



## The Relationship between Decision-Making and Intolerance to Uncertainty, Cognitive Flexibility and Happiness\*

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### ARTICLE INFO

#### Article History:

Received: 31 Dec. 2019

Received in revised form: 16 Aug. 2020

Accepted: 18 Nov. 2020

DOI: 10.14689/ejer.2021.91.3

#### Keywords

Self-Esteem in Decision-Making, Decision-Making Styles, Intolerance to Uncertainty, Cognitive Flexibility, the Level of Happiness

### ABSTRACT

**Purpose:** In this study, the relationship between university students' self-esteem in decision-making and decision-making styles and intolerance to uncertainty, cognitive flexibility and the level of happiness were investigated.

**Research Methods:** The study was conducted on 349 university students (69% female, 31% male) between the ages of 17-25 (average age 20.42). In this study, the Melbourne Decision Scale, the Intolerance to Uncertainty Scale, the Cognitive Flexibility Inventory and the Oxford Happiness Scale-Short Form were used to measure self-esteem in decision-making and decision-making styles and intolerance to uncertainty, cognitive flexibility and the level of happiness.

**Findings:** Calculated correlations showed that there were significant relationships between university students' self-esteem in decision-making and decision-making styles and intolerance to uncertainty, cognitive flexibility and the level of happiness and were significantly predicted by the variables of intolerance to uncertainty, cognitive flexibility and happiness.

**Implications for Research and Practice:** Suggestions for researchers are as follows: it is possible to say that the following themes can be further studied: the decision-making styles and self-esteem in decision-making concepts in different age groups and education levels; and identifying different variables related to these concepts and increasing the number of studies conducted with experimental arrangements involving different decision-making situations. For practitioners, seminars can be organized on this issue within the youth counseling centers working on the university campuses, organizing psycho-education programs for the development of young people's decision-making skills and emphasizing the importance of cognition in decision-making in these programs, as well as emphasizing emotions and uncertainty.

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## Introduction

Decision-making has become one of the important cognitive life skills that human beings should have because democracy has become a way of life today (Eldeleklioglu, 1996), problems arising with developing technology (Tiryaki, 1997) and the fact that individuals wish to lead a happy life (Alver, 2005). Decision-making, according to Gucray (2001), is that the individual chooses the most appropriate option available for the existing situation to meet his/her needs. Self-esteem in decision-making, on the other hand, is the self-assessment of the individual regarding the decision-making process in the case that he/she has to make a decision and can be explained by individuals' being more autonomous and self-confident (Tatlilioglu & Deniz, 2011). According to Larrick (1993), the competence and self-esteem of an individual as a decision-maker to protect the self is related to the perception of threat in the decision-making process. As the threat increases and the decision-making self-esteem decreases, the decision-maker becomes more defensive (Larrick, 1993). The previous studies show that the individuals with high self-esteem in decision-making demonstrated that they took a self-confident approach in problem-solving, had an internal control focus, had higher parental acceptance levels, focused on prudent-selective decision-making style, and had a low tendency of panic, responsibility avoidance and indifference in decision-making (Çolakkadioglu, 2003; Deniz, 2004, 2006; Friedman & Mann, 1993; Ozcan-Candangil, 2005; Tunc, 2011).

According to the Conflict Theory, the levels of self-esteem and stress that occurs in the individual concerning the styles used by the individuals in the decision-making process differ (Janis & Mann, 1977). In the context of decision-making, the concept of style is defined as the personal tendency of the individual in approaching the problem in the case of decision-making (Tasdelen-Karckay, 2004). The different decision-making styles, intertwined with a certain level of psychological stress to resolve time pressure and uncertainties, can be observed both cognitively and behaviorally. Individual characteristics and loading styles affect the individual's decision-making styles (Nunnally, 1978). In this respect, individuals' self-esteem in decision-making and their styles are an effective factor in their decision-making to be beneficial. Intolerance to uncertainty is the inability of individuals to withstand the repulsive reaction caused by the lack of necessary information and continues with the related perception of uncertainty (Bardeen, Fergus, & Orcutt, 2013; Carleton et al., 2016; Zvolensky, Vujanovic, Bernstein, & Leyro, 2010). Intolerance to uncertainty is all about fear and discomfort in encountering uncertain events and situations rather than the possibility of negative consequences and situations (Ladeouceur, Gosselin, & Dugas, 2000). Previous studies demonstrated that intolerance to high uncertainty had a destructive effect on adaptive responses and decision-making decision-making (Jensen, Kind, Morrison, & Heimberg, 2014; Luhmann, Ishida, & Hajcak, 2011). Ladeouceur, Talbot and Dugas (1997) found that individuals with high intolerance to uncertainty needed more information before making a decision. This situation can be evaluated as proof of low self-confidence in decision-making and continuing this situation over time after the decision (Jensen et al., 2014). Previous studies revealed

that high intolerance to uncertainty was associated with avoidance behavior (Maner et al., 2007; Raghunathan & Pham, 1999).

Studies suggested that high intolerance to uncertainty in the decision-making process might be better explained by increasing emotional response and anxiety during and after the decision-making process rather than being defined by behavioral and observable deterioration (Jacoby et al., 2014). Intolerance to uncertainty, whether it is behavioral or emotional, causes a damaging effect in decision-making processes. Previous studies demonstrated that the ability to adapt to the changes in environmental problems was vital for individuals who made strategic decisions (Barr, Stimpert, & Huff, 1992; Gavetti, 2005; Gavetti & Levinthal, 2000; Hodgkinson, 1997; Joseph & Ocasio, 2012; Levinthal & March, 1993).

Cognitive flexibility is a skill related to cognitive adaptation strategies to new and unexpected situations in the social environment (Canas et al., 2003). Cognitive flexibility allows decision-makers to adjust their transaction styles according to different situations, helping them overcome cognitive laziness (Laureiro-Martinez & Brusoni, 2018). Furr, Cavaretta and Garg (2012) defined the concept of cognitive flexibility level in decision-making individuals as the processes and characteristics that allow them to gather and combine new information, correct their perspectives and reflect it. Cognitive flexibility as a skill is the capacity to adjust the focus of attention when faced with different levels of uncertainty (Laureiro-Martinez, Brusoni, & Zollo, 2009). Accordingly, cognitive flexibility plays a key role in making decisions on different topics within changing living conditions. According to Zeelenberg, Nelissen, Breugelmens and Pieters (2008), emotions are effective at all stages of the decision-making process and help make the right decision.

Furthermore, it was revealed in the studies examining the effects of emotional states that emotional state similarly affected the quality of the decision (Bower, 1981; Johnson & Tversky, 1983; Isen, Shalcker, Clark, & Karp, 1978). Another effect of emotional states on the decision-making process is the effect of individuals on the tendency to escape from risk or take risks by evaluating the stimulus or condition they encounter before acting (Schwarz & Clore, 1983; 1988). Consequently, the findings in the literature suggest that individuals with positive emotions tended to refrain from taking risks when the loss was big and tended to take risks when they were small (Arkes, Herren, & Isen, 1988; Isen & Geva, 1987; Nygren, Isen, Taylor, & Dulin, 1996). Individuals who feel happy overestimate the possibility of being positive while underestimating the likelihood of events and consequences (Johnson & Tversky, 1983; Nygren, Isen, Taylor, & Dulin, 1996). The results of experimental studies revealed that individuals who felt happy were more likely to adopt the exploratory processing strategy associated with trusting their pre-existing cognitive structures and paying relatively little attention to the details (Schwarz, 2000).

The international studies on decision-making and intolerance to uncertainty emphasized the following themes: behavioral decisions (Carleton et al., 2016), rapid decision-making in high risk situations (Jensen, Kind, Morrison, & Heimberg, 2014), risk acceptance in gambling strategies and decision-making (Kornilova, Chumakova,

& Kornilov, 2018), delayed decisions and probability-based rewards (Luhmann, Ishida, & Hajcak, 2011), obsessive compulsive disorder (Purshkarskaya et al. 2015), social fear (Soltani, 2016), the process of making risky decisions in adolescents (Van den Bos & Hertwig, 2017), emotional decision-making in adolescents (Wild, Freeston, Heary, & Rodgers, 2014), career decision-making (Xu & Tracey, 2015); studies on cognitive flexibility; adaptive decision-making processes (Laureiro-Martinez & Brusoni, 2018), eating disorders (Perpina, Segura, & Sanchez-Reales, 2017), the effect of conceptual knowledge (Dong, Du, & Qi, 2016), the development of adaptive decision-making in adolescents (Hauser, Iannaccone, Walitza, Brandeis, & Brem, 2015), neurological model in learning and change (Laureiro-Martinez, Brusoni, & Zollo, 2009), dogmatism (Martin, Staggers, & Anderson, 2011); studies about happiness; decision-making process in transport (Duarte, Garcia, Limao, & Polydoropoulou, 2008), emotions and decision-making (Lerner, Li, Valdesolo, & Kassam, 2015), affection and decision-making (Peters, Vastfjall, Garling, & Slovic, 2006), emotions and cognitions (Schwarz, 2000), intuitive decision-making (Stevenson & Hicks, 2016), emotions in social decision-making (Van Kleef, De Dreu, & Manstead, 2010), and emotional specificity in decision-making (Zeelenberg, Nelissen, Breugelmens, & Pieters, 2008). Two studies are available examining the developmental connections between adolescents' decision strategies, bilingualism, and metacognitive decisions related to cognitive flexibility (Bilgic & Bilgin, 2016; Karsli, 2015).

The concept of decision-making is an important research topic not only of psychology but also of many other social sciences. As the variables in decision-making are discovered, as it is the case in the current study, determining the variables related to decision-making in different fields, such as logistics, marketing, advertising, and personnel management, will contribute to the generation of more efficient studies. When the literature on the results of the study on decision-making is examined, no national or international study has been found, which deals with university students' self-esteem in decision-making and decision-making styles, intolerance to uncertainty, cognitive flexibility and the level of happiness. The present study, which aims to reveal the relationship between the current variables and self-esteem in decision-making and decision-making styles, also aims to fill this gap. In this context, in this study, we aimed to reveal the relationship between 18-25 years old individuals' self-esteem in decision-making and decision-making styles and their intolerance to uncertainty, cognitive flexibility and the level of happiness. In the context of this main purpose, answers were sought for the following research questions:

1. Is there a significant relationship between university students' SEDM (self-esteem in decision-making) and decision-making styles, and TIU (intolerance to uncertainty), TCF (cognitive flexibility) and the level of H (happiness)?
2. Do the university students' TCF, TIU and H levels predict their SEDM and decision-making styles?

## Method

### *Research Design*

This study, which aims to reveal the relationship between university students' self-esteem in decision-making and decision-making styles, and intolerance to uncertainty, cognitive flexibility and the level of happiness, is a quantitative research study. This study belongs to the type of relational research examining the relationships and connections among the research types according to their levels.

### *Research Sample*

An example of convenience was used in this study. Research, Turkey's Marmara region is connected to a university located in the Faculty of Education, Guidance and Counseling, Special Education, Social Studies, Music, tutorials, French and English Language Teaching was conducted with a total of 349 students from studying 17-25 years in the Department. 69% of the participants in this study were female and 31% male (mean age 20.42, standard deviations, 1.83).

### *Research Instruments and Procedures*

**Melbourne Decision-Making Scale.** This scale used in this study was developed by Mann, Burnett, Radford and Ford (1997) to identify the self-esteem in decision-making and decision-making styles of university students. The first part of the scale, which consists of two parts, consists of six items and one factor aiming to determine the individual's SEDM. The second part aims to reveal the decision-making styles of individuals. This part consists of 22 items and four factors (Vigilance=V, Buckpassing=B, Procrastination=P, and Hypervigilance=HV). Both parts consist of 3-point type items. The high scores obtained from the first part of the scale are interpreted as high SEDM. The high number of points that can be obtained from the second part of the scale indicates that the relevant decision-making style has been used. The scale was adapted to Turkish by Deniz (2004). Later, other researchers (Kasik, 2009; Tatlıoğlu, 2010; Colakkadioglu & Deniz, 2015) tested its reliability and validity. Internal consistency coefficients of the scale respectively were found as SEDM .72, V .80, B .78, P .65 and HV .71. Internal consistency coefficients for this study were found as follows: SEDM .61, V .69, B .68, P .69 and HV .66.

**Intolerance to Uncertainty Scale.** The original of this scale used in the present study was developed in French by Freeston to determine the emotional, cognitive and behavioral responses to uncertain situations and adapted to English by Buhr and Dugas (2002). English version. As the scores obtained from the five-point Likert scale increased, the indifference to uncertainty increased, too. The scale was adapted to Turkish by Sarı and Dag (2009). The internal consistency coefficient of the whole scale was .79 and the test-retest reliability coefficient .66. For this study, the internal consistency coefficient of the whole scale was .91.

**Cognitive Flexibility Inventory:** The original of this inventory used in the present study was developed by Dennis and Vander Wal (2010), inventory alternatives consisting of 20 items in 5-point Likert type. As the scores obtained from the inventory

increased, the cognitive flexibility increased as well. The inventory was adapted to Turkish by Gulum and Dag (2012). The internal consistency coefficient of all inventory was .90. For the current study, the internal consistency coefficient of all inventories was .85.

**Oxford Happiness Scale-Short Form.** The original version of this scale used in this study was abridged by Hills and Argyle (2002) from the Oxford Happiness Scale, consisting of 8 items in the 6-point Likert type. As the scores obtained from the scale increased, the level of happiness increased, too. The scale was adapted to Turkish by Dogan and Akinci-Cotok (2011). The internal consistency coefficient of the scale was .74, and the test-retest reliability coefficient was .85. For this study, - the internal consistency coefficient of the scale was .77.

### *Data Analysis*

Data were collected during the period of one week in the spring semester of the 2018 and 2019 academic year. The scales used in this study were applied by the researcher to the students during the course hours. The scales used in the study were applied by the researcher to the students during the course hours. Before the application, the purpose of the study was explained to the students and then the scales were applied to the volunteer students. According to American Psychological Association (APA, 2017) ethical codes, it was stated that the study was assumed not to cause significant stress or harm, and informed consent could not be obtained in studies conducted in educational environments where the identity of the participants was not specified in the data collection tools. In this study, the participants were informed about the research and their identities were kept confidential without obstructing the course. Ethics committee approval was not obtained by informing the participants as sufficient. Although data were collected from 375 students, 26 scale data were not included in the analysis because they were filled in inadequately. The relationship between university students' SEDM and decision-making styles, and TIU, TCF and the level of H were examined by the Pearson Moments Product Correlation. Furthermore, the predictive status of university students' SEDM and decision-making styles, and TIU, TCF and the level of H were analyzed using the Multiple Linear Regression Analysis Variable Addition method.

## **Results**

The average and standard deviations of the university students' SEDM and decision-making styles, TIU, TCF and H scales are given in Table 1.

**Table 1**

*Average and Standard Deviations of University Students' Scores of SEDM and Decision-making Styles, TIU, TCF and H Scales*

	$\bar{X}$	SD	N
SEDM	9.19	1.91	349
V	10.04	1.91	349
B	3.54	2.32	349
P	3.63	2.22	349
HV	4.04	2.20	349
TIU	79.28	16.73	349
TCF	78.70	8.76	349
H	24.27	4.59	349

SEDM= Self-esteem in decision-making, V= Vigilance, B= Buckpassing, P= Procrastination, HV= Hypervigilance, TIU= Total Intolerance to Uncertainty, TCF= Total Cognitive Flexibility, H= Happiness

Whether there was a statistically significant relationship between university students' self-esteem in decision-making and decision-making styles and the level of intolerance to uncertainty, cognitive flexibility and happiness was examined by the Pearson Moment Product Correlation.

**Table 2**

*Correlation Results between University Students' SEDM and Decision-Making Styles and the TIU, TCF and H*

Variables	1	2	3	4	5	6	7	8
1. SEDM	1	.21**	-.47**	-.40**	-.52**	-.28**	.44**	.35**
2. V		1	-.18**	-.10	-.10	.04	.41**	.12*
3. B			1	.53**	.41**	.20**	-.36**	-.29**
4. P				1	.55**	.28**	-.39**	-.27**
5. HV					1	.51**	-.57**	-.34**
6. TIU						1	-.40**	-.31**
7. TCF							1	.36**
8. H								1

p<.05\* p<.01\*\*

When Table 2 is analyzed, it is clearly seen that there was a negative ( $r(348) = -.28$ ,  $p<.01$ ) relationship between university students' SEDM and their level of TIU, and a positive significant ( $r(348) = .44$ ,  $p<.01$ ) relationship between their TCF levels and a positive significant ( $r(348) = .35$ ,  $p<.01$ ) relationship between their H levels. The findings showed that there was a positive significant ( $r(348) = .41$ ,  $p<.01$ ) relationship

between the students' V styles and TCF levels and a positive ( $r(348) = .12, p < .05$ ) relationship between their H levels; a positive significant between B styles and levels of TIU ( $r(348) = .20, p < .01$ ); a negative significant relationship ( $r(348) = -.36, p < .01$ ) between TCF levels and a negative significant relationship ( $r(348) = -.29, p < .01$ ) between H levels; a positively significant ( $r(348) = .28, p < .01$ ) between P styles and levels of TIU; a negative significant relationship ( $r(348) = -.39, p < .01$ ) between TCF levels and a negative significant relationship ( $r(348) = -.27, p < .01$ ) between H levels; positive significance between HV styles and levels of TIU ( $r(348) = .51, p < .01$ ); and a negative significant relationship ( $r(348) = -.57, p < .01$ ) between TCF levels and a negative significant relationship ( $r(348) = -.34, p < .01$ ) between H levels.

In this study, whether university students' TIU, TCF and H levels predicted their SEDM and decision-making styles were analyzed using the Multiple Linear Regression Analysis Variable Addition (forward) method.

**Table 3.**

*Regression Results regarding whether University Students' SEDM and Decision-Making Styles were predicted by TIU, TCF and H Levels*

Dependent Variables	Predictive Variables	$\beta$ Coefficient *	Std. Error	Std. coefficient	$\beta R$	$R^2$	Change Statistics			
							$R^2$ Change	F	df	P
SEDM	Constant	.71	.83		.49	.24	.04	19.35		
	TCF	.08	.01	.36					347	0.00
	H	.09	.02	.22					346	0.00
V	Constant	-.67	1.16		.46	.21	.05	20.29		
	TCF	.11	.01	.50					347	0.00
	TIU	.03	.01	.23					346	0.00
B	Constant	11.95	1.06		.40	.16	.03	12.55		
	TCF	-.08	.01	-.29					347	0.00
	H	-.10	.03	-.19					346	0.00
P	Constant	9.70	1.45		.43	.18	.01	5.24		
	TCF	-.08	.01	-.30					347	0.00
	H	-.06	.03	-.12					346	0.01
	TIU	.02	.01	.12					345	0.02
HV	Constant	9.11	1.15		.65	.42	.10	57.71		
	TCF	-.11	.01	-.44					347	0.00
	TIU	.05	.01	.34					346	0.00

SEDM= Self-esteem in decision-making, V= Vigilance, B= Buckpassing, P= Procrastination, HV= Hypervigilance, TIU= Total Intolerance to Uncertainty, TCF= Total Cognitive Flexibility, H= Happiness

When the results of the analysis in Table 3 are examined, it is seen that there were three predictive variables in the regression equation for predicting SEDM and this analysis was completed in two stages. TCF was the first important variable and H the second variable that entered into the regression equation. The corrected  $R^2$  value of all variables in the analysis was .24. In other words, TCF and H explained 24% of SEDM. The fact that 24% of university students' SEDM levels were explained by independent variables demonstrated that 76% were explained by other variables. At the same time,



this regression analysis had a moderate effect size index ( $f^2 = .32$ ). The variable with the highest standardized  $\beta$  coefficient with SEDM was TCF ( $\beta = .36$ ). Consequently, it is possible to say that university students who had high self-esteem in decision-making were cognitively more flexible and happier.

When the analysis results in Table 3 are examined concerning V style, there were three predictive variables in the regression equation and this analysis was completed in two stages. TCF was the first important predictive variable and TIU as the second variable that entered into the regression equation. Since there was no significant relationship between H and V style, it was not included in the regression equation. The corrected  $R^2$  value of all variables in the analysis was .21. In other words, TCF and TIU explained 21% of V style. The fact that 21% of university students' V style was explained by the independent variables demonstrated that 79% were explained by the other variables. At the same time, this regression analysis had a moderate effect size index ( $f^2 = .27$ ). The variable with the highest standardized  $\beta$  coefficient with V style was TCF ( $\beta = .50$ ). Consequently, it is possible to say that university students who used a vigilant decision-making style were cognitively more flexible and their level of tolerance to uncertainty was low.

When the analysis results in Table 3 are examined, it is seen that there were three predictive variables in the regression equation to predict the B style and this analysis was completed in two stages. TCF was the first important predictive variable and H the second variable that entered into the regression equation. Due to no significant relationship between TIU and B style, it was not included in the regression equation. The corrected  $R^2$  value of all variables in the analysis was .16. In other words, TCF and H explain 16% of the B style. The fact that 16% of university students' B style was explained by the independent variables demonstrated that 84% of them were explained by the other variables. At the same time, this regression analysis had a small effect size index ( $f^2 = .03$ ). The fact that the explained variance or the effect size index was small indicated that the predictors in this analysis were not very effective in the level of B style of university students. The variable with the highest standardized  $\beta$  coefficient with the B style was the TCF ( $\beta = -.29$ ). Consequently, it is possible to say that the cognitive flexibility and happiness levels of university students using the buckpassing decision-making style were low.

When the analysis results in Table 3 are analyzed concerning P style, it is seen that there were three predictive variables in the regression equation and this analysis was completed in three stages. TCF was the first important predictive variable, H the second variable and TIU the third variable that entered into regression equation. The corrected  $R^2$  value of all the variables in the analysis was .18. In other words, TCF, H and TIU explained 18% of the P style. The fact that 18% of the university students' P style was explained by the independent variables demonstrated that rest of the 82% were explained by the other variables. At the same time, this regression analysis had a moderate effect size index ( $f^2 = .22$ ). The variable with the highest standardized  $\beta$  coefficient with the P style, on other hand, was the TCF ( $\beta = -.30$ ). Consequently, it is possible to say that the cognitive flexibility, happiness levels and tolerance to

uncertainty were low among university students who used the procrastinating decision-making style.

When the analysis results in Table 3 are examined, it is seen that there were three predictive variables in the regression equation for predicting the HV style and this analysis was completed in two stages. The TCF was the first important predictive variable and TIU the second variable that entered into regression equality. The corrected  $R^2$  value of all the variables in the analysis was .42. In other words, TCF and TIU explained 42% of HV style. The fact that 42% of university students' HV style was explained by the independent variables demonstrated that rest of the 48% of them were explained by the other variables. At the same time, this regression analysis had a large effect size index ( $f^2 = .72$ ). The fact that the explained variance was moderate and the effect size index was high indicated that the predictors in this analysis were effective on the level of university students' HV style. The variable with the highest standardized  $\beta$  coefficient with HV style was the TCF ( $\beta = -.44$ ). When the signs of the regression coefficients were analyzed, it is seen that there was a negative significant relationship between the TCF and HV style, and there was a positive relationship between the TIU to HV style. Consequently, it is possible to say that the university students who used the hypervigilant decision-making style had a level of low cognitive flexibility and tolerance to uncertainty.

### Discussion, Conclusion and Recommendations

In this study, we aimed to investigate the relationship between 18-25-year-old individuals' SEDM and decision-making styles and their TIU, TCF and the H. The findings obtained in this study showed that there were significant relationships between university students' SEDM and their TIU, TCF and H levels. Moreover, while significant relationships were identified, except for V style, between the other decision-making styles and TIU, TCF and H, it was also found that there were significant relationships between V style and TCF and H. The V style was significantly predicted by the predictive variables of TIU and TCF, and the predictive variables of TCF and H significantly predicted the B style. P style was significantly predicted by the predictive variables of TCF, TIU and H, and HV style was significantly predicted by the predictive variables of TCF and TIU.

The result of the current study regarding the V style conflicts with the finding that individuals with high levels of TIU need to gather more information before making a decision (Ladouceur et al., 1997). According to the result of Soltani's (2016) study, individuals who had higher TIU gathered less information to get rid of uncertainty in a short time. Similarly, in their study, Luhmann, Ishida, & Hajcal (2011) found that individuals with high levels of TIU had shorter waiting periods of time in decision-making and more often selected the less valuable (and more risky) rewards. Even if it is a less rewarding decision, making a decision that quickly avoids uncertainty may be preferable for those who are highly TIU (Jensen, Kind, Morrison, & Heimberg, 2014). According to another study result, the individuals with high levels of TIU were less busy with the tasks assigned than those with low levels of the TIU (Wild, Freeston,

Heary, & Rodgers, 2014). These explanations conflicted with the finding that there was a significant relationship between HV and B styles and TIU, and no relationship with the V style; however, there was a significant relationship between the P style.

In the present study, based on the similar study results supporting the finding that there was a negative relationship between university students' SEDM and their levels of TIU, in the repeated decision-making situations, it was revealed that a high level of TIU decreased self-confidence in decision-making. The individuals with damaged self-confidence and a high level of intolerance may approach their future decision-making situations with less self-confidence regardless of the information available. The university students with a high level of TIU had low self-esteem and were more likely to use one of the P or HV styles.

According to the results of the study supporting the finding that there was a positive significant relationship between the TCF and V styles, decision-makers with high TCF performed better in this process, learnt the rules about tasks more quickly and tried to learn more about the tasks (Dong, Du, & Qi, 2016; Laureiro-Martinez & Brusoni, 2018). Accordingly, TCF was an important precursor in making effective decisions when faced with different kinds of problems (Laureiro-Martinez & Brusoni, 2018). According to Bilgic and Bilgin (2016), the individuals with high TCF used less intrinsic, dependent and undecided decision-making strategies and used more rational decision-making strategies. Regarding SEDM, previous studies demonstrated that TCF helped to be more aware of the options, and individuals felt competent in flexible situations (Bilgic & Bilgin, 2016). Consequently, while the university students with high TCF evaluated their different options more vigilantly in the decision-making process, they acted more autonomously within the framework of their confidence in this process.

According to the results of this study supporting the findings related to H, it was found that the importance and effect of individual H in the decision-making process was highly related to the alternative (Duarte, Garcia, Limao, & Polydoropoulou, 2008). The fact that intuitive decision-making exhibited a positive significant relationship with H as a result of the studies of Stevenson and Hicks (2016), on the other hand, conflicts with the findings of the current study that there was a positive significant relationship between H and V style and a negative relationship between HV and B styles. Based on the findings of the present study, the university students with a high level of happiness used the vigilant decision-making style and acted more autonomously within the context of self-confidence.

In light of the findings of the present research, suggestions for researchers are as follows: it is possible to say that the following themes can be further studied; the decision-making styles and SEDM concepts in different age groups and education levels; and identifying different variables related to these concepts and increasing the number of studies conducted with experimental arrangements involving different decision-making situations. Furthermore, the focus can be placed on investigating the interventions that will increase university students' SEDM and encourage them to use V style, paying closer attention to the variables of TIU, TCF and H in programs aimed

at decision-making skills, and developing the skills of TCF. For practitioners, seminars can be organized on this issue within the youth counseling centers working on the university campuses, organizing psycho-education programs for the development of young people's decision-making skills and emphasizing the importance of cognition in decision-making in these programs, as well as emphasizing emotions and uncertainty.

This study has some important limitations, although, to our knowledge, the present study is the first national study to reveal the relationships between SEDM and decision-making styles and TIU, TCF and H. In the field, while the studies investigating the decision-making processes with especially TIU and decision-making with emotions, in the experimental model, the present study is in the screening model and is limited to the findings obtained from the responses of the participants to the scale items related to the variables. Therefore, the findings that conflict with the data already available in the field should be re-tested by the experimental studies. Furthermore, the other limitations of the present study are that only the predictive variables of TIU, TCF and H were investigated. Only the individuals who were educated at a faculty in a university located in the Marmara Region only were included in this study. These particular states of affairs limit the generalizability of the results of this study, although this university and the faculty concerned had students from different socio-economic levels and different regions of Turkey.

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### **Karar Verme ile Belirsizliğe Tahammülsüzlük, Bilişsel Esneklik ve Mutluluk Düzeyleri Arasındaki İlişki**

#### **Atıf:**

- Yildiz, M., & Eldeleklioglu, J. (2021). The relationship between decision-making and intolerance to uncertainty, cognitive flexibility and happiness. *Eurasian Journal of Educational Research*, 91, 39-60, DOI: 10.14689/ejer.2021.91.3

#### **Özet**

*Problem durumu.* Karar verme kavramı yalnızca psikolojinin değil diğer birçok sosyal bilimler alanının da ilgilendiği önemli bir araştırma konusudur. Karar vermenin ilişkili olduğu değişkenler keşfedildikçe lojistik, pazarlama, reklam, personel yönetimi gibi farklı alanlarda da daha verimli çalışmaların ortaya konulmasına katkı sağlanacaktır. Ayrıca psikolojik danışmanlık açısından bakıldığında karar verme kavramına ilişkin teorik bilgilerin çerçevesi genişledikçe karar verme becerilerini geliştirmeyi amaçlayan gerek psiko-eğitim programları gerek de sınıf rehberlik etkinliklerinde uygulanacak programlar daha etkili hale gelebilir. Bu sayede daha

erken yaşlarda etkili karar verme becerilerine sahip bireyler yetiştirilebilir. Bu açıdan mevcut çalışma karar verme kavramına ilişkin literatürün genişlemesine katkı sağlamayı hedeflemektedir. Karar vermeye ilişkin araştırma sonuçlarıyla ilgili literatür incelendiğinde ise üniversite öğrencilerinin karar verme öz saygıları ve karar verme stilleriyle belirsizliğe tahammülsüzlük, bilişsel esneklik ve mutluluk düzeylerini birlikte ele alan yurt dışında ve yurt içinde herhangi bir araştırmaya rastlanmamıştır. Mevcut değişkenlerin karar vermede öz saygı ve karar verme stilleriyle olan ilişkilerini ortaya çıkarmayı amaçlayan bu çalışma bu boşluğu da gidermeyi hedeflemektedir.

*Araştırmanın amacı.* Bu çalışmada; üniversitede öğrenim gören 18-25 yaş arası bireylerin karar verme özsaygıları ve karar verme stilleriyle belirsizliğe tahammülsüzlük, bilişsel esneklik ve mutluluk düzeyleri arasındaki ilişkilerin ortaya konulması amaçlanmıştır. Bu temel amaç bağlamında şu sorulara yanıt aranmıştır:

1. Üniversite öğrencilerinin karar verme öz saygıları ve karar verme stilleri ile bilişsel esneklik, belirsizliğe tahammülsüzlük ve mutluluk düzeyleri arasında anlamlı bir ilişki bulunmakta mıdır?
2. Üniversite öğrencilerinin bilişsel esneklik, belirsizliğe tahammülsüzlük ve mutluluk düzeyleri karar verme öz saygıları ve karar verme stillerini yordamakta mıdır?

*Araştırmanın yöntemi.* Üniversite öğrencilerinin karar verme özsaygıları ve karar verme stilleri ile belirsizliğe tahammülsüzlük, bilişsel esneklik ve mutluluk düzeyleri arasındaki ilişkiyi ortaya koymak amacıyla yapılan bu araştırma nicel araştırma türündedir. Düzeylerine göre araştırma türlerinden ilişkileri ve bağlantıları inceleyen ilişkisel araştırmalardan; değişkenler arasındaki ilişkide korelasyon türü ilişki çözümlemesi yoluyla birlikte değişimin varlığı ve derecesinin incelendiği korelasyonel araştırma türüne örnektir. Araştırmanın çalışma grubunu 2018-2019 eğitim öğretim yılının bahar yarıyılında Türkiye'nin Marmara Bölgesi'ndeki bir üniversitenin eğitim fakültesinin çeşitli bölümlerinde öğrenim görmekte olan üniversite öğrencileri oluşturmaktadır. Araştırmada üniversite öğrencilerinin karar verme özsaygısı ve karar verme stillerini, belirsizliğe tahammülsüzlüklerini, bilişsel esneklikleri ve mutluluk düzeylerini ölçmek için sırasıyla Melbourne Karar Verme Ölçeği, Belirsizliğe Tahammülsüzlük Ölçeği, Bilişsel Esneklik Envanteri ve Oxford Mutluluk Ölçeği-Kısa Formu kullanılmıştır.

*Araştırmanın bulguları.* İlk olarak üniversite öğrencilerinin karar verme özsaygıları ile karar verme stilleri ile belirsizliğe tahammülsüzlük, bilişsel esneklik mutluluk düzeyleri arasında istatistiksel olarak anlamlı bir ilişki olup olmadığı Pearson Momentler Çarpımı Korelasyonu ile incelenmiştir. Üniversite öğrencilerinin karar verme öz saygıları ile belirsizliğe tahammülsüzlük düzeyleri arasında negatif yönde anlamlı ( $r = -.28, p < .01$ ), bilişsel esneklik düzeyleri arasında pozitif yönde anlamlı ( $r = .44, p < .01$ ) ve mutluluk düzeyleri arasında pozitif yönde anlamlı ( $r = .35, p < .01$ ) bir ilişki olduğu belirlenmiştir. Üniversite öğrencilerinin dikkatli karar verme stilleriyle bilişsel esneklik düzeyleri arasında pozitif yönde anlamlı ( $r = .41, p < .01$ ) ve mutluluk düzeyleri arasında pozitif yönde anlamlı ( $r = .12, p < .05$ ) bir ilişki; kaçınan karar verme stilleriyle belirsizliğe tahammülsüzlük düzeyleri arasında pozitif yönde anlamlı ( $r =$

.20,  $p<.01$ ), bilişsel esneklik düzeyleri arasında negatif yönde anlamlı ( $r= -.36$ ,  $p<.01$ ) ve mutluluk düzeyleri arasında negatif yönde anlamlı ( $r= -.29$ ,  $p<.01$ ) bir ilişki; erteleyici karar verme stilleriyle belirsizliğe tahammülsüzlük düzeyleri arasında pozitif yönde anlamlı ( $r= .28$ ,  $p<.01$ ), bilişsel esneklik düzeyleri arasında negatif yönde anlamlı ( $r= -.39$ ,  $p<.01$ ) ve mutluluk düzeyleri arasında negatif yönde anlamlı ( $r= -.27$ ,  $p<.01$ ) bir ilişki; panik karar verme stilleriyle belirsizliğe tahammülsüzlük düzeyleri arasında pozitif yönde anlamlı ( $r= .51$ ,  $p<.01$ ), bilişsel esneklik düzeyleri arasında negatif yönde anlamlı ( $r= -.57$ ,  $p<.01$ ) ve mutluluk düzeyleri arasında negatif yönde anlamlı ( $r= -.34$ ,  $p<.01$ ) bir ilişki olduğu tespit edilmiştir. Son olarak üniversite öğrencilerinin belirsizliğe tahammülsüzlük, bilişsel esneklik ve mutluluk düzeylerinin karar verme öz saygılarını ve karar verme stillerini yordayıp yordadığı Çoklu Doğrusal Regresyon Analizi Değişken Ekleme (forward) yöntemi ile analiz edilmiştir. Regresyon analizine ilişkin bulgulara bakıldığında karar vermede özsaygıyı, kaçınan karar verme stilini, bilişsel esneklik ve mutluluk yordayıcı değişkenlerinin; dikkatli ve panik karar verme stilini belirsizliğe tahammülsüzlük ve bilişsel esneklik yordayıcı değişkenlerinin, erteleyici karar verme stilini üç yordayıcı değişkenin de anlamlı bir şekilde yordadığı bulunmuştur.

*Araştırmanın sonuç ve önerileri.* Araştırmanın bulgularına göre üniversite öğrencilerinin karar vermede özsaygıları ile belirsizliğe tahammülsüzlük, bilişsel esneklik ve mutluluk düzeyleri arasında anlamlı ilişkiler vardır. Ayrıca dikkatli karar verme stili hariç diğer karar verme stilleriyle belirsizliğe tahammülsüzlük, bilişsel esneklik ve mutluluk arasında anlamlı ilişkiler tespit edilmişken dikkatli karar verme stiliyle bilişsel esneklik ve mutluluk arasında anlamlı ilişkiler olduğu saptanmıştır. Regresyon analizine ilişkin bulgulara bakıldığında karar vermede özsaygıyı, kaçınan karar verme stilini, bilişsel esneklik ve mutluluk yordayıcı değişkenlerinin; dikkatli ve panik karar verme stilini belirsizliğe tahammülsüzlük ve bilişsel esneklik yordayıcı değişkenlerinin, erteleyici karar verme stilini üç yordayıcı değişkenin de anlamlı bir şekilde yordadığı bulunmuştur. Literatürdeki çalışmalar mevcut araştırmada panik karar verme ve kaçınan karar verme stili ile belirsizliğe tahammülsüzlük arasında anlamlı ilişki, dikkatli karar verme stili ile ilişki bulunmaması bulgularını desteklemekle birlikte erteleyici karar verme stili ile arasında anlamlı ilişki olduğu bulgusuyla çelişmektedir. Benzer çalışma sonuçlarına göre belirsizliğe tahammülsüzlük düzeyi yüksek olan üniversite öğrencilerinin karar verme öz saygılarının düşük, kaçınan, erteleyici ya da panik karar verme stillerinden birini kullanma ihtimalleri daha yüksektir. Karar vermede öz saygı ile ilgili olarak ise çalışmalar bilişsel esnekliğin seçeneklerinin farkında olmaya daha fazla yardım ettiği ve esnek olunabilen durumlarda bireylerin kendilerini yetkin hissettiklerini ortaya koymuşlardır. Buna göre bilişsel esnekliği yüksek üniversite öğrencileri karar verme sürecinde farklı seçeneklerini daha dikkatli bir şekilde değerlendirirken bu süreçte kendilerine duydukları güven çerçevesinde daha özerk davranmaktadırlar. Mutlulukla ilgili bulguları destekleyen çalışma sonuçlarıyla birlikte mevcut çalışmanın bulgularından yola çıkarak mutluluk düzeyi yüksek üniversite öğrencilerinin karar verme sürecinde seçenekleri değerlendirmeye daha fazla önem veren dikkatli karar verme stilini kullandıkları ve bu süreçte kendilerine duydukları güven çerçevesinde daha özerk davranmaktadırlar. Araştırmacılara yönelik öneriler;

farklı yaş grubu ve eğitim kademelerinde karar verme stilleri ve karar vermede özsayı kavramlarının çalışılması, bu kavramlara ilişkin farklı değişkenlerin belirlenmesi ve konuyla ilgili farklı karar verme durumlarını içeren deneysel düzenlerle yapılan çalışmaların sayılarının artırılması söylenebilir. Alanda çalışan uygulamacılara yönelik öneriler ise; üniversite kampüslerinde görev yapan gençlik danışma merkezleri bünyesinde bu konuda seminerler düzenlenmesi, gençlerin karar verme becerilerinin geliştirilmesi için psiko-eğitim programlarının düzenlenmesi ve hazırlanan bu programlarda karar vermede bilişlerin önemine değinilmesi kadar duygular ve belirsizlik konularına da ağırlık verilmesi söylenebilir.

*Anahtar sözcükler.* Karar Vermede Özsayı, Karar Verme Stilleri, Belirsizliğe Tahammülsüzlük, Bilişsel Esneklik, Mutluluk