

## RESEARCH

# Effects of Automatic Thoughts and Coping With Stress Mechanisms on Intolerance to Uncertainty in Adult Period Erişkin Dönemde Belirsizliğe Tahammülsüzlük Üzerinde Otomatik Düşünceler ve Stresle Başa Çıkma Mekanizmalarının Etkisi

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### Abstract

The aim of this study was to determine the relationships between coping with stress, intolerance to uncertainty and automatic thoughts. The research sample consists of 393 (Male: 194, Female: 199) volunteer participants living in Central Anatolia. The research data were collected using the Stress Coping Styles Scale, Intolerance to Uncertainty Scale, Automatic Thoughts Scale and a personal information form developed by the researcher. Significant relationships were found between intolerance to uncertainty, automatic thoughts and sub-dimensions of coping with stress (self-confident, helpless style, optimistic, submissive, seeking social support). In the regression analysis, it was determined that coping with stress and automatic thoughts predicted intolerance to uncertainty. To protect mental health, based on the results of this study, trainings can be organized to teach positive stress coping mechanisms and to identify negative automatic thoughts that predict intolerance to uncertainty in individuals. Individuals who have problems with these issues can be included in psycho-educational group practices.

**Keywords:** Stress, coping with stress, intolerance to uncertainty, automatic thoughts

### Öz

Bu çalışmada stresle başa çıkma ve belirsizliğe tahammülsüzlük ve otomatik düşünceler arasındaki ilişkileri saptamak amaçlanmıştır. Araştırma örneklemini Orta Anadolu'da yaşayan 393 (Erkek:194, Kadın:199) gönüllü katılımcıdan oluşmaktadır. Araştırma verileri Stresle Başa Çıkma Tarzları Ölçeği, Belirsizliğe Tahammülsüzlük Ölçeği, Otomatik Düşünceler Ölçeği ve araştırmacı tarafından geliştirilen kişisel bilgi formu kullanılarak toplanmıştır. Yapılan analizlerde belirsizliğe tahammülsüzlük, otomatik düşünceler ve stresle başa çıkmanın alt boyutları (kendine güvenli yaklaşım, çaresiz yaklaşım, iyimser yaklaşım, boyun eğici yaklaşım, sosyal destek yaklaşımı) arasında anlamlı ilişkiler saptanmıştır. Yapılan regresyon analizinde stresle başa çıkma tarzlarının ve otomatik düşüncelerin belirsizliğe tahammülsüzlüğü yordadığı saptanmıştır. Bu çalışmanın sonuçlarına bakılarak ruh sağlığının korunması için olumlu stresle başa çıkma mekanizmalarının öğretilmesine ve bireylerde belirsizliğe tahammülsüzlüğü yordayan olumsuz otomatik düşüncelerin belirlenmesine yönelik eğitimler düzenlenebilir. Bu konularda sorun yaşayan bireyler psiko-eğitimsel grup uygulamalarına dâhil edilebilir.

**Anahtar sözcükler:** Stres, stresle başa çıkma, belirsizliğe tahammülsüzlük, otomatik düşünceler

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**COMPLEX** life in today's world has made the uncertainties and the resulting stress life inevitable. Stress-free life does not seem possible in this life order. Therefore, learning to cope with stress seems to be a more realistic goal than eliminating stress. When trying to cope with stress, it is also important to know the basic dynamics that trigger stress. One of the most important dynamics of stress is uncertainty. Individuals' intolerance against uncertainty can directly affect problem solving dynamics. Also, the perception of stress is personal. Because, that makes the current situation a problem is the way we perceive the events. For this reason, thought processes that affect our perception style directly affect automatic thoughts and stress experiences. In this way the automatic thoughts, and the strategies used to cope with stress can turn into an effective factor on intolerance to uncertainty. Because uncertainty is a source of stress for every person and many problems manifest themselves with uncertainty.

Uncertainty can also lead to various psychological problems in individuals such as helplessness, hopelessness, guilt, confusion, depression, anxiety, trauma, emotional conflict, inactivity, identity problems, stress-related illnesses, substance abuse, and interpersonal violence (Boss 2004; Boss and Yeats 2014). As to intolerance to uncertainty is the tendency to react emotionally, cognitively and behaviorally to an ambiguous event and situation negatively (Buhr and Dugas 2002; Olatunji et al.2007). Since this approach is associated with attempting to gain control over situations perceived as ambiguous, it corroborates incompatible thinking and behavior (Gentes and Ruscio 2011). Excessive intolerance to uncertainty is also related to a person's emotional skills (Abbate-Daga et al. 2015). When people who are intolerant of uncertainty have to make decisions under the feeling of uncertainty, they can make sudden, impulsive decisions without considering different alternatives in a short time without considering the positive and negative consequences in order to reduce the uncertainty (Deschenes 2010). Also, intolerance to uncertainty is seen as a sub-dimension of the concept of anxiety (Çardak 2012). For this reason, intolerance to uncertainty is expected to create negative emotions in the individual and cause the individual to worry. Intolerance to uncertainty, which increases with anxiety, makes it difficult to solve the problems encountered and can make the life of the individual more difficult (Chen and Hong 2010). Thus, the individual experiences stress and, as a result, uses inappropriate thought patterns. Stress, on the other hand, is defined as a challenging situation that strains the person physically and mentally and weakens the individual by disabling the person's ability to cope with the problem (Erdoğan et al.2009). As to coping with stress consists of cognitive and behavioral efforts to tolerate, change or prevent stress sources (Dressler 1985). It is inevitable that stress causes situations that strain individual power and disrupt the integrity of the individual (Deniz and Yılmaz 2016). On the other hand, a certain level of stress provides physical and mental development and maturation. Because anxiety experienced at a certain level increases the performance of the individual and directs the individual to work, produce and gain new experiences (Arslan et al.2009). Therefore, it can be said that a low level of stress strengthens the individual. For this reason, it is necessary to control stress and prevent stress from being experienced above a certain level.

Automatic thoughts that are effective in making sense of stress and uncertainty are thought errors that occur due to the erroneous and ineffective process of information processing (Beck 2011). Automatic thoughts are evaluations that do not reflect the truth about the individual's perception of himself and the outside world, and emotional,

intellectual and behavioral problems experienced by the individual (Turan 2010). These thoughts affect the individual's current life and evaluation of the future (Kuyucu 2007). Beck et al. (2005) states that automatic thoughts cause emotions that make life difficult for the individual. It is stated that automatic thoughts negatively affect a person's ability to cope with stress, cause anger, and also anger can turn into aggression in interpersonal relationships, or self-harming behavior (Öncü and Sakarya 2013). It is also reported that an individual's negative perceptions and attitudes towards life can be changed by intervening in automatic thoughts (Çakır 2014). Studies have proven that automatic thoughts are important in prevention and intervention efforts, because these thoughts can be changed (Chretien et al.2017). Therefore, researching the function of automatic thoughts can help reshape people' thoughts by changing their perceptions (Hays 2009). This situation may affect the decrease of uncertainty and stress experienced by individuals.

Considering the results of the research, intolerance to uncertainty is largely associated with negative thought and negative emotion regulation processes (Yıldız 2017). Positive coping and avoiding inappropriate thoughts reduce the feeling of uncertainty experienced by individuals and the individual can more easily cope with the stress caused by uncertainty. When people start to feel a little more comfortable in the face of uncertainty, their minds start to find freedom by discovering new sources of hope (Boss and Yeats 2014). It is stated that automatic thoughts about interpersonal relationships increase people's stress levels (Ogai 2013). Automatic thoughts that have, especially in stressful lives, cause emotional problems by increasing anxiety (Yılmaz and Duy 2013, Walsh et al.2015). Because increasing anxiety strengthens the feeling of uncertainty. Intolerance to uncertainty also increases maladaptive thinking and behavior (Gentes and Ruscio 2011). As a result, individuals with a tendency to intolerance to uncertainty can make impulsive decisions (Deschenes 2010). Türküm (2001) reported that parallel to these people's distorted perceptions of reality, they avoid dealing with problems in order to cope with stress. The impact of automatic thoughts on stressful experiences is inevitable. Based on this, it can be said that there is a significant relationship between automatic thoughts and coping with stress (Bulut 2016). Since automatic thoughts of an individual affect coping with stress, it is necessary to identify dysfunctional and harmful factors first and to realize what these factors cause (Özmen and Önen 2005). In this coping process, uncertainty, which is the most important trigger of stress, also appears as an important factor.

Because uncertainty is known as a factor that slows down even the strongest people. Based on the literature findings above, this study was conducted considering that automatic thoughts and the strategies used in dealing with stress in case of intolerance to uncertainty can be an important predictor. In this context, the following questions were sought.

1. Is there a significant relationship between intolerance to uncertainty, automatic thoughts and sub-dimensions of coping with stress (self-confident, helpless style, optimistic, submissive, seeking of social support)?
2. Do automatic thoughts and sub-dimensions of coping with stress (self-confident, helpless style, optimistic, submissive, seeking of social support) predict intolerance to uncertainty?

## Method

For the research, the ethics committee permission was obtained from Niğde Ömer Halisdemir University with the decision dated 24/04/2019 and numbered 2019 / 04-02. The scales were applied to the volunteer participants by the researcher. Study data were obtained in 2019. The consent of the participants was obtained with the informed consent form that gave information about the purpose of the study. The scales were applied over a 30-minute time frame. The study group of the research consists of 393 adults living in Niğde. 194 (49.4%) of the adults determined randomly are men and 199 (50.6%) are women. Participants' ages are between 21 and 63 ( $\bar{X} \pm sd = 27.09 \pm 8.71$ ). Participants were not diagnosed with any mental illness.

**Table 1. Socio-demographic characteristics of participants**

N	Place of Residence			Age ( $\bar{x}$ )	Marital Status		Economic Level Perception			Educational Level						
	Village	Town	City		Married	Single	Low	Medium	High	Primary	High School	Associate Degree	License	Master		
<b>Female (f)</b>	199	31	46	122	26.6	54	199	31	46	122	26.6	54	19	9	31	46
<b>Male (f)</b>	194	24	36	134	27.6	58	194	24	36	134	27.6	58	19	4	24	36
<b>Total (f)</b>	393	55	82	256	27.1	112	393	55	82	256	27.1	112	39	3	55	82

## Data collection tools

### Intolerance to Uncertainty Scale

This measuring tool was developed by Freeston et al (1994) in order to evaluate the cognitive, emotional and behavioral responses displayed in ambiguous situations. The internal consistency of the scale is .91. Test-retest reliability coefficient is .78. Due to the low item total correlation of the 10th item of the scale consisting of 27 items ( $r = .29$ ), and the lack of test-retest reliability ( $r = .27, p < .05$ ), this item was removed and the scale became 26 items. Adaptation of the scale to Turkish culture was carried out by Sarı and Dağ (2009). The last form of the scale with 26 items consists of 4 factors. The internal consistency of the final version of the scale is .93. Test-retest reliability is .66. It is a 5-point Likert type scale. As the scores obtained from the scale increase, intolerance to uncertainty increases. The reliability coefficient calculated for this research is .94.

### Automatic Thoughts Scale

It was developed by Hollon and Kendal (1980). It was prepared to measure automatic thoughts seen especially in depressive periods and the frequency of these thoughts coming to mind. Adaptation studies of the scale to Turkish culture were carried out by Şahin and Şahin (1992). It is a 5-point Likert type scale. The scale has 30 items. The scale does not have reverse item. The items are graded between (1) none and (5) always.

The total score to be obtained from the scale is the lowest 30, the highest 150. A high score indicates that the individual's automatic thoughts emerge more. Exploratory factor analysis was conducted to determine the factor structure of the scale. The scale has a 5-factor structure. Item total correlation values of the scale range between .35 and .69. A correlation at the level of .91 was found in the reliability study of the scale halving method. The reliability coefficient calculated for this research is .97.

### **Stress Coping Strategies Scale**

Scale developed by Folkman and Lazarus (1980) was adapted to Turkish culture by Şahin and Durak (1995). The scale is Likert type, rated between 0 and 3. The sub-dimensions of the scale can also be scored. Items 1 and 9 are scored in reverse. In the study conducted on 3 different samples, it was determined that the scale consists of 5 sub-dimensions, and the Cronbach's Alpha coefficients of these dimensions vary between .47 and .80. The reliability coefficient obtained for the optimistic approach sub-dimension ranged from .68 to .49; for the self-confident approach sub-dimension ranged from .62 to .80; for the helpless style approach sub-dimension ranged from .64 to .73, for sub-dimension of submissive approach ranged from .47 to .72 ; for the sub-dimension of seeking of social support ranged from .45 to .47 was found to be. The reliability coefficient calculated for this study is .70 for the optimistic approach, .78 for the self-confident approach, .72 for the helpless style approach, .60 for the submissive approach, and .33 for seeking of social support.

### **Personal information form**

It is a form developed by the researcher to determine the age, gender, marital status, perceived economic status, education level and place of residence of the participants.

### **Statistical analysis**

Research data were analyzed with SPSS 22.0 program. First of all, the arithmetic mean and standard deviation values of the data were examined and correlation analysis was performed in order to determine the relationship between variables. Hierarchical regression analysis was used to analyze the data. Before the analysis, the assumptions of the multiple linear regression analysis were tested. The data set was determined to be suitable for the assumptions of normality and linearity of multiple linear regression analysis. Levene test results are  $p > .05$  for all variables. The lack of statistical significance means that the distribution is normal. The skewness value is in the range of -.26 to .73 for all variables; kurtosis value is in the range of -.40 to -.08 for all variables. The fact that the coefficients of skewness and kurtosis around  $\pm 1$  can be interpreted as the scores do not deviate excessively from normal (Büyüköztürk et al.2010). It is stated that skewness values between +1 and -1, and kurtosis values between +2 and -1 are also normal (Huck 2008). In this context, it was found that there is a relationship between dependent and independent variables, which is a prerequisite for regression (Table 1). Considering the .001 validity level (Büyüköztürk 2014), the data were examined in terms of outliers and 5 data were removed from the data set according to the mahalanobis distance value. Binary correlations between independent variables are moderate. This indicates that there is no multiple connection. The Durbin-Watson test used to test autocorrelation should have a value in the range of 1.5 - 2.5 (Kalaycı 2010) in this study

is 1.87. Tolerance > .2, VIF <10 indicates that it has acceptable values (Green and Salkind 2010).

## Results

The relationship between intolerance to uncertainty, coping strategies with stress, and automatic thoughts has been examined according to various variables. Findings obtained as a result of the analysis are below.

**Table 2. The effect of gender and marital status on intolerance to uncertainty**

			<b>t<sub>(393)</sub></b>	<b>p</b>
<b>Sex</b>	Female (n=199)	Male (n=194)	-.83	.40
	Mean ± Sd	Mean ± Sd		
	79.23 ± 21.27	77.48 ± 20.01		
<b>Marital Status</b>	Married (n=112)	Single (n=281)	-1.30	.19
	Mean ± Sd	Mean ± Sd		
	76.22 ± 22.71	79.22 ± 19.74		

\*p<.05

When Table 2 was examined, it was found that the intolerance to uncertainty scores of the participants did not differ significantly according to of gender ( $t_{(2-393)}=-.83$ ,  $p>.05$ ) and marital status ( $t_{(2-393)}=-1.30$ ,  $p>.05$ ).

**Table 3. The effect of economic level perception, educational level and place of residence on intolerance to uncertainty**

		<b>N</b>	<b><math>\bar{X}</math></b>	<b>SS</b>	<b>F</b>	<b>p</b>
<b>Economic Level Perception</b>	Low	37	75.59	19.31	.58	.56
	Medium	305	78.95	20.60		
	High	51	76.90	22.01		
<b>Educational Level</b>	Primary	20	87.25	15.55	1.03	.38
	High school	41	78.75	18.69		
	Associate Degree	34	76.61	23.06		
	License	278	77.84	20.76		
	Master	20	78.95	22.84		
<b>Place of Residence</b>	Village	55	79.20	18.94	.98	.37
	Town	82	80.95	22.01		
	City	256	77.36	20.55		

One-way analysis of variance (ANOVA) was conducted to determine whether the economic level perception, educational level and place of residence significantly differentiated scores of intolerance to uncertainty. When table 3 is examined, it is seen that the economic level perception, educational level and place of residence do not significantly differentiate the scores of intolerance to uncertainty. ( $p>.05$ )

When Table 4 is examined, it is seen that there are significant relationships ( $r$ ) between variables ( $p<.001$ ,  $p<.05$ ). According to the results of the hierarchical regression analysis, while stress coping strategies (self-confident approach, desperate approach, optimistic approach, submissive approach and seeking of social support approach) predict intolerance to uncertainty by 28%; the predictive effect increases to 33% with automatic thoughts. Positive coping strategies such as self-confident approach, optimistic approach and seeking of social support approach are negative predictors of intolerance to uncertainty; It has been determined that negative coping strategies such as

helpless style and submissive approach are positive predictors of intolerance to uncertainty. It was determined that the increase in automatic thoughts positively predicted intolerance to uncertainty. Cohen (1988) suggested  $R^2$  values are assessed as follows: .26 (substantial), .13 (moderate), .02 (weak). Looking at this situation, it can be said that coping strategies with stress and automatic thoughts have a substantial effect on intolerance to uncertainty.

**Table 4. Correlations, arithmetic mean values and standard deviation values of variables**

Variables	$\bar{X} \pm SD$	IU	OT	SC	HS	O	D	SSS
IU	78.37 ± 20.65	1.00						
OT	62.11 ± 25.69	.50*	1.00					
SC	21.09 ± 3.81	-.26*	-.38*	1.00				
HS	18.30 ± 4.44	.48*	.55*	-.25*	1.00			
O	13.94 ± 2.97	-.26*	-.31*	.62*	-.22*	1.00		
S	12.49 ± 3.24	.30*	.41*	-.22*	.53*	-0.03	1.00	
SSS	11.19 ± 1.96	-.23*	-.23*	.10**	-.14*	.13**	-.18*	1.00

\* $p < .001$  \*\* $p < .05$ ; IU: Intolerance to Uncertainty, OT: Automatic Thoughts SC: Self-Confident, HS: Helpless Style, O: Optimistic, S: Submissive, SSS: Seeking of Social Support

**Table 5. Hierarchical regression analysis**

Dependent Variable	Independent Variable	$R^2$	F	$\beta$	t
Intolerance to Uncertainty	1. Step	.28	30.09*		
	Self-Confident			-.059	-1.04
	Helpless Style			.383	7.31*
	Optimistic			-.123	-2,17**
	Submissive			.058	1.09
	Seeking of Social Support			-.143	-3.24**
	2. Step	.33	31.59*		
	Self-Confident			-.005	-.097
	Helpless Style			.270	4.91*
	Optimistic			-.099	-1.80
	Submissive			.020	.39
Seeking of Social Support			-.110	-2.55***	
Automatic Thoughts			.285	5.33*	

\* $p < .001$ , \*\* $p < .01$ , \*\*\* $p < .05$

## Discussion

According to the findings of this study, there is significant relationship between coping with stress sub-dimensions and automatic thoughts and intolerance to uncertainty. Coping strategies and automatic thoughts are strong predictors of intolerance to uncertainty. In this study, it was determined that demographic variables such as gender, marital status, educational level, economic status and place of residence do not have an effect on intolerance to uncertainty. When the literature is reviewed, it is seen that there are few studies showing the relationship between intolerance to uncertainty and demographic variables. In the literature, it is seen that gender (Coşkun 2019, Güvenç 2019, Duman 2020), marital status and economic status (Ersöz et al.2016, Belge 2019), education level (Belge 2019), and place of residence (Coşkun 2019) do not significantly differentiate intolerance to uncertainty. Looking at these results, it is thought that personality traits or other emotional attitudes may be effective on intolerance to

uncertainty. Experiencing uncertainty is a process that underlies any negative emotional structure. At the same time, uncertainty is one of the most important triggers of stress. There is also a positive relationship between intolerance to uncertainty and perceived stress (Lally and Cantillon 2014, Demirtaş and Yıldız 2019). Lally and Cantillon (2014) stated that those who are intolerant of uncertainty, regardless of the current situation, are worried about the results and have low tolerance to stress. The theoretical structure expressing the connection between uncertainty and stress states that intolerance to uncertainty can increase the negative effects of stressors (Chen and Hong 2010). Individuals who are intolerant to uncertainty easily experience stress (Yook et al. 2010). Therefore, it is important to use coping strategies with stress. Strategies used to cope with stress are associated with negative emotions such as uncertainty (Hamilton and Lobel 2008). Because, although positive and negative coping strategies do not always produce the desired solutions in the individual, they also reduce stress by reducing uncertainty. On the other hand, being indecisive in stressful experiences prevents the active use of coping strategies. As a result, the perception of uncertainty increases and problems can grow even more. Because uncertainty is stressful and upsetting (Sarı and Dağ 2009). Individuals who are intolerant of uncertainty see their uncertainty experiences as stressful situations and problems occur in their functionality (Buhr and Dugas 2002). For this reason, it is important to use appropriate coping strategies in stressful events that cause uncertainty. Because the uncertainties caused by stressful experiences reveal to uncontrollable anxiety (Robichaud 2013). These emotional experiences, which are in mutual interaction, have negative effects on human life physiologically, socially and cognitively and reduce the quality of life. It can be said that the use of positive coping strategies with stress will decrease uncertainties and increase the quality of life. These results, on the other hand, confirm the finding that coping strategies with stress are strong predictors of intolerance to uncertainty.

One of the strong predictors of intolerance to uncertainty is automatic thoughts. It is stated that intolerance to uncertainty tends to manifest itself as evocations an uncertain situation and exhibiting negative thoughts about the consequences of the current situation (Koerner and Dugas 2008). When considered from this point of view, it is seen that there is a cognitive process. In addition, intolerance to uncertainty strengthens maladaptive thinking and behavior (Gentes and Ruscio 2011). Therefore, individuals with high intolerance to uncertainty may use inappropriate cognitive strategies when they experience uncertainty (Behar et al. 2009).

In addition, these individuals tend to make impulsive decisions without taking into account the nature of the current situation in order to reduce uncertainty while making decisions in case of uncertainty (Deschenes 2010). Impulsive behavior also causes the use of incompatible coping strategies (Pawluk and Koerner 2016). Cognitive behavioral approaches stated that impulsive assessment is cognitive processes that increase the intensity and frequency of obsessive thoughts (Clark et al.2003). Frost and Steketee (2002) state that some of the obsessive thoughts are related to automatic thoughts. From this point of view, replacing automatic thoughts with healthy thoughts will reduce the perception of uncertainty by reducing obsessive and impulsive behaviors. Since automatic thoughts are short-lived, temporary (Papageorgiou and Wells 2004), it is important to teach healthy thinking before these thoughts negatively affecting individual. In addition, not using automatic thoughts will also contribute to the fight against stress by affecting the elimination of uncertainties in our lives.

## Conclusion

Considering the results of the research, it is seen that intolerance to uncertainty is closely related to stress experiences and automatic thoughts. According to these findings, it can be said that stress is the affective dimension of intolerance to uncertainty and the cognitive dimension of automatic thoughts. Based on the results of this study, training can be organized to teach coping strategies with stress and to understand automatic thoughts that will gain individual awareness. Intolerance to uncertainty is an attitude that can negatively affect an individual's functionality in daily life activities, working motivation and perceptions about events. For this reason, activities that can raise awareness for youth and adults can be organized with public health specialist in schools. Individuals seeking help in this regard can be included in psycho-educational group practices. This study can be repeated with different samples and the results obtained can be compared. In addition, since it is determined that the demographic variables used in this study are not effective on intolerance to uncertainty; the effect of personality traits and attitude on intolerance to uncertainty can be examined in new studies. This study is limited to the measurement tools used and the sample.

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