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Comparing Metacognitive Beliefs and Thought Control Strategies among Iranian Students with Three Personality Types

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ABSTRACT

Objective: The aim of this study is to investigate the relationship between metacognitive beliefs, thought control strategies and personality type. **Method:** Participants were 135 students of medical sciences in Mashhad University of Medical Sciences in Iran. The subjects were evaluated using Friedman and Rosenman questionnaire, Type D personality scale (DS14), Metacognitions Questionnaire (MCQ-30), and Thought Control Questionnaire (TCQ). Data were analysed using MANOVA and Tukey's range test in SPSS software. **Results:** The results of our study showed that there was a significant difference among students with Type B and Type D personalities in terms of "positive beliefs about worry" and "beliefs about uncontrollability of thought and danger". Also, from among subscales of thought control strategies, all three type of personalities differed from each other in terms of "distraction", "worry" and "punishment". Furthermore, there was a significant difference between Type A and B, and Type A and D personalities in terms of "distraction" and between TypeD and B personalities in terms of "worry". **Conclusion:** It was concluded that there is a significant difference in metacognitive beliefs and thought control strategies among Iranian students with Type A, B, and D personality.

Keywords: *Type A personality, Type B personality, Type D personality, Metacognitive beliefs, Thought control, Medical students*

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Introduction

The effective factors in development of physical and mental diseases as well as health have always been of interest to researchers. Different models have been proposed to show the factors affecting health. One of them is biomedical model which focuses on purely biological factors, and excludes psychological, environmental, and social influences. Another model is psychosocial model which consider the role of social factors in development of physical and mental diseases. Later, biopsychosocial model which is a combination of two mentioned models was proposed stating that biological, psychological (which entails thoughts, emotions, and behaviours), and social (socio-economical, socio-environmental, and cultural) factors, all play a significant role in human functioning in the context of disease or illness. The interaction between health and psychological factors and problems has been pointed out in Diagnostic and Statistical Manual of Mental Disorders (DSM-5) where Axis 1 refers to principal disorders caused by general physical diseases such as depression, and Axis 2 lists any personality disorder factors contributing to Axis 1. The relationship between personality traits and health is understood well from

personality patterns presented by Friedman and Rosenman (1) under the title of "Type A" or "Type B" where personalities that are more competitive, outgoing, ambitious, impatient and/or aggressive are labelled Type A, while more relaxed personalities are labelled Type B. There is also another personality type presented by Denollet et al. (2) which called "Type D" which stands for "distressed", and defined as joint tendency to experience negative affectivity and social inhibition. Individuals with a Type D personality have the tendency to experience increased negative emotions across time and situations and tend not to share these emotions with others, because of fear of rejection or disapproval. Various studies in different countries have been conducted on investigating the relationship between these personality types and different diseases and problems, e.g. (3–19). Thoughts also have a strong effect on emotional and psychological health. Wells (20) shows that much psychological distress results from how a person responds to negative thoughts and beliefs (e.g. by ruminating or worrying) rather than the content of those thoughts. According to him, inner cognitive factors which help individuals to control their own thoughts are referred as "metacognition", and are responsible for healthy and unhealthy control of the mind. Metacognition is defined as any knowledge or cognitive process that is involved in the appraisal, control, and monitoring of thinking, disorder in thought and emotion is due to cognitions (21, 22). Metacognition involves the use of knowledge, experiences and strategies. Many researches have shown the relationship between metacognitive variables and other diseases, e.g. (23–33).

According to Wells (20) thought control strategies have following scales: distraction, social control, worry, punishment, and re-appraisal. There are also some studies conducted on assessing thought control strategies, e.g. (34–38). Based on the related studies, it can be found out that both metacognitive beliefs and personality types can play a key role in development of mood disorders, anxiety disorders, general health, and mental health, but so far, there is no research conducted on the relationship between metacognitive beliefs and personality types. Therefore, in this study we attempted to find out if there is any difference among A, B and D personality types in terms of metacognitive beliefs and thought control strategies.

Materials and Methods

Personality Types and Their Characteristics

Personality type refers to psychological classification of different types of individuals, and a group of persons who have a common collection of personality traits. Personality typology leads to an increase in an accurate knowledge and understanding of individuals. It is also used to predict individuals' information and use effective treatment strategies better and more appropriately. Personality type is distinguished from personality trait; personality types are sometimes said to involve qualitative differences between people, whereas traits might be construed as quantitative differences (39).

Type A

According to Friedman (8), "Type A" behaviour is expressed in three major symptoms: time urgency and impatience, high competitive drive spirit, and free-floating hostility. He believed that the most frequent and important observable common similarity among Type A individuals is time urgency. The personality theory describes a Type A individual as ambitious, aggressive, business-like, controlling, highly competitive, impatient, preoccupied with his or her status, time-conscious, and tightly-wound. People with Type A personalities are often high-achieving "workaholics" who multi-task, push themselves with deadlines, and hate both delays and ambivalence (8). Type A individuals are strongly motivated to overcome obstacles, and move towards

success and victory. They are attracted to competition, and enjoy power and recognition, and are easily arouse to anger and action. These individuals are inclined to criticise themselves and try to achieve their goals without feeling satisfied with their efforts or successes. Tendency towards high competition and ambition, and perfectionism are number of traits of this group (8).

Researches and studies have shown that participants with Type A personality have more work advance than those with type B personality. One of the reasons of the difference is that Type A individuals tend to set higher goals for themselves. Sometimes, Type A individuals, blood pressure and heart rate go up when simple told they are going to compete against another person (40). Glass (41) found that Type A students participate in more sports, receive more athletic awards, and participate in more social activities in high school than Type B classmates (cited by [42]). The initial researches demonstrated that Type A individuals are more prone to get coronary artery disease (CAD), but later researches showed that having a Type A personality does not mean the risk of getting heart attack or coronary artery disease. In fact, the relationship between the behaviour of individuals with Type A and heart diseases is more complex than it can be imagined. According to Williams (43), hostility component of Type A personality is the only significant risk factor. Hostility is a fatal feeling, and if is expressed as pessimism or distrust, it may harm the individual's health (6).

Type B

Type B behaviour pattern is determined by characteristics such as low level of competition, time urgency, and hostility. They can ignore others individuals' mistakes without getting angry or hurt. They know that everyone and even they themselves may make a mistake. They consider mistakes as a good experience, and try to modify it, but they do not try to correct their friends and acquaintances' mistakes. They speak slowly with a gentle tone, allow their friends and acquaintances to finish their speeches, and listen to others with patience. From their points of view, engagement and dialogue with others is informative and constructive for them, and at the same time, they accept criticism. They have tendency towards being easygoing, and have a philosophical view. One of the main traits of this type of personality is that they cannot be easily irritated and angry. They usually plan before stating a specific work so that they can easily cope with situations. Type A individuals are resilient and somewhat inflexible while Type B individuals are more flexible and can adapt themselves to the conditions better. Type B individuals have a good tolerance in social relations. They enjoy spending time with others, spend their free times with social interactions, and have a good social life. They also have more interpersonal reputation and social skills than Type A individuals. Type A individuals eat food quickly while Type B individuals eat slowly. Type B individuals also comfort without feeling guilty and are not under pressure (8).

Type D

Type D personality or distressed personality type was introduced by Denollet et al. (2) as a constant and important psychological factor for heart diseases. The concept is achieved by a study on the relationship between personality traits and risk factors of heart disease. Type D traits generally include negative affectivity and social inhibition. Negative affectivity refers to the individual's tendency towards experiencing negative affections over time and across different situation, and the latter component i.e. social inhibition is tendency towards inhibiting from the emotions in social interactions. From clinical point of view, Type D individuals have a negative, pessimistic view about life, feel anxious and unsatisfied, and totally, experience less positive emotions. Individuals with this type of personality have few friends, make

few friendly relationships, and do not feel comfortable with strangers (44).

Type D individuals can be distinguished from non-type D individuals since they experience social isolation and more withdrawing from society, both of which ultimately lead to a decrease in social support. They are at more risk for mental and medical disorders. Cognitive behavioural therapy, social skills training, emotional support, interpersonal psychotherapy, progressive muscle relaxation, autogenic training, diaphragmatic breathing, guided imagery, various forms of meditation, hypnosis, biofeedback, exercise, and other treatments may all reduce stress in Type D persons and improve their ability to socialize (10).

Metacognition

The term "Metacognition" first was coined by Flavell (21) who defines it as "cognition about cognitive phenomena" or "thinking about thinking". According to him, metacognition consists of both metacognitive knowledge and metacognitive experiences or strategies. It includes knowledge about when and how to use particular strategies for learning or for problem solving (45).

Metacognitive knowledge

Metacognitive knowledge is referred to the individuals' theories and beliefs about their thinking; the information which individuals have about their own cognition, tasks, learning strategies, and how they affect their cognition (46). Flavell (21) defines metacognitive knowledge as knowledge about one's own cognitive strengths and limitations. There are two types of metacognitive knowledge in metacognition theory: positive and negative metacognitive beliefs: Positive ones are related to the benefits and advantages of being engaged in cognitive activities constituting the cognitive attentional syndrome, e.g. "Being worry helps me to avoid from danger"; and negative metacognitive beliefs concern uncontrollability, meaning, importance, dangerousness of thoughts, and cognitive experiences, e.g. "I am unable to remember the names" (20).

Metacognitive strategies

According to Wells (20), metacognitive strategies are responses which are used by individuals to control and change thinking and leads to cognitive self-regulation. The selected strategies may exacerbate or suppress the cognitive activities or change them. In psychological disorders, patient feels that has no control. In fact, the strategies often are attempts to achieve control. The attempts do not continue during a long time due to different strategies by patients including suppressing thoughts, conducting analysis to find the answers or making effort to predict the events which may occur in the future. Anyway, the result of the strategies is to avoid from the possible problems. Metacognitive knowledge, experiences and strategies are related to each other, and have an integrated action in psychological disorder. According to metacognition theory, disharmony and incompatibility among knowledge, experience and strategies lead to a maladaptive thinking pattern which results in development of psychological disorder.

Thought Control Strategies

One dimension of metacognition which is related to the psychological problems in self-regulatory executive function (SREF) model is the use of some thought control strategies. Based on this model, some thought control strategies maybe more effective than other strategies. One of the methods for assessing people's differences in using thought control strategies is Thought Control Questionnaire (TCQ) developed by Wells and Davies (34). Five factors of TCQ are distraction, social control, worry, punishment, and re-appraisal. Several studies have been conducted in the field of difference in using thought

control strategies among both clinical and non-clinical groups. For example, Wells and Davies (34) found significant association between the punishment and worry subscales and various measures of emotional vulnerability and perceptions of impaired control over cognition. Reynolds and Wells (35) suggested that particular thought control strategies may be associated with the symptoms of posttraumatic stress disorder (PTSD) and depression. The scales appear to be sensitive to changes associated with recovery. Also they found significant differences in thought control strategies between depressed and PTSD patients. They showed that distraction, punishment and reappraisal control strategies predicted depression scores in depressed patients while use of distraction predicted intrusions in PTSD. Morrison and Wells (36) showed that schizophrenic patients used different thought control strategies (more worry and punishment-based strategies, less distraction-based strategies) in comparison with non-patients. Abramowitz et al. (37) studied thought control strategies in individuals with obsessive-compulsive disorder (OCD). They found that OCD patients showed more frequent use of worry and punishment strategies, and less frequent use of distraction. Psychometric properties of TCQ were investigated by Ree (38) on psychiatric inpatients. Her findings supported the psychometric properties of the TCQ and showed that the use of certain thought control strategies may contribute to the maintenance of psychopathology while the use of others may contribute positively to treatment outcome.

Research Design

Statistical population

The current study is a descriptive-correlational study. The population is consisted of all the students of Mashhad University of Medical Sciences in the academic years 2012–2013.

Sampling

A multistage cluster sampling and random sampling method were used. For this purpose, first, from all schools of Mashhad University of Medical Sciences including medical, dentistry, pharmacy, midwifery and nursing, health, and paramedical, randomly we selected medical, dentistry and pharmacy schools, and then from each one, one class of basic science courses were chosen. In this basis, 140 subjects were determined. Of this, 5 students were removed due to lack of response, and finally, the total sample size was specified as 135.

Research instruments

The instruments used for collecting data from subjects were:

1. *A/B personality type questionnaire*: This Iranian structured questionnaire which has been designed according to Friedman and Rosenman (1), is used to test the A or B type of personality in participants; it has 25 questions with scoring as 0 = No and 1 = Yes. In this test, Patients who received a score of ≥ 13 or < 13 were considered as Type A and Type B, respectively.
2. *Type D personality scale:* This scale which is an Iranian version of Type D Personality Scale (DS14) developed by Denollet (11) is used to measure Type D personality of participants. The questionnaire has 14 items which assess two main subscales: negative affectivity (NA) and social inhibition (SI), each containing 7 items based on 5-point Likert scale ranging from 0 = false to 4 = true. A cut-off of ≥ 10 on both subscales is used to classify participants as Type D.
3. *Metacognition questionnaire (MCQ-30):* The questionnaire has been developed to measure a number of metacognitive parameters, some of which play a pivotal role in metacognitive model of psychological disorder. The shortened 30-item version of the MCQ (47)

measures five factors: cognitive confidence, positive beliefs about worry, cognitive self-consciousness, negative beliefs about uncontrollability of thoughts and danger, and beliefs about need to control thoughts, ranging from 1= do not agree to 4 = agree very much.

4. *Thought Control Questionnaire (TCQ):* The questionnaire was developed by Wells and Daviest (34) to assess the individual differences in using different thought control strategies and its relationship with emotional vulnerability. The questionnaire has 30 questions which are answered based on a 4-point Likert scale ranging from 1 = never to 4 = almost always. The questions measure the distraction, social control, worry, punishment, and reappraisal.

Research variables

Considering our tools for collecting data, in this study, our variables are: personality type (A, B, D types), metacognition (its five factors), and thought control (its five subscales).

Data analysis

In addition to finding mean and standard deviation of variables, MANOVA test was used to examine the research hypotheses in SPSS software.

Results and Discussion

Descriptive Statistics

Table 1 shows the statistics of research subjects. In Tables 2–5 we presented statistics of research variables. As can be seen in Table 1, from 135 participants (54 females and 80 males), 94 subjects had Type D personality, while 31 of them were reported as Type B and 10 subjects as Type A personality. Without considering Type D, 38 of them had Type A and 97 had Type B personality. According to Table 2, minimum and maximum scores are related to *distraction* factor, and based on Table 3, minimum score is for the scale of cognitive self-awareness, and maximum scores are for two factors of cognitive confidence and positive beliefs about worry. In Table 4, maximum score in those with Type A personality is related to the subscale of reappraisal, in Type B, it is for factors of social control and distraction, and in Type D, the highest score belongs to social control. Finally, according to Table 5, maximum score in Type A, Type B and Type D is for the scales of uncontrollability of thought and danger, cognitive confidence, and positive beliefs about worry, respectively.

Table 1: Descriptive characteristics of participants

Measure	Frequency	%
Sex		
Female	54	40.0
Male	80	59.0
Not specified	1	1.0
Total	135	100.0
Marital status		
Single	127	94.1
Married	6	4.4
Not specified	2	1.5
Total	135	100.0
Field of study		
Dentistry	16	11.9
Pharmacy	27	20.0
Medical	92	68.1
Total	135	100.0
Personality type		
Type A	10	7.4
Type B	31	23.0
Type D	94	69.6
Total	135	100.0

Table 2: Descriptive statistics of thought control subscales

Variable	N	Minimum score	Maximum score	Mean	SD
Distraction	135	4.00	63.00	14.95	5.78
Punishment	135	6.00	21.00	11.90	2.99
Reappraisal	135	7.00	22.00	14.60	2.93
Worry	135	6.00	20.00	10.28	2.98
Social control	135	6.00	23.00	13.67	3.65

Table 3: Descriptive statistics of metacognition subscales

Variable	N	Minimum score	Maximum score	Mean	SD
Positive beliefs about worry	135	2.00	41.00	12.97	5.57
Uncontrollability of thoughts and danger	135	3.00	24.00	14.26	3.97
Cognitive confidence	135	1.00	41.00	12.49	5.30
Need for thought control	135	3.00	24.00	15.37	3.73
Cognitive self-awareness	135	3.00	20.00	14.37	3.30

Table 4: Descriptive statistics of thought control subscales based on personality types

Type personality	Subscale	N	Minimum score	Maximum score	Mean	SD
Type A	Distraction	10	8.00	13.00	22.00	15.52
	Punishment	10	6.00	18.00	11.80	4.049
	Reappraisal	10	10.00	22.00	15.20	3.88
	Worry	10	6.00	14.00	9.40	3.02
	Social control	10	6.00	19.00	13.10	4.90
Type B	Distraction	10	6.00	23.00	15.45	3.56
	Punishment	10	6.00	16.00	10.90	2.58
	Reappraisal	10	7.00	21.00	14.48	3.19
	Worry	10	6.00	16.00	8.90	2.57
	Social control	10	8.00	23.00	13.54	3.53
Type D	Distraction	10	4.00	22.00	14.04	3.81
	Punishment	10	6.00	21.00	12.24	2.95
	Reappraisal	10	7.00	22.00	14.58	2.75
	Worry	10	6.00	20.00	10.84	2.96
	Social control	10	6.00	23.00	13.77	3.57

Table 5: Descriptive statistics of metacognition subscales based on personality types

Type personality	Subscale	N	Minimum score	Maximum score	Mean	SD
Type A	Positive beliefs about worry	10	6.00	21.00	13.50	4.79
	Uncontrollability of thoughts and danger	10	9.00	24.00	14.30	4.54
	Cognitive confidence	10	1.00	22.00	10.90	6.00
	Need for thought control	10	4.00	20.00	14.20	4.51
	Cognitive self-awareness	10	8.00	19.00	15.60	3.23
Type B	Positive beliefs about worry	10	6.00	18.00	10.54	3.25
	Uncontrollability of thoughts and danger	10	6.00	19.00	12.35	3.22
	Cognitive confidence	10	6.00	41.00	12.32	6.69
	Need for thought control	10	6.00	22.00	15.00	3.58
	Cognitive self-awareness	10	10.00	20.00	14.80	2.82
Type D	Positive beliefs about worry	10	2.00	41.00	13.71	5.99
	Uncontrollability of thoughts and danger	10	3.00	24.00	14.89	3.971
	Cognitive confidence	10	6.00	24.00	12.72	4.71
	Need for thought control	10	3.00	24.00	15.60	3.68
	Cognitive self-awareness	10	3.00	20.00	14.09	3.44

Testing Research Hypothesis

Hypothesis: There is difference between metacognition and thought control in individuals with Types A, B, and D personality.

In this section, in order to test our hypothesis first we used MANOVA test. Results are presented in Table 6. According to Table 6, MANOVA test results (F) show that the correlation between subscales of distraction, punishment, worry, positive beliefs about worry, and uncontrollability of thoughts and danger and personality type is significant ($p < 0.05$).

Tukey's range test was used to investigate the multiple comparisons. It is used to find means that are significantly different from each other. The results are presented in Table 7. The results of Tukey's tests show that there is a significant difference over the studied measures of distraction between Type A and Type B, and Type A and Type D ($p < 0.05$). The personality types do not differ from each other in terms of punishment, while mean values of three subscales of worry, positive beliefs about worry, and uncontrollability of thought and danger differ from each other significantly among type B and type D individuals.

Table 6: MANOVA test results

	Variables	Sum of squares	Degree of freedom	Mean square	F	Significance level
Personality type	Distraction	582.226	2	291.113	9.839	.000
	Punishment	42.066	2	21.033	2.394	0.095
	Reappraisal	4.032	2	2.016	0.232	0.793
	Worry	96.017	2	48.009	5.763	0.004
	Social control	4.773	2	2.387	0.177	0.838
	Positive beliefs about worry	236.459	2	118.230	3.974	0.21
	Uncontrollability of thoughts and danger	150.267	2	75.134	5.049	0.008
	Cognitive confidence	34.603	2	17.302	0.607	0.547
	Need for thought control	23.179	2	11.589	0.835	0.436
	Cognitive self-awareness	28.104	2	14.052	1.290	0.279

Table 7: Tukey's test results for comparing research variables

Variables			Mean difference	The standard error of measurement	Significant level
Distraction	Type A	B	6.5484*	1.97817	0.003
		D	7.9574*	1.80927	0.000
	Type B	A	–6.5484*	1.97817	0.003
		D	1.4091	1.12658	0.426
	Type D	A	–7.9574*	1.80927	0.000
		B	–1.4091	1.12658	0.426
Punishment	Type A	B	0.8968	1.07794	0.684
		D	–0.4447	1.07794	0.894
	Type B	A	–0.8968	0.61389	0.684
		D	–1.3415	0.98591	0.077
	Type D	A	0.4447	0.61389	0.894
		B	1.3415	1.04970	0.077
Worry	Type A	B	0.4968	0.96008	0.884
		D	–1.4404	1.04970	0.294
	Type B	A	–0.4968	0.59781	0.884
		D	–1.9372*	0.96008	0.004
	Type D	A	1.4404	0.59781	0.294
		B	1.9372	1.98371	0.004

(*continued on next page*)

Table 7: (*continued*)

Variables			Mean difference	The standard error of measurement	Significant level
Positive beliefs about worry	Type A	B	2.9516	1.98371	0.300
		D	–0.2128	1.81434	0.992
	Type B	A	–2.9516	1.98371	0.300
		D	–3.1644*	1.12974	0.016
	Type D	A	0.2128	1.81434	0.992
		B	3.1644*	1.12974	0.016
Uncontrollability of thought and danger	Type A	B	1.9452	1.40284	0.351
		D	–0.5936	1.28307	0.889
	Type B	A	–1.9452	1.40284	0.351
		D	–2.5388*	0.79893	0.005
	Type D	A	0.5936	1.28307	0.889
		B	2.5388*	0.79893	0.005

Note: * = at 0.05 confidence level

Discussion

The obtained results shown in Table 7, indicates that individuals with Type B personality significantly differ from Type D in terms of "positive beliefs about worry" and "beliefs related to uncontrollability and danger". There was a considerable difference over experiencing negative emotions and affections between Type B and Type D, such that Type D individuals had higher negative emotions and confusion. Depression and symptoms of post-traumatic stress are two examples of such emotions. In addition, evaluating metacognition models showed a correlation between positive and negative metacognitive beliefs about worry, and such disorders and negative emotions. According to the effect of metacognitive beliefs on the incidence and maintenance of these disorders, the difference between Type D and Type B personality can be explained by two sub-scales of positive and negative metacognitive beliefs. The results of the study also showed that there is not any significant difference among individuals with Type A, B and D personality in terms of "cognitive confidence", "need for thought control" and "cognitive self-awareness". The difference exists in terms of other personality traits such as negative emotions and time urgency.

Our results demonstrated that those with Type A, B and D personalities differed from each other significantly in terms of thought control strategy of "distraction". The differences between behavioural patterns of Type A and B personalities cause type the individuals with Type A personality to suffer from greater stress; and anxiety, depression and sleep disorders are reported in Type A more than Type B. Strategy of distraction was negatively associated with vulnerability to stress. This strategy is not significantly related to neuroticism and anxiety. The difference between depressed patients and non-depressed patients indicates that depression and anxiety has a negative correlation with distraction. Also, there is a relationship between improvement of depression and increased use of strategy of distraction. The strategy of distraction as a coping strategy significantly improves insomnia (48).

Our results did not show a significant difference in using two "social control" and "reappraisal strategies" among the three personality types. Studies have shown that

social control and re-appraisal strategies were negatively correlated with stress, and are considered to be the positive factors of gaining mental health. Reappraisal has significant and positive correlation with the scores on Beck depression subscale, and predicts disturbing thoughts in depressed group while social control is negatively correlated with depression, anxiety and disturbing thoughts. Investigating the strategies of thought control between patient and improved groups showed that recovery from depression and posttraumatic stress disorder has a relationship with an increasing use of reappraisal (46). Such differences have not been yet investigated among type personalities and the results of the current study illustrated lack of a significant difference in using these two strategies among those with Types A, B and D personality.

Finally, our findings revealed that, there was a significant difference over mean values of using the strategies of "worry" and "punishment" among three personality types, and by conducting post hoc test, we found that the difference in "worry" is significant between Type B and Type D personalities. Thought control strategies of worry and punishment are used more extensively in some clinical disorders and have relation with some specific criteria of pathology. For example, studies of Ellis and Cropley (48), have shown that thought control strategies of worry and punishment are positively correlated with Beck depression scale and Beck anxiety. Also, improvement of depression or posttraumatic stress has relationship with decreasing use of these two strategies. In addition, tendency towards use of worry and punishment as the thought control strategies has a positive pathological worry, neuroticism and introversion. Accordingly, use of worry and punishment to control thought indicates to the readiness for emotional problems. These emotional problems are seen in individuals with Type D personality more than those with Type B personality, and this is in consistence with the results of our study.

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