations (Kramer, 2010b). Muris et al. (1995) found common latent factors between COPE scales (Carver, Scheier, & Weintraub, 1989) and the 17 scales of a defence questionnaire. The factor solution yielded three independent factors, labelled immature and problem-avoiding coping and defence, emotion-venting coping and defence and mature and problem-oriented coping and defence (Muris et al., 1995). Similar results were reported by Kramer (2010b), who identified strong canonical correlations (absolute correlation values above .50) between mature defences and self-reliant coping, or between mature defences and accommodating coping, while coping based on opposition was associated with narcissistic and borderline defences. Despite their convergence, the findings of these research studies should be treated with caution because they are based on small samples (only 18 participants, in the case of Kramer, 2010b) or samples consisting only in students (Moris et al., 1995). Therefore, the extrapolation of these conclusions still represents an unsolved problem. Other types of research studies analysed the influence of psychotherapy sessions on coping and defences, and concluded that coping and defences are describing different facets of the same processes. These research studies compared the coping levels and defence levels at different moments during the psychotherapy (e.g., in the first session and in the 20th session), and found significant differences in the coping mechanisms between these sessions, and insignificant differences in the overall defence functioning (Kramer, 2010b). Similarly, Kramer, de Roten, Michel, and Despland (2009) showed that the therapeutic alliance moderated the change in coping functioning as a result of the psychotherapy, but has no effect on the defence functioning. Based on these results, both studies (Kramer, 2010b; Kramer et al., 2009) concluded that defence functioning describes stable adaptational processes while coping concepts describe malleable forms of adaptational processes. However, these results were not replicated by Kramer, de Roten, Perry, and Despland (2013), who reported that only defensive change was related to the active versus control condition, whereas coping change was not significant. Although divergent, the results of these research studies indicated that coping and defences are responding differently to psychotherapy, which suggests that they represent different forms of adaptation processes.

## OVERVIEW OF THE PRESENT RESEARCH

The objective of the present research is to test the hypothesis that coping strategies and defence mechanisms are non-independent constructs. Although the correlational results presented above suggested that coping strategies and defence mechanisms are independent constructs, research studies that used canonical correlations or exploratory factor analysis showed the two constructs share large amounts of variance. Based on these findings, we anticipate that

H1. Coping and defences are constructs that describe correlated strategies for dealing with adversity.

Furthermore, based on the results reported by previous research studies (Kramer, 2010b, Moris et al., 1995) we expect that:

H2. Adaptive defences will correlate with problem-oriented coping scales.

H3. Non-adaptive defences will correlate with avoidant coping scales.

## METHOD

### Participants

The data from several convenience samples totalizing 542 Romanian adults (74.53% female) were used in the study. Participants were volunteers who agreed to an informed consent form and completed both questionnaires in a single session. About half of the participants did not have a college education (51.30%), and their age ranged from 18 to 62 years (mean age: 31.28 years). Regarding the occupational background of the participants, the most frequent categories were students (25%) and medical professionals (20%).

### Measures

The *COPE* scale (Carver et al., 1989) is one of the best known measures of coping mechanisms. The questionnaire has 60 items that are relevant for 15 coping strategies, grouped in four categories: *coping focused on the problem* (coping strategies included: planning, suppression of concurrent activities and affective coping); *coping focused on emotion* (coping strategies included: acceptance, positive interpretation and growth, restraint and religious coping); *coping focused on search for social support in dealing with the problem* (coping strategies included: focus on and venting of emotions, use of social-instrumental support and use of social-emotional support); and *strategies for avoidance of the problem* (coping strategies involved: denial,

mental disengagement, behavioural disengagement). The remaining coping strategies were not included in these factors, were included in the questionnaire because previous research studies provided evidence for their existence. The Romanian adaptation of the COPE scale successfully replicated the original factor structure (Crasovan & Sava, 2013). On the present sample, the internal consistency values ranged between .52 (for the *Restraint* coping style) and .90 (for the *Substance use* coping style). The classification proposed by Carver et al. (1989) had acceptable fit indices on the current sample,  $\chi^2(45) = 265.01$ ,  $p < .001$ ; GFI = .92, CFI = .90, RMSEA = .09.

The *Defense Style Questionnaire-60 (DSQ-60)*, Thygesen et al., (2008) is a self-report measure that assesses the 30 defence mechanisms included in the DSM IV (APA, 1994). The questionnaire has 60 items that must be evaluated using a 9-point Likert scale (1 – *not at all applicable to me*; 9 – *completely applicable to me*). The scales of DSQ-60 can be classified according to the seven levels of defensive functioning described by Perry (1990), or according to the factor structure identified by Thygesen et al. (2008). Both classification systems are presented in Table 1. In the adaptation to Romanian culture, the original factor structure of DSQ-60 had acceptable fit (Crasovan & Maricutoiu, 2012). On the present sample, the internal consistency of the 30 defence styles ranged from .09 (for the *Reaction-formation* scale) to .76 (for the *Withdrawal* scale). The small internal consistency values were caused by the fact that each defence style is assessed using two items. However, these internal consistency values are comparable with the ones reported by previous research studies and represent a generalised issue of defence styles measures (Vaillant, 2000). The classification of defence styles into seven levels had marginally acceptable fit indices,  $\chi^2(354) = 1021.31$ ,  $p < .001$ ; GFI = .88, CFI = .82, RMSEA = .06, and the classification of defence styles into 3 factors had good fit indices,  $\chi^2(65) = 140.15$ ,  $p < .001$ ; GFI = .97, CFI = .95, RMSEA = .05.

### Data analysis

To overpass the issue of multiple hypotheses testing, we use the overall fit indices specific to structural equation models (SEM). Unlike canonical correlation analysis used by Kramer (2010b), this approach is more adequate for analysing non-causal relationships (such as the relationships between coping and defences), because SEM do not assume that one set of variables is predictor for the other set of variables. In addition, SEM has the advantage of allowing for comparisons between complex models, such as models that assumed the existence of relationships between coping and defences, and models that assumed independence between these constructs. Because of the large number of coping and defence mechanisms, we

analysed the relationships between the higher-order factors of coping and defence mechanisms. This approach has two main benefits. Firstly, estimation of the relationships between latent factors of coping and defences allows for simplification of the structural model and easier understanding of data. Secondly, it can provide a better generalisation of results. Because we used higher-order factors, results could be generalised for scales that can be included in these categories, but were not assessed by the questionnaires used in this research. For coping mechanisms, we used the classification proposed by Carver et al. (1989). We classified defence mechanisms using both Perry's (1990) seven levels model, and the model of defensive styles described by Thygesen et al. (2008). We investigated the relationships between Carver's classification of coping strategies and each of the two perspectives on defence mechanisms.

We used structural equations modelling, with the *maximum likelihood* estimation method. Following the recommendations by Fan, Thompson, and Wang (1999), we reported fit indices that are least influenced by estimation method (the Goodness-of-Fit Index – GFI), or by sample size (the Root-Mean-Square Error of Approximation – RMSEA). For comparison purposes, we also reported the chi-square index and the Comparative Fit Index (CFI). Acceptable fit is indicated by values smaller than .08 for RMSEA (Browne & Cudeck, 1993), and values higher than .90 for CFI (Hoyle, 1995). Following the recommendations by Cheung and Rensvold (2002), we considered that two structural models are different when the  $\Delta\chi^2$  is statistically significant, and the difference between the CFI of the two models is larger than 0.01.

We grouped the coping styles using the classification proposed by Carver et al. (1989), which was described previously in the *Measures* section. In the case of the defence styles, we conducted separate analyses for the two classifications described in Table 1. Firstly, we tested the adequacy of a model that assumes independence between the higher-order factors of coping styles and the higher-order factors of defence mechanisms. Secondly, we tested the adequacy of a model that assumes the existence of associations between the two sets of latent factors. Finally, we compared the two perspectives by testing the statistical difference between the overall fit of the two models.

## RESULTS

### Correlations between coping styles and defence mechanisms

The correlations between coping styles and defence mechanisms supported the idea of independence between the two constructs. Of the four hundred and fifty correlation coefficients, only 14 had absolute values above .30



**TABLE 1**  
Classifications of defence mechanisms

<i>Model</i>	<i>Categories of defence mechanisms</i>						
The 7 levels of defence mechanisms (Perry, 1990)	<i>Action:</i> help-rejecting, complaining, acting-out and passive aggression.	<i>Major image distortion:</i> projective identification, splitting of other and splitting of self.	<i>Refusal to take responsibility:</i> fantasy, rationalisation, projection and denial.	<i>Minor distortion of the image:</i> devaluation of other, devaluation of self, self-idealisation and the idealisation of the other, omnipotence.	<i>Neurotic:</i> displacement, reaction formation, dissociation, repression.	<i>Obsessive:</i> the isolation of the affect, intellectualization and undoing.	<i>Adaptive:</i> sublimation, suppression, self-assertion, self-observation, humour, anticipation, altruism, affiliation.
Defensive style (Thygesen et al., 2008)	<i>The style of image distortion is considered to be the immature level of the defensive functioning, includes help-rejecting complaining, splitting of other, splitting of self, projection and projective identification.</i>		<i>Thy style of affective regulation considered being the average level of defensive functioning includes intellectualization, dissociation, isolation and fantasy.</i>			<i>The adaptive style considered being the mature level of functioning includes sublimation, self-observation, humour, anticipation and self-assertion.</i>	

**TABLE 2**  
Comparisons between models assuming independence and models assuming non independence

<i>Models</i>	<i>Correlated</i>	<i>Fit indices</i>				<i>Difference</i>	
		$\chi^2$	<i>GFI</i>	<i>CFI</i>	<i>RMSEA</i>	$\Delta\chi^2$	$\Delta CFI$
4 types of coping & 7 levels of defence	No	$\chi^2(738) = 2369.59$ , $p < .001$	.81	.76	.06	$\Delta\chi^2(28) = 313.83$ , $p < .001$	.04
4 types of coping & 7 levels of defence	Yes	$\chi^2(710) = 2055.76$ , $p < .001$	.84	.80	.06		
4 types of coping & 3 defence styles	No	$\chi^2(278) = 995.57$ , $p < .001$	.87	.82	.07	$\Delta\chi^2(12) = 269.07$ , $p < .001$	.07
4 types of coping & 3 defence styles	Yes	$\chi^2(266) = 726.50$ , $p < .001$	.91	.89	.06		

and can be considered strong associations (according to the guidelines proposed by Cohen, 1988). These results are convergent with previous empirical evidence (Callahan & Chabrol, 2004; Erickson et al., 1997; Vickers & Hervig, 1981) and support the idea of independence between coping and defences.

### Analysis of SEM

SEM analyses indicated that models that assumed associations between coping and defences have significantly better fit as compared to models that assumed independence between the latent factors of the two questionnaires (see Table 2 for more details). This result was obtained in the case of Perry's seven levels of defences,  $\Delta\chi^2(28) = 313.83$ ,  $p < .001$ ;  $\Delta CFI = .04$ , and in the case of the three defence styles identified by Thygesen et al. (2008),  $\Delta\chi^2(12) = 269.07$ ,  $p < .001$ ,  $\Delta CFI = .07$ . Consequently, these results supported the general hypothesis

of this study that anticipated the relationships between coping and defences.

Results presented in Table 3 show consistent correlations (ranging from .35 to .62) between adaptive defence mechanisms and coping focused on the problem, on the emotion or on seeking social support. Similarly, the avoidant coping strategies correlated with defence styles that are not adaptive (correlations between .52 and .74). These results supported the two hypothesised relationships that anticipated associations between adaptive defences and problem-oriented coping scales, and associations between non-adaptive defences and avoidant coping scales. Correlations values close to zero were found between avoidant coping and adaptive defence mechanisms, and between non-avoidant coping (problem-focused, emotion-focused or social support-focused) and non-adaptive defences.

These results suggested that coping and defence mechanisms could be grouped into two types of adaptive

**TABLE 3**  
Estimated correlations between categories of coping and  
categories of defences

	Coping			
	<i>Problem</i>	<i>Emotion</i>	<i>Social</i>	
	<i>focused</i>	<i>focused</i>	<i>support</i>	<i>Avoidant</i>
<i>Defences</i>	( $\alpha = .82$ )	( $\alpha = .77$ )	( $\alpha = .83$ )	( $\alpha = .72$ )
<i>3 factor model</i> (Thygesen et al., 2008)				
Image-distorting ( $\alpha = .75$ )	-.05	-.01	<.01	.63**
Affect regulating ( $\alpha = .70$ )	-.06	-.02	-.07	.62**
Adaptive ( $\alpha = .61$ )	.58**	.62**	.35**	-.02
<i>7 levels model</i> (Perry, 1990)				
Action ( $\alpha = .61$ )	.03	.03	.11*	.59**
Major image distortions ( $\alpha = .62$ )	-.07	-.01	.04	.74**
Refusal to take responsibility ( $\alpha = .67$ )	-.02	.08	.01	.67**
Minor image distortions ( $\alpha = .60$ )	.14*	.14*	.06	.63**
Neurotic ( $\alpha = .50$ )	-.01	.02	.02	.63**
Obsessive ( $\alpha = .56$ )	.07	.10	-.01	.52**
Adaptive ( $\alpha = .70$ )	.55**	.59**	.36**	<.01

Note.  $N = 542$ .

\*correlation significant at  $p < .01$ ; \*\*correlation significant at  $p < .001$ .

processes. One type of adaptive processes includes mature (or adaptive) defences and all forms of active coping (focused on the problem, focused on emotion or focused on seeking social support), while the other type includes non-adaptive defence mechanisms and avoidant coping. Starting from these observations, we tested a model that assumed the existence of two types of adaptive strategies, using the composite score for each of Cramer's four types of coping and the composite score for each of Perry's seven defence levels (described in Table 1). This model (presented in Figure 1) had excellent fit indices,  $\chi^2(43) = 171.28$ ,  $p < .001$ ; GFI = .95; CFI = .94; RMSEA = .07. Moreover, results indicated a weak association,  $r(540) = .19$ ,  $p < .001$ , between the two types of adaptive processes. Because of the weak, albeit significant association between the two latent variables, we also assessed the fit of a model that assumed the two types of adaptive processes are not associated. This latter model had similar fit indices,  $\chi^2(44) = 185.25$ ,  $p < .001$ ; GFI = .94; CFI = .94; RMSEA = .08, and the difference between the models was statistically significant,  $\Delta\chi^2(1) = 13.97$ ,  $p < .001$ .

Because, Erickson et al. (1997) have found that gender moderates the relationships between coping and defences, we investigated the gender equivalence of the model presented in Figure 1. Results indicated excellent fit indices for the male sample,  $\chi^2(43) = 60.86$ ,  $p = .038$ ; GFI = .93; CFI = .97; RMSEA = .06, and for the female sample,  $\chi^2(43) = 135.39$ ,  $p < .001$ ; GFI = .94; CFI = .94; RMSEA = .07, suggesting that the model had

good configural invariance. Further analyses of structural invariance showed that the two groups have equal factor loadings,  $\Delta\chi^2(9) = 8.93$ ,  $p = .44$ , and similar intercepts,  $\Delta\chi^2(12) = 16.95$ ,  $p = .15$ , but residual uninvariance was found,  $\Delta\chi^2(23) = 56.80$ ,  $p < .001$ .

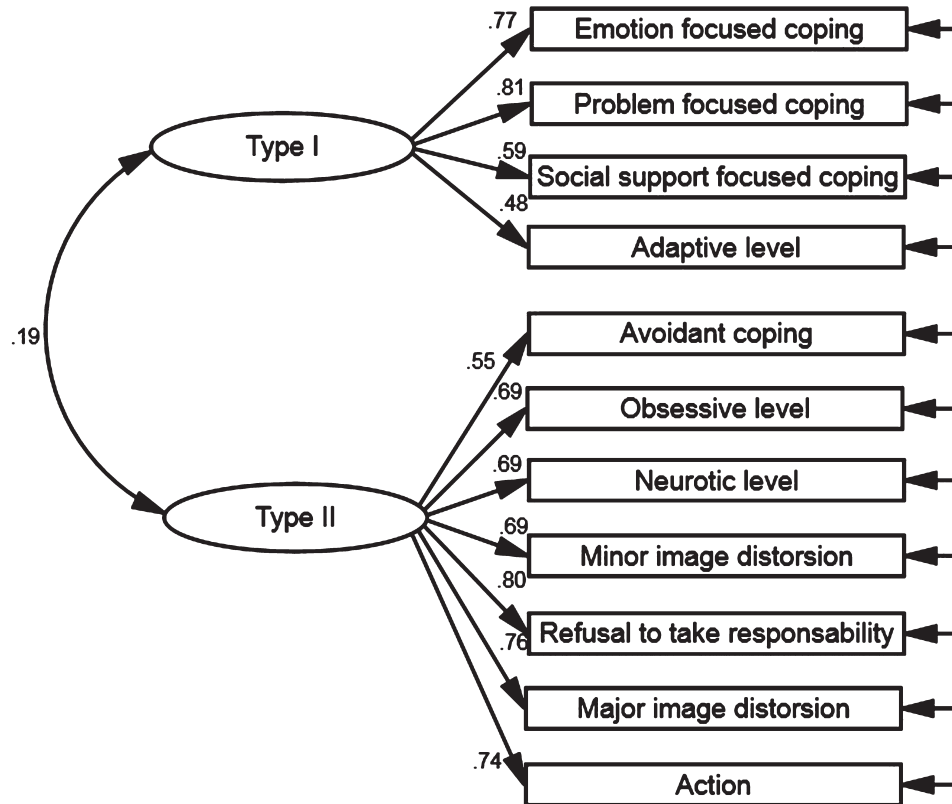
Taken together, these findings supported the existence of relationships between that coping and defences, and suggested that the two concepts are describing the non-independent psychological phenomena.

## DISCUSSION

The aim of the present research was to investigate the relationships between coping strategies and defence mechanisms. We were interested in these relationships because they were suggested by theoretical arguments while the empirical support was inconclusive. The zero-order correlations between coping strategies and defence mechanisms did not provide clear support in favour or against the independence between the two types of constructs. To avoid the multiple hypothesis issue (Shaffer, 1995) the correlation matrix was analysed using SEM. SEM analyses showed a better fit for models that assumed relationships between coping and defences as compared to models that assumed their independence. SEM results also revealed strong correlations between second-order factors of coping and defence mechanisms. The statistically significant tests of SEM and the high proportions of common variance between second-order factors of the two questionnaires (ranging between 12.25 and 54.76%) provide strong evidence for concluding that coping strategies and defence styles are non-independent concepts, and confirm the findings of previous research studies that used multivariate analyses (Kramer, 2010b; Moris et al., 1995).

The present findings provide empirical support for the theoretical idea that coping and defences could be complementary facets of the same psychological processes. Correlations between the latent variables indicated that avoidant coping is strongly associated with all forms of non-adaptive defences, and non-avoidant coping (focused on problem, emotion or on seeking social support) is strongly associated with adaptive defences. In addition, correlations between non-avoidant coping and non-adaptive defences have values close to zero, suggesting the two types constructs are independent one from the other. This result is similar with the findings reported by Muris et al. (1995) who showed that coping and defences share common variance that can be explained using uncorrelated latent factors.

Although correlations between the latent variables are comparable with findings reported by previous studies (Erickson et al., 1997), the present research found stronger relationships between coping and defences. In previous research, the small correlation values can be attributed to poor internal consistency of self-report



**Figure 1.** Configuration and standardised loadings of the model assuming two types of adaptation processes.

measures, which diminished the capacity of the scales to correlate with other variables. By studying the relationships between latent variables, the results of the present research study are error-free estimates of associations.

The pattern of correlations between coping and defence categories would seem to indicate the existence of two types of reactions: an active and adaptive response to negative events (a latent factor that includes adaptive defences, and coping strategies focused on the problem, on the emotion or on finding social support), and a passive and non-adaptive response to adverse events (a latent factor that includes avoidant coping and all non-adaptive defence mechanisms). This result is in line with the observations made by Skinner et al. (2003), who noted that passive reactions are less present in coping taxonomies. The uneven distribution of coping and defences between the two latent factors suggest that coping mechanisms detail different active ways to deal with adversity while the defence mechanisms are focused on detailing the passive reactions. This specialisation could be the result of different theoretical backgrounds that generated the two perspectives. More specifically, Lazarus's approach focused on describing reactions that can be observed in normal individuals while the psychiatric perspective is focused on detailing reactions that can be observed in clinical cases.

### Implications for future research and practice

The strong correlations between coping and defence categories indicate that research findings from one concept could be transferred and used by practitioners that are familiar with to the other theoretical perspective. For example, Moskowitz et al. (2009) concluded that active coping and positive reappraisal were associated with positive outcomes in people coping with HIV. Because active coping strategies and adaptive defences are correlated adaptation processes (as concluded in the present research), one can anticipate that adaptive defence mechanisms (e.g., sublimation, suppression, self-assertion) are also associated with positive outcomes in people with HIV.

An intriguing result is the weak relationship between the two types of reactions described previously. Traditionally, active (or mature) and passive (or immature) reactions to adversity were considered poles of a continuum (Vaillant, 2000), but the results of the present research study rather suggest the two types of reactions are independent one from the other. This independence has several implications. Firstly, the absence of any relationship suggests the two types of reactions are not opposite. Therefore, giving them opposite labels ("adaptive" and "non-adaptive"; "mature" and "immature," "active" and "passive") could lead to erroneous

conclusions regarding the existence of negative relationships between the two types of reactions. Moreover, the use of composite indexes such as the overall defensive functioning (or overall coping styles) could be inappropriate because such an index includes coping or defences that are manifestations of the two types of adaptive processes. Based on the results of the present research study, we recommend researchers and practitioners to compute two separate defensive functioning (or coping styles) indices: one for active mechanisms (which includes adaptive defence styles and/or non-avoiding coping styles), and one for passive mechanisms (which includes non-adaptive defence styles and/or avoiding coping styles). By using these two overall defence scores, researchers and practitioners will overpass the internal consistencies issues that are specific to self-reported defence scales. Secondly, this result suggests that individual's response to adverse events could include elements from both types at the same time. Consequently, clinical and psychotherapeutic practice should focus on both active and passive reactions because the improvement of one type of reaction does not automatically associate with improvements in the other. Thirdly, future research should examine the differences between individuals that exhibit both types of reactions as compared to individuals that manifest only one type of reactions. Finally, active and passive reactions should have predictive incremental validity one over the other, and researchers and practitioners should consider both types of reactions when investigating how individuals react to adversity.

### Limitations

We aware the present research may have limitations. The first is the use of Cramer's model of coping strategies. Although it is one of the most highly cited perspectives, this model does not cover all coping strategies identified by Skinner et al. (2003) in the literature. For example, the conclusions of this research cannot be extended to categories of coping strategies such as negotiation, opposition or delegation. Future research should examine the relationships between these coping categories and the two types of adaptive processes identified in this research.

A second limitation of the current research is the use of self-report methods for assessment of coping and defences. This is a limitation because self-report questionnaires may not reflect the actual thoughts of the respondent (Glass & Arnkoff, 1997), therefore our results describe the respondents' representation of coping and defences, not necessarily the actual adaptation processes. Because this limitation of self-report measures, researchers developed observer-rated measures of adaptation processes (e.g., the rating scales developed by Perry, 1990), but research studies identified weak relationships between self-report defence measures and observer-rated

measures for adaptation strategies (Cramer, 1998). As a consequence, it is possible to find different results regarding the relationships between coping and defences, if we assess adaptation processes using other methods than self-report questionnaires. A third limitation is the use of a sample from a single culture. Although both questionnaires were adapted to the Romanian culture, the correlation between the two types of adaptation processes could vary from one culture from another. Therefore, more research is needed to ensure higher generalisability for the results of the present research. The fourth potential limitation is the rather large women percentage in our sample. However, results of invariance analyses showed that the two-factor model has similar factor loadings and similar intercepts, therefore gender imbalance is not a decisive limitation of the present research. The fifth limitation is the use of super-ordinate categories of coping and defences. Because of this decision, it is difficult to draw conclusions regarding the relationships between specific defence styles (e.g., anticipation) and specific coping mechanisms (e.g., planning). Finally, the cross-sectional design of the present research could be interpreted as a limitation. In our opinion, this is not the case because we did not have causal inferences that might be less valid because of the cross-sectional nature of our data.

### CONCLUSIONS

In summary, the present study showed that coping strategies and defence styles are similar concepts that describe the same adaptation processes. This conclusion should provide an encouragement for better integration of results from the two theoretical perspectives, and for a new way of conceptualising adaptation processes. A major finding of the present research study is the establishment of two types of weakly correlated adaptation processes: active (or mature) and passive (or immature) processes. Most coping strategies included in the COPE model (Carver et al., 1989) depict active adaptation processes, and only three out of twelve coping strategies describe passive adaptation processes. At the same time, most defence styles included in the DSM-IV (APA, 1994) reflect passive adaptation processes, and only 8 of 30 defence strategies detail active adaptation processes. This suggests that, if considered alone, neither coping strategies models nor models of defence styles provide a comprehensive perspective on human adaptation processes. Because active and passive adaptation processes are rather independent one from the other, the present results could be a step further towards enhancement of the theoretical perspectives regarding the relationships between coping and defences.

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