

The Relationship between Cognitive Intelligence, Emotional Intelligence, Coping and Stress Symptoms in the context of Type A Personality Pattern

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Abstract

Objective: This study aimed to determine the relationships between cognitive and emotional intelligence, coping and stress symptoms in the context of Type A personality pattern.

Method: The Raven Progressive Matrices, Emotional Intelligence Questionnaire, Ways of Coping Inventory, Stress Symptoms Scale, and Type A Personality Scale were administered to 271 university students. Two groups, Type As and Type Bs were created according to the Type A Personality Scale scores and were compared in terms of their scores on the other scales that were administered.

Results: Our analyses showed that stress symptoms were negatively correlated with effective coping, stress management, and general mood dimensions of the Emotional Intelligence Questionnaire. They were also positively correlated with ineffective coping and Type A behaviors. Being female also significantly predicted stress symptoms. When the participants were grouped according to Type A Personality Scale scores as Type As and Type Bs, the regression analysis showed that the stress symptoms of Type As were significantly predicted by the insufficient use of effective coping styles and deficiencies in the general mood component of emotional intelligence, whereas the stress symptoms of Type Bs were predicted by the insufficient use of effective coping styles, overuse of ineffective coping styles, and increase in the intrapersonal abilities component of emotional intelligence.

Conclusion: Stress symptoms can be related to the variables associated with personality styles. It is suggested that stress management programs for Type As should include exercises that increase emotional intelligence, especially the components of drawing pleasure from their life situation, being more positive, hopeful and optimistic.

Key Words: Stress, Coping, Cognitive Ability, Emotional Intelligence, Type A Personality

INTRODUCTION

While Lazarus and Folkman (1984) define stress as an interaction between the individual and the environment in which the individual assesses deficiencies in his/her coping resources, they highlight the existence of four processes during this interaction. The first is the perception of an internal or external stimulus; the second is the evaluation of that stimulus as a threat to wellbeing; the third is the appraisal of cognitive and/or physical coping resources, and the fourth is a complex set of cognitive and somatic responses known as the stress response (Lazarus, 1993).

Even though some events might constitute an actual threat that can lead to the stress response, there is a consensus that it is the individual's appraisal of that event which will determine that it will be experienced as stressful. While this appraisal is being made, the cognitive capacities of the individual are being used and they are, therefore, important in the process. The stress response begins, not after the perception of the stimulus, but after the cognitive appraisal of that stimulus as a threat (Uçar, 2004). The stress response that follows is based on the environmental and personal characteristics of the individual (Lazarus, 1993).

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General Cognitive Ability: Individuals make their cognitive appraisals by using their cognitive capacities and abilities. The related literature points to a negative correlation between cognitive intelligence and stress symptoms. Individuals with low cognitive ability and high neurotic personalities are more vulnerable to stress. Researchers think that the anxiety felt by an individual might interfere with his/her cognitive performance, resulting in inefficient use of cognitive resources (Perkins and Corr, 2006). Similarly, some studies report that test-anxious students have low intelligence test scores. On the other hand, an optimum arousal state, measured according to heart rate, is found to be positively correlated with cognitive performance (Hopko et al., 2005).

Among the cognitive abilities, verbal ability is significantly correlated with experienced stress, whereas numerical ability is correlated with coping (Plante and Sykora, 1994). However, these correlations between stress and intelligence were mostly studied in individuals with post-traumatic stress disorder (PTSD). A study conducted with American Vietnam veterans reported that relatively high cognitive intelligence was protective against experiencing PTSD (McNally and Shin, 1995). Similar findings were observed among Bosnian veterans (Sarač et al., 2007).

Research on the relationship between PTSD and cognitive functions report that individuals with PTSD have memory lapses of daily events, false memories, deficient autobiographic memory, and lesions in the frontal lobe. Investigations using advanced brain imaging reported a reduction in hippocampal volume in individuals with long-term PTSD. It is thought that this shrinkage is responsible for the observed memory problems (Bremner, 2006). Consequently it would not be wrong to conclude that chronic and intense stress have negative effects on intelligence, operationally defined as making predictions through the use of a wide memory capacity (Hawkins and Blakeslee, 2004).

The complex and relatively unexplained relationship between cognitive intelligence and stress remains ambiguous. Even though studies have shown that there is a relationship between low cognitive ability and high-level stress symptoms in people that experience traumatic events, as well as a decrease in hippocampal volume, the casual direction is not clear. It is not yet known if low intelligence leads to chronic stress or if chronic stress leads to a deficient hippocampus and, consequently, to lower cognitive intelligence. Another cognitive capacity with a relatively consistent relationship to stress is emotional intelligence.

Emotional Intelligence: Emotional intelligence is generally characterized according to 2 different models. The first is the ability model, according to which emotional intelligence is defined as the ability to differentiate and monitor one's own and others' feelings, and using this knowledge to manage one's own thoughts and behaviors (Salovey and Mayer, 1990). Defined as such, it is conceptualized as a pure form of intelligence and cognitive ability. The other model was proposed by Bar-On and is known as the trait model. According to this model, emotional intelligence is defined as all the characteristics other than cognitive intelligence that help people cope with a variety of challenges in one's life (Lyusin, 2006). Research conducted based on these models have reported inconsistent results concerning the relationship between stress and intelligence.

The correlation between personality and emotional intelligence, as defined by the ability model, is weaker than that as defined by the trait model (Rooy et al., 2005). Even though there is criticism regarding the notion that emotional intelligence (according to the trait model) actually measures the same construct as personality, Shulman and Hemenover (2006) think that trait-based emotional intelligence is different than personality. It explains 1%-6% of the variance, especially in health status, apart from personality. It is reported that a high-level of emotional intelligence can significantly predict healthy functioning, as well as the distress and experience of traumatic stress (Hunt and Evans, 2004). Two studies that investigated the relationship between emotional intelligence and stress among healthcare providers reported that those with a high level of emotional intelligence, experienced less stress at work (Nikolaou and Tsaousis, 2002; Landa et al., 2007).

Studies on the relationship between emotional intelligence and coping reported no relationship between emotional intelligence (defined according to the ability model) and coping, in terms of cognitive avoidance and seeking social support, while it was positively correlated to problem-focused coping and emotional intelligence. On the other hand, a study of emotional intelligence defined according to the trait model and measured with self-report scales reported strong correlations between problem-focused coping, cognitive avoidance, and seeking social support (Goldenberg, et. al. 2006). It was reported that those with high levels of emotional intelligence understand their own emotions and the emotions of others. With this understanding they can adapt to challenging situations and solve their problems more effectively. Consequently, it is thought that those with high emotional intelligence experience fewer symptoms of stress.

Type A Personality: Type A personality, or Type A behavior, is a variable frequently mentioned in the stress literature. Type As are said to be competitive, aggressive, and racing with time. Due to these characteristics Type As perceive even comparatively neutral situations as stressful and are prone to experiencing higher levels of stress. It is said that they have a low threshold for stress and are constantly producing their own stress (Lelord and Andre, 1996).

Even though there are many studies on the relationships between coronary heart disease, stress, and Type A behavior (Keenan and McBain, 1979; Howard, et. al., 1986; Dembroski and Costa, 1987; Jung, 1999; Kojima et. al., 2004), to the best of our knowledge there are no studies related to the role of intelligence in this relationship. The purpose of the present study is to investigate the relationship between cognitive intelligence, emotional intelligence, coping and stress symptoms in the context of Type A personality.

METHOD

Sample

The sample consisted of 271 randomly chosen university students, studying in various departments at 3 different universities. There were 190 (70.1%) female and 80 (29.5%) male students. Participation in the study was voluntary. Mean age of the students was 20.86 ± 1.87 years (range:17-26 years). The level of education of the participants' mothers was taken as the indicator of SES.

Assessment Instruments

Ways of Coping Inventory (WOCI): The original instrument was developed by Lazarus and Folkman (1984). The original 66-item form was shortened and adapted for use with the Turkish population. The shortened form consists of 30 items (Şahin and Durak, 1995). The items were factor analyzed and 5 factor-based subscales were formed: self-confident approach, optimistic approach, receiving social support (as effective ways of coping), and helpless approach, submissive approach (as ineffective ways of coping) (Şahin and Durak, 1995). Reliability analysis of the scale showed that Cronbach's alpha values ranged between .31 and .83 (Şahin and Durak, 1995; Akkoyun, 2004; Yılmaz, 2006). In the present study the coefficients were .83 for self confident approach, .79 for optimistic approach, .73 for helpless approach, .65 for submissive approach, and .63 for receiving social support (the alpha coefficients for effective ways of coping and for ineffective ways of coping were .82 and .78, respectively).

Stress Symptoms Scale (SSS): This Scale is part of the Stress Audit 4.2-OS battery developed by Miller, Smith, and Mahler (1988), and consists of the 3 dimensions: Stress factors, stress symptoms, and vulnerability to stress. SSS was adapted for use with groups, and the participant is asked to rate each item for the previous 6 months and for the next six months. Since studies showed that the past and the present six months are highly correlated for the three dimensions, in the present study the Stress symptoms dimension which investigated only the last 6 months was used. This stress symptoms dimension (scale) consists of 70 items regarding problems with the muscular system, the sympathetic nervous system, the parasympathetic nervous system, the emotional system, the cognitive system, and the immune system. High scores indicate high levels of experienced stress. The Cronbach's alpha values for the subscales ranged between .91 and .96 (Şahin and Durak, 1997); in the present study they ranged between .80 and .92. Cronbach's alpha for the total scale was .97.

Type A Personality Scale: This scale developed by Batigün and Şahin, was based on a checklist prepared by Rathus and Nevid (1989) to determine the characteristics of Type A individuals. The scale contains 25 items and scores range between 25 and 125; high scores indicate the presence of Type A behaviors (Batigün and Şahin 2006). The Cronbach's alpha coefficient for the total scale reported by 2 different studies was .86 ($n = 426$) and .90 ($n = 94$). The scale includes 4 factor-based subscales; Importance attributed to work, moving away from social activities, importance attributed to speed, and importance attributed to timing. Cronbach's alpha coefficients range between .40 and .79 (Batigün and Şahin, 2006). In the present study the entire scale was used and the Cronbach's alpha was found to be .83.

Raven Standard Progressive Matrices (RSPM): RSPM measures the ability to develop systematic reasoning based on comprehension of meaningless pictures, finding relationships, and understanding the qualities of a shape that completes a presented relationship. RSPM evaluates an individual's clear thinking and correct cognitive functioning capacities (Raven, 1960). The scale is reported to include items that measure the g factor (general cognitive ability) (79%) and spatial ability (15%) (Pichot, 1965). Raven (1960) reported that the g factor saturation is .82. The test was adapted for use with 7-15-year olds by Şahin and Düzen (1994) and for 20-55-year-olds by Karakaş and Başar (1995). Test-retest reliability for 18-25-year-olds is $r = .79$ ($P < 0.001$) (Karakaş, 2002; Kafadar, 2004). A study conducted with 85 indi-

viduals reported that the correlation between WAIS-R and RSPM was .55 ($P < 0.01$) (Kafadar, 2004). In the present study the raw scores for the test and the scores for test completion time were used.

Emotional Intelligence Questionnaire (EIQ): This is a 133-item questionnaire originally known as the Bar-On EQ-i measures the 5 dimensions of emotional intelligence. In the present study an 88-item shortened and adapted form (Acar, 2001) was used. The 5 dimensions of the questionnaire are: intrapersonal abilities, interpersonal abilities, adaptability, stress management, and general mood. The intrapersonal abilities dimension consists of items regarding awareness of one's emotions, self-confidence, self-esteem, self-actualization, and autonomy. The interpersonal abilities dimension is composed of items regarding understanding others, and forming and maintaining satisfactory relationships. The adaptability dimension consists of items concerning problem solving, realism, and flexibility. The stress management dimension is composed of items regarding coping with stress without losing hope and feeling in control. The general mood dimension measuring one's outlook on life, satisfaction with life, and feelings toward life and living in general. High scores indicate high-level ability on the mentioned dimensions. The reliability coefficient is reported to be $\alpha = .92$ for the total questionnaire, ranging between $\alpha = .65$ and $.84$ for the subscales (Acar, 2001). In the present study the reliability coefficients ranged between $\alpha = .62$ and $.87$ for the subscales and was $\alpha = .93$ for the entire questionnaire.

Procedure

The above-mentioned assessment instruments were combined with a demographic data questionnaire to make up a 9-page test battery. The battery was administered in classrooms to groups of 10-30 students. Initially,

345 students were assessed; however, due to incomplete or careless completion, several forms were not included in the analyses. After the exclusion of outliers, 271 forms were deemed useable for the study.

RESULTS

Relationships between the Study Variables

In order to investigate the relationships between the study variables, RSPM cognitive ability scores, completion time, emotional intelligence scores, Type A personality scores, and effective and ineffective coping scores were correlated. The correlations are presented in Table 1. As can be observed, all of the correlations were in the expected direction based on the related literature.

There was a significant positive correlation ($r = .14$, $P < 0.05$) between cognitive and emotional intelligence scores. Additionally, cognitive intelligence was positively and significantly correlated ($r = .15$; $P < 0.05$) with effective coping styles, and was negatively correlated ($r = -.12$; $P = \text{ns.}$) with ineffective coping styles. There was a significant negative correlation ($r = -.22$; $P < 0.01$) between emotional intelligence and Type A score. The strongest correlation was between emotional intelligence and effective coping ($r = .724$; $P < 0.01$). A negative correlation ($r = -.57$; $P < 0.01$) was observed between emotional intelligence and ineffective coping. Emotional intelligence was negatively correlated with stress symptoms ($r = -.40$; $P < 0.01$).

Type A scores were negatively correlated ($r = -.16$; $P < 0.01$) with effective coping and were positively correlated ($r = .15$; $P < 0.01$) with ineffective coping. There was also a positive relationship between Type A scores and stress symptoms ($r = .20$; $P < 0.01$). As expected, the correlation between effective and ineffective coping was

TABLE 1. Intercorrelations among the study variables.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) Cognitive Intelligence	1.000					
(2) Emotional Intelligence	.142*	1.000				
(3) Type-A Personality	-.103	-.218**	1.000			
(4) Effective Coping	.145*	.724**	-.157**	1.000		
(5) Ineffective Coping	-.118	-.567**	.148*	-.398**	1.000	
(6) Stress Symptoms	-.057	-.399**	.198**	-.337**	.432**	1.000

n = 271. * $P < 0.05$. ** $P < 0.01$

TABLE 2. Variables predicting stress symptoms for the total sample.

		β	t	R	R ²	R ² Change	F
1	Demographic characteristics			.216	.047	.047	3.027*
	Gender	.224	3.346***				
	Age	-.022	-.338				
	SES	-.006	-.103				
	School type	.134	1.924				
2	Coping styles			.503	.253	.206	13.882***
	Effective coping	-.253	-4.034***				
	Ineffective coping	.309	5.050***				
3	Type-A Personality	.170	2.907**	.527	.278	.025	13.466***
4	Cognitive Intelligence	.008	.145	.527	.278	.000	11.738***
5	RSPM Comp. time	-.064	-1.130	.531	.282	.004	10.588***
6	Emotional Intelligence			.568	.323	.041	8.096***
	Intrapersonal abilities	.125	1.406				
	Interpersonal abilities	.014	.192				
	Adaptability	-.057	-.757				
	Stress management	-.154	-2.056*				
	General mood	-.241	-2.634**				

*P < 0.05, **P < 0.01, ***P < 0.001

$r = -.40$ ($P < 0.01$). Again, as expected, stress symptoms were negatively correlated ($r = -.34$; $P < 0.01$) with effective coping and were positively correlated ($r = .43$; $P < 0.01$) with ineffective coping.

Variables that Predicted Stress Symptoms in the Total Sample

The second step of our analyses consisted of hierarchical regression analyses to determine the variables that predicted stress symptoms. The demographic variables of age, gender, academic department, and SES were entered into the equation as a cluster in the first step. Effective and ineffective coping were entered in the second step. In the following steps, Type A scores, cognitive intelligence scores, and RSPM completion time scores were entered, respectively. In the last step the EIQ subscale scores were entered as a cluster. The results are presented in Table 2. As can be observed, the variables that significantly predicted stress symptoms were gender (being female), effective and ineffective coping, Type A

personality, stress management and general mood dimensions of emotional intelligence.

After obtaining this result regarding the predictive power of the Type A personality, the next several analyses were conducted by dividing the sample according to Type A scores, as Type As and Type Bs. Individuals that scored 1 standard deviation ($SD = 11.7$) above the mean ($M = 71.3$) were considered Type As ($n = 48$; males = 21, females = 26; 1 participant did not provide their gender), and those that scored 1 standard deviation below the mean were considered Type Bs ($n = 47$; males = 9, females = 38).

The t-test comparison of these 2 groups (see Table 3), in terms of their scores on the study variables, showed that Type As had significantly lower EIQ scores ($P < 0.01$) and used significantly less effective coping ($P < 0.05$).

There were no differences in the use of effective coping strategies. Type As also had significantly more stress symptoms ($P < 0.05$). In order to determine how these 2

TABLE 3. Comparison of Type A and Type B groups according to the study variables

Study variables	Type-A's (n= 48)		Type-B's (n= 47)		t	Significance level
	Mean	SD	Mean	SD		
Cognitive intelligence	50.15	5.09	51.51	5.17	1.296	.198
Emotional intelligence	319.02	34.89	340.89	34.47	3.074**	.003
Effective coping	32.04	7.01	34.66	6.43	1.898	.061
Ineffective coping	15.60	5.79	12.70	5.69	-2.465*	.016
Stress Symptoms	156.87	50.35	134.57	43.18	-2.315*	.023

(*) $P < .05$, (**) $P < .01$,

groups differed in terms of the assessment instruments' subscales a Bonferroni correction was made and the significance level was determined to be $P = 0.0028$. According to this criterion, the 2 groups significantly differed only in EIQ stress management subscale scores; Type As having significantly lower scores ($X = 39.15$, $SD = 6.10$) than Type Bs ($X = 44.85$, $SD = 6.93$; $t = 4.25$; $P < 0.000$).

Variables that Predicted Stress Symptoms in Type As

Table 4 shows the results of the hierarchical regression analysis of the variables that predicted stress symptoms in Type As. After controlling for the effects of the demographic variables in the first step, not using effective coping strategies significantly predicted stress symptoms in Type As ($\beta = -.475$, $P < 0.001$), explaining 23.8% of the total variance ($F(2,36) = 2.580$, $P < 0.05$). Additionally, among the EIQ dimensions that were entered into the equation in the last step, the general mood dimension ($\beta = -.692$, $P < 0.05$) significantly contributed ($F(5,29) = 2.034$, $P < 0.05$) to the equation, explaining 13.3% of the variance.

Variables that Predicted Stress Symptoms in Type Bs

The results of a similar regression analysis for Type Bs are presented in Table 5. After controlling for the effects of the demographic variables in the first step, the use of ineffective coping strategies ($\beta = .401$, $P < 0.01$) and not using effective coping strategies ($\beta = -.424$, $P < 0.01$) predicted stress symptoms in Type Bs, explaining 36.4% of the total variance ($F(2,38) = 4.855$, $P < 0.001$). In other words, as in Type As, not using effective coping strategies predicted stress symptoms in Type Bs;

however, for Type Bs the use of ineffective coping was also significant. Among the EIQ dimensions that were entered in the last step, the intrapersonal abilities dimension ($\beta = .598$, $p < 0.05$) made a significant contribution to the equation ($F(2,31) = 2.981$, $P < 0.001$), explaining 10.5% of the variance.

DISCUSSION

In this study the relationships between cognitive intelligence, emotional intelligence, stress symptoms and coping were investigated in the context of Type A personality. The results showed that stress symptoms and coping strategies were related to emotional intelligence and Type A personality. Cognitive intelligence, on the other hand, had a positive relationship with emotional intelligence and effective coping strategies, but not with stress symptoms. It can be concluded that, even though cognitive intelligence was not directly related to stress symptoms, it might have a role in choosing the right coping resources and putting emotional intelligence into action.

In general, our findings showed a positive relationship between cognitive intelligence and emotional intelligence as in the related literature, depending on the instruments used (Rooy, et. al. 2005). Even though it is not a strong relationship, cognitive intelligence—defined as an ability to solve problems based on cognition (Şemin, 1972)—can be considered to be helpful in finding effective solutions. The findings of the present study are supported by those of Plante and Sykora (1994), who reported a similar positive correlation between cognitive ability and coping scores.

A negative correlation was observed between emotional intelligence and Type A scores. This finding is supported by the findings of another study that reported

TABLE 4. Variables predicting stress symptoms for Type As.

	β	t	R	R ²	R ² Change	F
1 Demographic characteristics			.251	.063	.063	.638
Gender	.222	1.298				
Age	-.041	-.249				
SES	-.012	-.078				
School type	.173	1.007				
2 Coping Styles			.548	.301	.238	2.580*
Effective coping	-.475	-2.993**				
Ineffective coping	.213	1.358				
3 Cognitive intelligence	.100	.689	.557	.310	.009	2.247*
4 RSPM Comp. time	-.198	-1.329	.587	.344	.034	2.230*
5 Emotional intelligence			.691	.477	.133	2.034 *
Intrapersonal abilities	.420	1.447				
Interpersonal abilities	.108	.367				
Adaptability	-.306	-1.213				
Stress management	.082	.456				
General mood	-.692	-2.474*				

*P < 0.05, **P < 0.01

a negative correlation between emotional intelligence and the two components of Type A personality structure (impatience–irritability) (Day et al., 2005). It is possible to say that the highly competitive, aggressive, and hostile traits of Type As hinder the ability to understand other peoples' feelings.

The positive relationship observed in the present study between emotional intelligence and effective coping strategies is similar to many other reports in the literature. Goldenberg et. al.(2006) reported a positive correlation between emotional intelligence and problem-focused coping. As emotional intelligence scores increase, people seem to employ more effective coping and less ineffective coping strategies.

On the other hand, in the present study a significant and negative relationship between emotional intelligence and stress symptoms was found. According to this finding it can be posited that as emotional intelligence scores increase, stress symptoms will decrease. There are several studies in support of this finding (Nikolaou and Tsousis, 2002; Shulman and Hemenover, 2006; Landa et. al., 2007). It is thought that an ability to detect and understand the feelings of others, and to use this information to solve interpersonal problems, can help people lead more satisfying lives and experience less stress.

The finding regarding the negative correlation between Type A personality and the use of effective coping

strategies is also supported by many other studies (Akoyun 2004, Batıgün and Şahin 2006). Additionally, in the present study, it was observed that Type A personality was positively correlated with stress symptoms, which again is supported by the findings of other studies (Akoyun, 2004; Emdad and Söndergaard, 2005; Batıgün and Şahin, 2006).

Regression analysis of the total sample showed that stress symptoms were predicted by gender (being female), the presence of Type A behaviors, use of effective (lack of) and ineffective coping (more of) strategies, and the stress management and general mood dimensions of emotional intelligence (Table 2). It is thought that the use of ineffective coping strategies might increase one's level of stress. Additionally, being female is related to experiencing more stress. Burke and Weir (1978) similarly reported the role of female gender in the experience of stress. Weekes et al. (2005) also reported that perceived stress is related to health problems, mostly in females. However, the findings of the present study regarding gender should be considered with caution, because there were significantly more females in the sample than males.

Cognitive intelligence scores had no role in predicting stress symptoms; however, studies that investigated the relationship between PTSD and cognitive intelligence reported a predictive role for cognitive intelligence (McNally and Shin, 1995; Sarač et al., 2007). It has been

TABLE 5. Variables predicting stress symptoms for Type Bs.

		β	t	R	R ²	R ² Change	F
1	Demographic characteristics			.264	.070	.070	.749
	Gender	.046	.249				
	Age	-.186	-1.046				
	SES	.079	.453				
	School type	.281	1.436				
2	Coping Styles			.659	.434	.364	4.855***
	Effective coping	-.424	-3.160**				
	Ineffective coping	.401	3.044**				
3	Cognitive intelligence	-.040	-.253	.659	.435	.001	4.068**
4	RSPM Comp. time	.146	1.008	.671	.450	.016	3.688**
5	Emotional intelligence			.745	.556	.105	2.981**
	Intrapersonal abilities	.598	2.004*				
	Interpersonal abilities	.008	.041				
	Adaptability	-.066	-.311				
	Stress management	-.274	-1.477				
	General mood	-.228	-.894				

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

reported that while intense stress experienced in response to traumatic events might be mediated by cognitive intelligence, it is also possible that intense stress leads to a decrease in hippocampal volume, which in turn results in problems with memory (Bremner, 2006) and, perhaps, with how one copes. In the present study, since the stress symptoms measured were daily life stress symptoms, most probably due to interpersonal problems, instead of traumatic stress symptoms, it is understandable that emotional intelligence, not cognitive intelligence, was predictive.

Additionally, Type As had significantly lower emotional intelligence scores than Type Bs and there were no differences between the 2 groups in terms of cognitive intelligence. Similarly, Type As had significantly higher ineffective coping scores, while there were no differences between the 2 groups in terms of effective coping.

Type As had significantly lower scores on the general mood, intrapersonal abilities, and stress management dimensions of emotional intelligence. These results indicate that Type Bs, who also had fewer stress symptoms,

had greater satisfaction with life, were more hopeful about the future, and were generally in a positive mood. They were also more self-confident, had higher levels of self-esteem, and had more positive emotional self-perceptions. It is possible that Type Bs, being more conscious of their own feelings and the feelings of others, and being more self-assertive, cope with their stress by problem-solving instead of internalizing. Consequently, they have higher effective coping scores and lower symptom scores.

The general mood dimension of the EIQ consists of 2 sub-components—happiness and optimism. Individuals with high scores on this dimension generally have greater satisfaction with life, are more hopeful and optimistic, and create a positive climate around themselves (Acar, 2001). Our results show that Type As' low scores on the general mood dimension of the EIQ indicate that the stress symptoms they experienced might have been related to their hopelessness, pessimism, and negativism.

Stress symptoms in Type Bs were also predicted by effective and ineffective coping strategies. This is an

expected finding; however, the intrapersonal ability dimension of emotional intelligence also made a significant contribution to the prediction (with a positive beta coefficient) in Type Bs. This was considered an interesting finding (see Table 5). The intrapersonal ability dimension of the EIQ measures sensitivity to the feelings of one's self and of others. It is possible that an increase in this ability, instead of contributing to an increase in stress symptoms in Type Bs, actually reflected sensitivity to stress symptoms. In other words, Type Bs with high scores on this dimension were probably more aware of their stress symptoms and, consequently, reported more symptoms on the questionnaire.

CONCLUSION

The results of the present study showed that the variables related to the symptoms of stress vary according to personality style. Accordingly, when designing programs for stress management, different strategies for Type As

and Type Bs should be considered. For example, for both groups, teaching effective coping strategies might be helpful; however, for Type As training should also include strategies for obtaining more satisfaction from life, increasing hopefulness, and becoming more positive and optimistic.

Future studies, instead of considering cognitive ability as a single dimension, should break it down to its components, i.e. simple sensory reasoning, comprehension span, reaction time, etc., and the relationships between stress symptoms and these components should be evaluated. The present study has some limitations in terms of the small number of individuals in the Type A and Type B groups, as well as uneven gender distribution. It is hoped that in the future studies conducted with larger samples and with more even gender distribution will reveal more significant results. In the present study the dependent variable was perceived stress symptoms. Future studies should also consider using perceived stress factors as a dependent variable.

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