

ORIGINAL ARTICLE

**RELATIONSHIP BETWEEN COPING STRATEGIES AND
THINKING STYLES AMONG UNIVERSITY STUDENTS**

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Abstract

Objective: This study aims at exploring the correlation between coping strategies and thinking styles. **Methods:** The study sample consisted of 62 students (30 females and 32 males) from the Medical Science College in Hodeidah University, Yemen. They responded to the Scale of Coping styles and Inventory of Thinking styles questionnaire. **Results:** Active coping strategy was affected significantly by legislative, local and hierarchical thinking styles, while avoidance strategy was affected significantly by oligarchic thinking styles, behavioral conducts by judicial, global and anarchic thinking styles. Significant gender differences were found in behavioral conducts (from coping strategies), anarchic and internal thinking styles with advantage with females. **Conclusion:** Coping strategies are not independent of thinking styles. These results offer justification and support for future research in larger samples. Potential implications of the impact of thinking styles on coping strategies are also considered. *ASEAN Journal of Psychiatry, Vol. 15 (1): January – June 2014: 14-22.*

Keywords: Coping Strategies, Thinking Styles

Introduction

Many people are exposed to stressful life events that impede growth and cause further complexity to their lives. These events force people to look for the best ways to cope with these stressful situations. These experiences will help them to form their own coping strategy which becomes one of the fundamental components in the intelligence style of the individual. These coping strategies are formed through life span based on one's experiences and his development. It refers to "cognitive and behavioral responses serving to mobilize, recruit, direct, coordinate, modulate and monitor one's behavioral, emotional and attentional resources in an attempt to adapt to stressful or threatening situations"[1].

There are two general framework for coping strategies in literature, the first framework was contributed by Folkman & Lazarus (1980, 1984) [2, 3] who divided coping strategies into problem-focused coping strategy (refer to

direct activities to modifying the stressor) and emotion-focused coping strategy (refer to regulating emotional tension and arousal). The other coping strategies fall into these two subtypes. But in real life these two strategies are not the only types of coping. We use a lot of other methods in dealing with difficult situations for example, "maintain favorable morale under stress, sustain or restore positive self-regard, and taking a break from chronic or recurrent demands that are stressful in order to restore our commitment" [4]. Therefore, other authors suggested more than two strategies.

The second framework distinguished between approach and avoidance coping strategy [5, 6]. Approach coping is defined as an orientation towards the stressful events, with the person's active attempts at resolving and managing the stressor [7]. It is referred to as sensitization, engagement, vigilance, attention, and monitoring, and it includes cognitive efforts to analyze or change one's thinking about a

problem and behavioral efforts to resolve or deal directly with a problem [8].

Avoidance strategies tend to reduce stress over short periods of time by moving away from the source of the threat as well as prevent anxiety from becoming crippling when confronting uncontrollable stressors. It indicates cognitive and behavioral efforts to deny, minimize or escape from a difficult situation that lead to avoid the stressor and its associated emotions or thoughts, or to lessen distress through emotional expression, such as denial, wishful thinking, day dream, watch TV and substance abuse [9]. In addition, avoidance allows gradual recognition of a threat. Increasing hope and courage are possible when avoidance strategies are used in a partial, tentative, or minimal manner [10,11].

Whatever the types or the number of coping strategies, these strategies depend on the individual's awareness of stressful events and the interaction between the characteristics of the individual and the characteristics of the situation [12]. The choice of appropriate coping strategy is affected by cognitive processes, such as thinking, attention, cognition, memory, classification, reasoning, analysis, synthesis, generalizing, and decision-making [13]. Most relevant findings in the previous studies indicate that the way people interpret and evaluate events plays a key role in how well they cope with these events [14]. Lazarus and Colleagues [15] suggested that the stress and coping strategies are due to knowledge (perception thinking) and the way in which the individual assesses his relationship with the environment, and this relationship is not going in one direction. The environmental requirements, coping strategies with stress, and emotional responses are the result of the impact of each one on the other.

Coping strategies are also affected by thinking styles which refer to individual's preferred ways of thinking and make use of their personal skills in dealing with stressful events [16, 17, 18]. Thinking style is also defined as one's preferred manner of thinking to govern or control daily activities including dealing with stressors, understanding, solving problems and challenges [19,18-20). Thus, styles greatly affect how people analyze and approach problems, associate with others,

organize, communicate, and lead [21]. And this is what makes thinking styles among the important personal characteristics which seem to influence the performance in stressful conditions and inhibit the effects of disturbing factors [22].

Sternberg (1985, 1990, 1994a, 1994b, 1997) [23-27] in mental self-management theory, describes 13 thinking styles that are divided into five dimensions: (1) functions (include: the legislative, executive and judicial styles), (2) forms (including the monarchic, hierarchic, oligarchic and anarchic styles), (3) levels (include: the global and local styles), (4) scopes (include: the internal and external styles) and (5) leanings (include: liberal and conservative styles) of the mental government. These styles are cognitive in their way of looking at things and correspond preferences in the use of abilities [28].

Few studies found that the differences in thinking styles preferences can affect people's ways of coping with stressful events. Hou and Colleagues (2007) [29] investigate the relationship between thinking styles and coping strategies in China's adolescents whose return to single child family. They found impact of dialectic thinking style on coping strategies. The adolescents with high dialectic thinking style adopted less self-awareness coping; while those with low dialectic thinking style adopted more self-awareness coping and are more likely to employ all types of coping strategies.

Some researchers began to address other aspects of cognitive variables involved in coping strategies and thinking styles which are related to clinical syndromes like depression. Limiãna, Corbalan and Sanchez (2009) [30] identify the cognitive dimensions involved in thinking styles, coping and the psychological adjustment at (118) parents of children with myelomeningocele. The results show the internally focused thinking style contributed the most of psychological adjustment. This thinking style help to detect stable responses associated with caring for children with this syndrome. Epstein and Colleagues (1996) [31] tested the contribution of rational and intuitive thinking styles in predicting coping styles. The results showed that the separate scores and the interaction term were all significant predictors

of two facets of behavioral coping. Burns and Fedewa (2005) [32] examined the relationship between cognitive styles and perfectionistic thinking, and the findings showed that negative perfectionists were poor constructive thinkers and exhibited maladaptive coping in reaction to stress. Positive perfectionists were found to engage problems actively and to be conscious. The present study aimed to identify the impact of thinking styles on coping strategies among students in the Faculty of Medicine at Hodeidah university.

Methods

Participants

The study population consisted of undergraduate students who had been studying throughout the 2009-2010 academic year at Hodeidah University-Yemen. The study sample consisted of 62 students at the second year in the Faculty of Medicine. They were selected by using a simple random method. All data was collected in this survey by pen and paper in three sessions taken time between 50-75 minutes. The mean age of the sample was 20.66 ± 1.187 years (range: 19–23 years). They were 32 men (mean age= 20.84 ± 1.139) and 30 women (mean age= 20.467 ± 1.22).

Measurement

The Thinking Styles Inventory (TSI) [33] developed by Sternberg & Wagner (1994) translated into Arabic by Abu Hashim [34] was used to assess thinking styles among the

university students. The TSI is a self-report inventory with 65 items divided into 13 subscales with five items on each subscale. These subscales are legislative, executive, judicial, monarchic, hierarchic, oligarchic, anarchic, global, local, internal, external, liberal, and conservative. For each item, participants are responding on a seven-point Likert scale: 1 "not at all well", 2 "not very well", 3 "slightly well", 4 "somewhat well", 5 "well", 6 "very well", and 7 "exactly well". Albaili [35] and Abu Hashim [34] reported acceptable reliability and validity estimates for Arabic samples.

The scale of coping styles with stressful life events developed by Leonard Poon (1980) [36] translated into Arabic by Ali [37] was also used in this study. This scale consists of [30] items divided into three subscales: Active Coping (7) Items, Avoidance (13) items, and Behavioral Conducts (10) items. Ali [37] found good validity and reliability for this scale in Egypt. In this study the researcher confirmed validity of instruments by getting a consensus from a panel of experts and assessing the concurrent validity.

Results

The concurrent validity was measured by examining the correlation between the degree of each items and the degree of sub-scale as shown in Tables 1 and 2.

Table 1. Concurrent validity of coping styles scale

Items of active coping strategies	R	Items of avoidance strategies	R	Items of behavioral conducts	R
1	0.42*	11	0.52**	2	0.40*
3	0.49**	14	0.78**	5	0.41*
4	0.76**	19	0.72**	8	0.46*
6	0.56**	21	0.40*	9	0.66**
7	0.43*	26	0.38*	10	0.53**
12	0.39*	29	0.39*	15	0.397*
13	0.42*	30	0.56**	20	0.548**
16	0.36*			22	0.49**
17	0.53**			25	0.51**
18	0.44*			28	0.47**
23	0.43*				
24	0.71**				
27	0.34*				

* $p < 0.005$ ** $p < 0.001$ (Pearson correlation)

Table 2. Concurrent validity of thinking styles inventory scale

Styles	Items	R	Styles	Items	R	Styles	Items	R
Legislative	1	0.658**	Local	5	0.40*	Monarchic	9	0.70**
	14	0.496**		18	0.57**		22	0.82**
	27	0.43*		31	0.48**		35	0.30*
	40	0.52**		44	0.68**		48	0.74**
	53	0.65**		57	0.30*		61	0.34*
Executive	2	0.41*	Liberal	6	0.55**	Oligarchic	10	0.76**
	15	0.67**		19	0.59**		23	0.25*
	28	0.27*		32	0.44**		36	0.84**
	41	0.78**		45	0.50**		49	0.48*
	54	0.36*		58	0.47**		62	0.41*
Judicial	3	0.496**	Conservative	7	0.57**	Anarchic	11	0.57**
	16	0.654**		20	0.71**		24	0.42*
	29	0.734**		33	0.46**		37	0.72**
	42	0.81**		46	0.82**		50	0.42*
	55	0.555**		59	0.70**		63	0.73**
Global	4	0.758**	Hierarchical	8	0.85**	Internal	12	0.64**
	17	0.56**		21	0.65**		25	0.54**
	30	0.614**		34	0.74**		38	0.65**
	43	0.32*		47	0.56**		51	0.77**
	56	0.59**		60	0.47**		64	0.36*
External	13	0.758**	* p<0.005 ** p<0.001 (Pearson correlation)					
	26	0.56**						
	39	0.614**						
	52	0.32*						
	65	0.59**						

The reliability of instrument was tested by getting the Cronbach's alpha coefficient and through test-retest (n=30) assessment. The

results are shown in Tables 3 and 4 respectively.

Table 3. Reliability coefficients of coping styles subscale

Subscales	Cronbach's Alpha	test-retest reliability
Active Coping	0.624	0.689
Avoidance	0.510	0.42
Behavioral conducts	0.489	0.478
Total	0.468	0.607

Table 4. Reliability coefficients of thinking styles inventory

Subscales	Cronbach's Alpha	test-retest reliability
Legislative	0.399	0.448
Executive	0.38	0.392
Judicial	0.663	0.857
Global	0.483	0.828
Local	0.633	0.69
Liberal	0.53	0.49
Conservative	0.75	0.688
Hierarchical	0.68	0.649
Monarchic	0.49	0.88
Oligarchic	0.59	0.39
Anarchic	0.515	0.859

Internal	0.494	0.83
External	0.49	0.48
Total	0.80	0.75

In order to examine the impact of thinking styles on coping strategies, the researcher used

stepwise multiple regression techniques, the results were summarized in Table 5.

Table 5. Contributions of Thinking Styles to coping strategies

Coping strategies	Thinking styles	Constant factor	β	R	R ²	t	Significant level
Active coping	Legislative	26.077	0.190	0.290	0.084	2.348	0.022
	Local	23.170	0.230	0.356	0.127	2.290	0.026
	Hierarchical	23.360	0.188	0.345	0.119	2.194	0.032
	Anarchic	27.390	0.184	0.273	0.074	2.176	0.034
Avoidance	Oligarchic	12.303	0.141	0.300	0.090	2.435	0.018
Behavioral conducts	Judicial	17.985	0.223	0.367	0.135	3.021	0.004
	Global	18.159	0.186	0.314	0.098	2.560	0.013
	Anarchic	16.264	0.262	0.455	0.207	3.962	0.000

As seen in Table 5, active coping strategy had significant correlations with legislative, local, hierarchical, and anarchic thinking styles. Thus, only these four thinking styles were entered into the equation predictive of active coping strategy. Avoidance strategy showed significant correlation with oligarchic thinking

style. The behavioral conducts showed significant correlation with judicial, global, and anarchic thinking styles. Sex differences in coping strategies and thinking styles were examined by independent-samples t test analysis and the results are shown in Table 6.

Table 6. Gender differences in coping strategies and thinking styles

	Gender	Mean	Standard deviation	t-test	Significant level
Behavioral conducts	Male	21.37	3.01	2.35	0.022
	Female	23.13	2.87		
Anarchic	Male	21.46	5.50	2.024	0.047
	Female	24.13	4.81		
Internal	Male	19.18	7.22	2.19	0.032
	Female	22.700	5.10		

Based on Table 6, there was a significant difference between men and women in behavioral conducts. Anarchic and internal thinking styles, whereby women used the behavioral conducts, anarchic and internal thinking style significant more than man.

Discussion

The specific aim of the present study was to investigate the contributions of thinking styles in coping strategies. The study findings showed that active coping strategy was significantly correlated with legislative, local,

hierarchical, and anarchic thinking styles. Local and hierarchical thinking styles together, were found to explain 24.6% of the variance in active coping strategy, whereas legislative and anarchic thinking style together explained 15.8% of the variance. These four thinking styles accounted for 40.4% of the variance in the active coping subscale, which means that 40.4% of changes in the dependent variable (active coping strategy) can be explained by these thinking styles. This model explains the impact of interaction between four thinking styles (legislative, local, hierarchical, and anarchic styles) on active coping strategy, and

this means the individuals who use active coping strategy are active, prefer direct ways to deal with problems, and do more behavioral attempts to solve these problems. People with these features tend to think in ways which are consistent with their coping strategy. This explanation is consistent with the characteristics of these styles of thinking which is described in the mental self-management theory. According to Sternberg's theory people with legislative style prefer problems which require devising new strategies to create their own laws and they enjoy giving commands [17-38]. People with local thinking style, on the other hand are attracted by the practical situations, and they are described as subjective because they take account of everything and they do not leave anything to chance or luck [33]. People with hierarchic thinking style tend to do many things at one time, put their goals in the form of hierarchy depending on their importance and priority. They are realistic, logical and organized in solving problems and decision-making. This explanation does not apply to the people with anarchic style who tend to adopt a method of random and non-compliant in a particular order to solve the problems. Their performance is better when the tasks and positions that are assigned to them are disorganized, and they are confused (33). I did not find appropriate interpretation for the relationship between this style of thinking and active coping strategy.

These findings are partially consistent with the results of some previous studies, for example, Limiãna and Colleagues (2009) [30] who found significant correlations between externally focused thinking style and some aspects of active coping strategy (confrontive, social support seeking, and innovation seeking coping strategies). The presence of externally focused and innovation-seeking thinking styles seemed to be associated with the use of active and changing coping strategies such as confrontation. Gras and his friends (2012) [39] showed the internally focused thinking style contributed the most of psychological adjustment, and behavioral responses associated with caring for children with severe spina bifida.

This study also found that avoidance strategy showed significant correlation with oligarchic

thinking style. Those who have this thinking style are characterized by rushing into the goals of equal importance, and they are nervous, confused, and they have many contradictory goals. So it is rational to show significant relationship with avoidance strategy. These results are partially consistent with the findings from Limiãna and Colleagues (2009) [30] who found a significant relationship between intuition - guided and feeling-guided thinking styles and the use of escape- avoidance coping strategies.

According to the results of this study, coping strategies are not independent from thinking styles and the interaction between these variables may lead to formation of independent cognitive style affected by gender differences. Therefore, the potential applications of the interaction between thinking styles and coping strategies will have a significant impact in future studies.

On the other hand, there were no significant gender differences in most coping strategies and thinking styles except those differences that have emerged in favor of females in the behavioral conducts (from coping strategies) and anarchic and internal thinking styles. These results are not consistent with the results of many previous studies. Al-Shaka'a (2009) [40] found significant differences in coping strategies between males and female students at Al-Quds Open University. The results were in favor of males in positive coping, and in favor of female in negative coping and behavioral actions. Scientific researches confirm the existence of differences between gender in the strategies of coping with stressful life events. The studies conducted on samples of individuals who were exposed to heart disease, found that males tend to use a strategy of confrontation focused on the problem more than a strategy of confrontation focused on emotion as well as escape and avoidance strategies. The researchers stressed that the selection of appropriate coping strategies depends on assessment of the individual for the event [41]. In general, males and females show differences in experiences related to pressures, and pain. Epidemiological studies have confirmed that females described their painful experiences more negatively than males [42, 43].

Other authors also pointed out the existence of sufficient evidence of gender differences with regard to anxiety, suffering and behavior associated with pain. Women were found to express their feelings more significantly compared to men and women and men repeatedly showed differences in behavioral coping styles to pain, suffering, recourse to social support, and a sense of disaster related to suffering [44-47]. Flynn and his Colleagues [48] found that the differences between genders in the coping strategies were not clear when comparing the two groups, and the researchers concluded that effective coping strategies may be less effective in women compared to men in the sample of law students.

The results of current study showed that thinking styles play an important role in the coping strategies, which means that any intervention in thinking styles will also have a direct impact on coping strategies, and this will have an important practical and theoretical implication which, we hope, will be supported by researches in the future.

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