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## The Mediator Role of Resilience in the Relationship between Sensation-Seeking, Happiness and Subjective Vitality

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## **The Mediator Role of Resilience in the Relationship between Sensation-Seeking, Happiness and Subjective Vitality**

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### **Abstract**

Sensation-seeking, subjective vitality and happiness are interrelated constructs in the current literature. However, there is currently no research on how the relationship between these concepts is affected. This research aims to examine the mediating effect of resilience in the relationship between them, thus bridging a large gap in the field. The group of participants in the research consisted of 519 university students; 384 (74%) of them women and 135 (26%) of them men. In addition, the average age of the participants was 20.17 (Sd = 1.36). We used sensation seeking, resilience, subjective vitality and Oxford happiness scales in the research. We used mediation analysis to determine the indirect effect of resilience between sensation seeking and subjective vitality and happiness. The results revealed a minor, positively significant relationship between sensation seeking and resilience, subjective vitality, and happiness, indicating that resilience plays a mediating role in the relationship between the concepts of. Moreover, a high level of psychological resilience increases subjective vitality and happiness. Based on these findings, guidance and psychological counselors in schools may be able to better guide improving students' mood.

**Keywords:** Happiness, Resilience, Sensation seeking, Subjective vitality, Positive psychology

### **Introduction**

As a psychosocial creature, the human being makes important decisions at various stages of development. These developmental periods present various opportunities or challenges for individuals. The transition to university is a period that begins before adulthood, in which young people must develop personally, socially and academically. Arnett (2000) defines this period as "emerging adulthood," in which people first experience staying away from their families, have limited social support, shelter, nutrition and other financial issues. This situation presents an important source of risk for students (Coyne et al., 2020). These sources of risk negatively affect adolescents' adaptation to university life and their psychological health (Kasikci, 2020), happiness being the most important indication of the latter among young people.

In field, the concept of happiness is multifaceted. According to the most widely accepted subjective model of well-being aimed at defining the happiness of adults, happiness is defined as a 3-component structure that includes life satisfaction and positive and negative emotion. Diener (2000) sees this 3-component structure as a general perception of happiness. Seligman et al. (2005) conceptualize happiness as a structure consisting of three dimensions: pleasure, meaning, and commitment. People follow this 3-way component, respectively, to be happy. Seligman (2011) emphasizes positive emotion as an important factor for happiness.

The concept of happiness in the related literature is used together with the concept of well-being, although. In a meta-analysis study, Lyubomirsky et al. (2005) found that happiness resulted in 50% genetic factors, 10% demographic factors, and 40% purpose actions (such as gratitude, meaning, social support, and hope). However, Seligman (2011) describes happiness as a "thing" in this regard and well-being a "structure" – a multidimensional concept consisting of the sum of different components.

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Subjective vitality means that the individual feels content, energetic – spiritually and physically – and can unlock their own potential (Brunstein & Maier, 2002). Similarly, Ryan and Frederick (1997) define subjective vitality as a state of physical and mental well-being. In addition, Deci and Ryan (2008) express subjective vitality as an important component of psychological well-being and eudemonic well-being. In this situation, studies have shown that individuals with high subjective vitality can be more productive and cope more easily in stressful situations (Martin-Cuellar et al., 2019; Penninx et al., 2000; Ugur et al., 2019). Individuals with higher subjective vitality have more energy to perform activities and tasks (Deci & Ryan, 2008). As a result, high subjective vitality can contribute to the psychological well-being of individuals in line with self-determination theory, which addresses how purposeful actions can explain subjective vitality and argues that subjective vitality enhances well-being through intentional actions (Salama-Younes, 2011). Moreover, there are significant relationships between subjective vitality, curiosity, and proactive personality (Celik & Topcuoglu, 2017).

### **The Relationship between Sensation-Seeking and Happiness-Subjective Vitality**

Zuckerman (2007) defined sensation-seeking as a form of courage based on exploring and experiencing new situations. Individuals with high excitement-seeking may nurture an interest in extreme sports, such as mountaineering and skiing (Klinar et al., 2017; Stephenson & Southwell, 2006). However, those with low levels of sensation-seeking are seen to avoid activities that increase their stimulation level (Renfro et al., 2013; Sulejmanov et al., 2018). Furthermore, individuals with high sensation-seeking levels generally see risk rates as less concerning in otherwise heavily risk-involved activities. In this sense, those who seek heightened sensations have higher participation rates in risky activities and exhibit similarly low avoidance behavior (Zuckerman & Kuhlman, 2000).

However, no research appears to have been conducted into the links between sensation-seeking, subjective vitality and happiness among university students – despite the presents of studies linking sensation-seeking, subjective vitality and happiness with various other concepts. For example, Farahani et al. (2011) and Neshat et al. (2009) found that athletes' sensation seeking predicts happiness, while Ma (2018) found a significant relationship between sensation seeking and happiness levels in individuals who use the Internet problematically, and Asgari et al. (2016) showed that there is a significant relationship between fertile women's sensation seeking and their happiness. Reis et al. (2020), meanwhile, found that the exercise game on sensation seeking in the virtual environment predicted subjective vitality. Sensation seeking predicts attitudes towards violence (Kaya et al., 2019). Students' level of life satisfaction with low excitement-seeking decreases (Celik & Turan, 2016). There are significant relationships between sensation seeking and life satisfaction, proactive personality (Celik & Raba, 2017), self-concealment (Celik, 2015), loneliness (Batmaz & Celik, 2021) and general self-efficacy (Celik & Kocak, 2018).

### **The Mediator Role of Resilience**

The importance of studies on reducing the effects of negativity has increased in the last few years, with the concept of resilience having become the subject of much research to assist specific occupational groups (Chmitorz et al., 2018; Sagone et al., 2020). Masten et al. (2006) define resilience as the ability to summon the energy necessary to take action, recover successfully, and return to normal when faced with challenges that negatively affect an individual's development and well-being. In the context of positive “psychology,” which suggests the need to develop the strengths and positive aspects of individuals, resilience is conceptualized by focusing on qualities that enable the person to self-correct and develop in the face of difficulties, instead of focusing on the negative effects of risk processes (Connor & Davidson, 2003).

Contemporary theorists describe endurance as a complex, multidimensional structure characterized by dynamic interactions between individuals and their social ecology (Betancourt & Khan, 2008; Ungar, 2012). On the other hand, instead of focusing on the shortcomings and weaknesses of individuals, the “positive psychology approach” focuses on strengths, positive aspects, happiness, and positive emotions. In this sense, it is important to define the protective factors that enable individuals to develop positive coping strategies in stressful situations. One of these protective factors is resilience. Researchers define psychological resilience in terms of risk factors, protective factors and adaptive behaviors in the face of negativity (Naglieri et al., 2013; Rutter, 2006).

The above studies reveal that resilience positively affects mental health (Benetti & Kambouropoulos, 2006; Mak et al., 2011; Schwarzer & Warner, 2013). In this context, resilience can be considered among some of the resources that can positively affect happiness and subjective vitality. Although previous studies provide evidence that resilience predicts happiness, these studies – conducted among immigrants (Brailovskaia et al., 2019), those with psychopathology (Bachik et al., 2020), student nurses (Benada & Chowdhry, 2017), and secondary school students (Pourkord et al., 2020) – have key limitations. For instance, although Garg and Sarkar (2020) reveal that

resilience predicts subjective vitality in university students, they do not provide any findings on how this relationship is affected. Therefore, little is known about how resilience affects normally developing university students' subjective vitality and happiness levels.

### **Purpose of the Present Study**

Although previous studies have provided evidence that sensation-seeking is associated with happiness levels (Hajloo & Pezeshki, 2013) and subjective vitality (Reis et al., 2020), information on how this relationship is affected is scarce. Recent studies have revealed how resilience affects the relationship between happiness and extraversion and neuroticism (Lü et al., 2014), and between stigma and happiness (Cho & Ryu, 2021) in lung cancer patients. However, these studies were not conducted on normally developing university students. A similar situation can also be seen in studies on the concept of subjective vitality. For example, Akin et al. (2016) have examined the mediating effect of mindfulness on the relationship between friend quality and subjective vitality; Martin-Cuellar et al. (2019) have demonstrated the multilevel mediating relationship of psychological well-being and compassion between mindfulness and subjective vitality; while Tristan et al. (2021) have presented findings on how psychological needs influence the relationship between feedback and subjective vitality. The studies mentioned above show that there is a need for evidence, however, on how resilience affects the relationship between sensation seeking, happiness and subjective vitality in university students.

Sensation-seeking can constitute a precursor to subjective vitality and happiness. However, resilience, including preventive and protective properties, can increase subjective vitality and happiness. Therefore, examining the mediating role of resilience may illuminate the mechanisms between sensation seeking and subjective vitality and happiness. With this in mind, the research aims to examine the mediating role of resilience in the relationship between sensation seeking, happiness, and subjective vitality.

Thus, the hypotheses in the research were formed as follows.

H<sub>1</sub>: Resilience mediates the relationship between sensation seeking and subjective vitality.

H<sub>2</sub>: Resilience mediates the relationship between sensation seeking and happiness.

## **Method**

### **Participants**

519 university students, including 384 (74%) women and 135 (26%) men, participated in this study. In terms of participants' class levels, 345 (66,5%) were first-year students, 45 (8,7%) were second-year students, 42 (8,1%) were third-year students and 87 (16,8%) were fourth year students. In addition, the participants were between the ages of 18 and 21, and the average age of the participants was 20.17 (Sd = 1.36). Participants are studying in the education faculty and preschool, guidance and psychological counselling, and special education teaching departments.

### **Measures**

The sensation-seeking, resilience, Oxford happiness and subjective vitality scales, and a personal information form were used in the data collection process.

#### *Sensation Seeking Scale – Short Form*

The sensation-seeking scale developed by Stephenson et al. (2003) was adapted to Turkish by Celik (2015). The Sensation-Seeking Scale consists of four items in total. In addition, the reliability coefficient was found as .81 in the adaptation study of the scale into Turkish. During the adaptation process, Exploratory Factor analysis was conducted to test the scale's construct validity, and it was concluded that the item factor loads of the scale were between .74 and .84. Within the scope of this research, the Cronbach Alpha ( $\alpha$ ) and McDonald ( $\omega$ ) values were calculated to determine the level of reliability of the scale, with both reliability coefficients coming to .82.

#### *Resilience Scale – Short Form*

The Resilience Scale developed by Smith et al. (2008) to determine the levels of resilience of adults was adapted to Turkish by Dogan (2015). The Resilience Scale consists of 6 items in total. High scores from the scale indicate high resilience. The reliability of the scale was calculated by internal consistency and test re-test methods, with the values of its internal consistency reliability coefficient ranging from .80 to .91 were reached. The test re-test reliability coefficient was found to be between .62 and .69. Confirmatory factor analysis was conducted for the validity of the scale during the adaptation process, and it was concluded that the scale gave an acceptable level of compliance ( $\chi^2/df = 1.83$ , CFI = .99, GFI = .99, IFI = .99, RMSEA = .05 and SRMR = .03). Within the scope of this research, Cronbach Alpha ( $\alpha$ ) and McDonald ( $\omega$ ) values were calculated for reliability, with the coefficients coming to .86.

#### *Oxford Happiness Scale - Short Form*

The Oxford Happiness Scale developed by Hills and Argyle (2002) was adapted to Turkish by Dogan et al. (2011). Oxford Happiness Scale consists of seven items in total. Internal consistency and test re-test methods were used for the reliability of the scale, and the internal consistency reliability coefficient was determined as .74. The test re-test reliability coefficient was found to be .85. Confirmatory factor analysis was conducted for the validity of the scale during the adaptation process, and it was concluded that the scale gave an acceptable level of compliance ( $\chi^2/df = 2.77$ , CFI = .97, AGFI = .95, NFI = .92, RMSEA = .07 and RMR = .04). Within the scope of this research, Cronbach Alpha ( $\alpha$ ) and McDonald ( $\omega$ ) values were calculated to determine the level of reliability of the Oxford happiness scale and it was found to be .80 and .79, respectively.

#### *Subjective Vitality Scale*

The Subjective Vitality Scale developed by Ryan and Frederick (1997) was adapted to Turkish by Uysal et al., (2014). Subjective Vitality Scale consists of seven items in total. The internal consistency coefficient calculated for its reliability was found to be .84. Confirmatory factor analysis was conducted for the validity of the scale during the adaptation process, and it was concluded that the scale gave an acceptable level of compliance ( $\chi^2/df = 1.73$ , GFI = .99, AGFI = .96, NFI = .99, RMSEA = .05 and SRMR = .03). Within the scope of this research, Cronbach Alpha ( $\alpha$ ) and McDonald ( $\omega$ ) values were calculated to determine the level of reliability of the subjective vitality scale and both reliability coefficients were found to be .89.

### **Data Collection**

Because of the pandemic COVID -19, we obtained approval from the ethics committee before collecting data online. In this regard, we provided the link we prepared for online data collection via Google Forms and forwarded it to target students via student information systems, email, and applications such as WhatsApp. During the online data collection process, the researchers added an informed consent form link for students to offer their voluntary participation in the research process. As a result, the researchers could complete the online data collection process within 10 days. Since each of the questions presented to the participants within the scope of the research required a valid answer, there was no imperfect data in the research process.

### **Data Analysis**

We applied the two-stage Structural Equation Model (SEM) proposed by Kline (2015) to examine the mediating role of resilience in the relationship between sensation seeking and happiness and subjective vitality. In this context, we tested the measurement model in the first stage. We built the measurement model to test whether the observed variables contributed significantly to other variables (Anderson & Gerbing, 1988; Kline, 2015). We tested the structural model based on the validated theoretical background in the second phase. The X-square ( $\chi^2$ ) ratio to a degree of freedom and GFI, CFI, IFI, SRMR, and RMSEA values were used to evaluate the goodness of fit of the established model. As breakpoints that define the goodness fit;  $\chi^2/sd \leq 5$ ; CFI, GFI, TLI, and IFI  $\geq .90$ ; RMSEA  $\leq .08$  with SRMR was accepted (Hu & Bentler, 1999; Kline, 2015). Missing data were analyzed using the maximum likelihood (ML) estimator. In the mediation analysis, gender was included as a control variable in the model. Mediation analyses were carried out using AMOS 21.0 after researchers ascertained the arithmetic mean, standard deviation, skewness and kurtosis values, and the relationships between the variables (Table-1).

## Results

### Descriptive Statistics and Correlation

Table 1 shows the relationships between the variables of sensation seeking, resilience, happiness, and subjective vitality.

Table 1. Descriptive and Relational Consequences of Variables of Sensation Seeking, Resilience, Happiness and Subjective Vitality Variables

Variable	Correlation				Descriptive Statistics			
	1	2	3	4	M	SD	Skewness	Kurtosis
1. Sensation Seeking	-				9.56	3.40	.224	-.950
2. Resilience	.20**	-			17.76	2.35	-.099	-.199
3. Happiness	.17**	.42**	-		23.45	5.16	-.075	-.533
4. Subjective Vitality	.26**	.47**	.68**	-	31.10	8.62	-.073	-.731

Note. \*\* $p < .001$

Upon a glance at Table 1, there appears low-level, positively significant relationships between sensation seeking and resilience ( $r = .20, p < .001$ ), subjective vitality ( $r = .26, p < .001$ ), and happiness ( $r = .17, p < .001$ ). In addition, one can see moderate, positively significant relationships between resilience and subjective vitality ( $r = .47, p < .001$ ) and happiness ( $r = .42, p < .001$ ). In addition, the kurtosis and skewness values are between  $\pm 2$  criteria for the assumption of normality. This means that all variables have a normal distribution (George & Mallery, 2010).

### The Measurement Model

We tested the two-stage structural equation model Kline (2015) proposed for the measurement model. In this context, the measurement model includes four latent variables (sensation seeking, resilience, happiness, and subjective vitality) and 24 observed variables. The results of the measurement model showed good fit values and the model fit indices were acceptable [ $\chi^2/df=3.12$ ; CFI= .90; AGFI= .91; IFI= .91; NFI= .90; TLI= .90; RMSEA=.064 and SRMR= .049]. The parameter estimates for the measurement model are presented in Table 2. After we gained evidence that the measurement model had been validated, we moved on to the mediation analysis phase.

Tablo 2. Parameter Estimates of the Measurement Model

			Unstandardized Estimate		Sstandardized Estimate		
			$\beta$	S.E.	$\beta$	C.R.	p
ss4	<---	SenS.	1.000		.562		
ss3	<---	SenS	1.204	.104	.693	11.568	***
ss2	<---	SenS	1.472	.116	.830	12.704	***
ss1	<---	SenS	1.497	.117	.856	12.810	***
r1	<---	Res.	1.000		.787		***
r2	<---	Res.	-1.065	.060	-.759	-17.804	
r3	<---	Res.	-1.082	.061	-.761	-17.854	***
r4	<---	Res.	.984	.062	.690	15.934	
r5	<---	Res.	-.897	.060	-.651	-14.921	***
r6	<---	Res.	-1.041	.064	-.704	-16.330	
sv1	<---	SubV.	1.000		.855		***
sv2	<---	SubV.	.839	.052	.637	16.158	***
sv3	<---	SubV.	.841	.049	.665	17.091	***
sv4	<---	SubV.	.989	.043	.815	23.155	***
sv5	<---	SubV.	.957	.053	.695	18.196	
sv6	<---	SubV.	.781	.050	.622	15.628	***
sv7	<---	SubV.	1.171	.042	.913	28.166	***
h1	<---	Happy.	1.000		.529		***
h2	<---	Happy.	1.305	.127	.629	10.298	***
h3	<---	Happy.	1.151	.107	.683	10.797	***
h4	<---	Happy.	.920	.090	.624	10.248	***
h5	<---	Happy.	1.099	.108	.614	10.155	***
h6	<---	Happy.	1.341	.118	.758	11.394	***
h7	<---	Happy.	.577	.097	.303	5.967	***

Note: SenS = Sensation Seeking; Res = Resilience; SubV.= Subjective Vitality; Happy = Happiness.

### Structural Model

Gender was included in the structural model as a control variable in the study. First, the model in which resilience is the mediator in the relationship between sensation seeking and happiness and subjective vitality was tested. The results of the mediation model showed good fit values and the model fit indices were acceptable [ $\chi^2/sd=3.12$ ; CFI= .90; AGFI= .91; IFI= .90; NFI= .91; TLI= .92; RMSEA=.073 and SRMR= .055]. Figure 1 shows the path diagram for the mediation model.

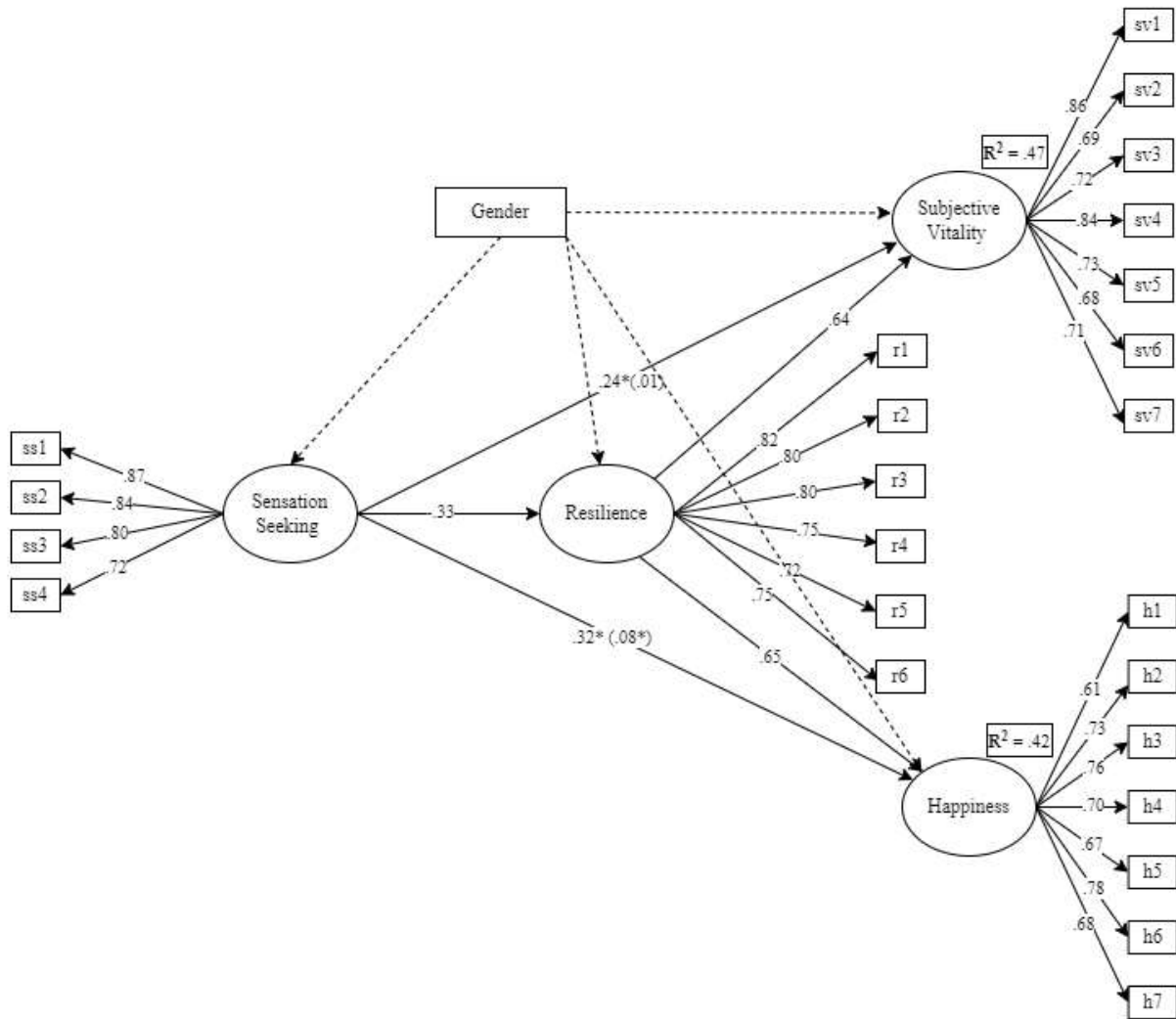


Figure 1. The Mediator Role of Resilience \* $p < .05$

We took account of the suggestions of Baron and Kenny (1986) during the course of statistical procedures for the mediation analysis. We determined the relationship between sensation seeking, happiness, and subjective vitality as the first criterion in this context. We determined the relationship between psychological resilience and sensation seeking and happiness as the second criterion. Finally, we analyzed the mediation by simultaneously including the dependent and independent variables in the model. In this context, we determined that by adding resilience to the model between sensation seeking and happiness, the significant effect of sensation seeking on happiness declined and the  $\beta$  value decreased from .32 to .08. When we added resilience to the model between sensation seeking and subjective vitality, we determined that the significant effect of sensation seeking on happiness declined and the  $\beta$  value decreased from .24 to .01.

In addition to the structural model in Figure 1, we have given the standardized and unstandardized coefficients between variables in Table 3.

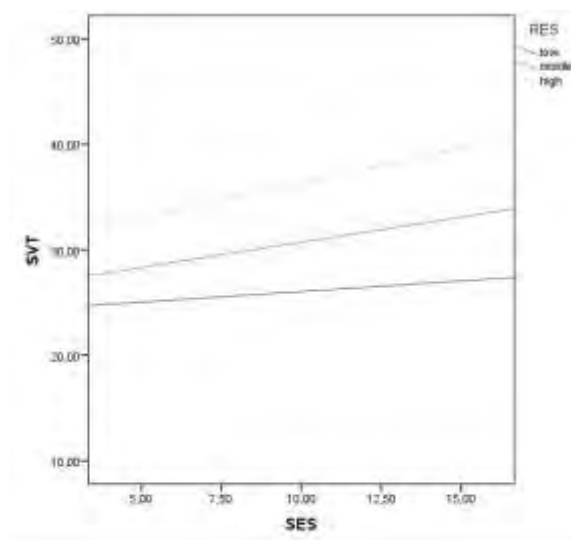
Table 3. Standardized and Unstandardized Coefficients of Model

Variables	Unstandardized Estimate	S.E	C.R (t)	Standardized Estimate	%95 BIAS	
					Lower	Upper
SenS. → Res.	-.30	.04	-6.58	-.33	-.43	-.23
Res. → SubV.	-1.01	.07	-12.9	-.65	-.73	-.57
Res. → Happy.	-.50	.06	-9.02	-.64	-.73	-.54

Note: SenS = Sensation Seeking; Res = Resilience; SubV.= Subjective Vitality; Happy = Happiness.

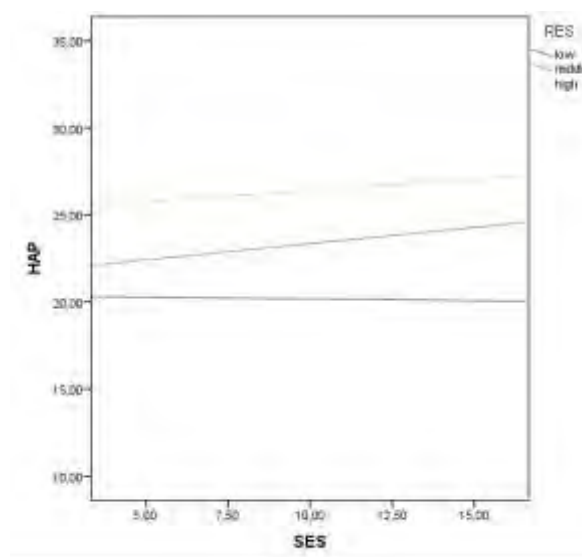


When the direct path coefficients between variables and the confidence intervals for these coefficients were examined, we found that the direct paths established between variables were significant (Table 3). The effect of psychological resilience levels on subjective vitality is shown in figure 2.



Note: SES = Sensation Seeking; RES = Resilience; SVT= Subjective Vitality  
Figure 2. The mediating effect of resilience levels on subjective vitality

The effect of psychological resilience levels on happiness is shown in figure 3.



Note: SES = Sensation Seeking; RES = Resilience; HAP= Happiness  
Figure 3. The mediating effect of resilience levels on happiness

As shown in Figures 1 and 2, as the level of resilience increases, the predictive power of sensation seeking increases subjective vitality and happiness. In other words, while the relationship between sensation seeking and subjective vitality and happiness is higher in individuals with high resilience, the relationship between sensation seeking and subjective vitality and happiness is lower in individuals with low resilience.

### Bootstrapping Process

We used the bootstrapping method to determine the direct and indirect effects of resilience on the relationship between sensation seeking, subjective vitality and happiness. Table 4 contains the results of this analysis.

Table 4. Bootstrapping Process for the Mediator Model

<i>Direct Effect</i>		Estimate	%95 BIAS			
			Lower	Upper		
SenS.	→	Res.	-.33	-.43	-.23	
Res.	→	SubV.	-.65	-.73	-.57	
Res.	→	Happy.	-.64	-.73	-.54	
SenS.	→	SubV.	.30	.20	.39	
SenS.	→	Happy.	.22	.12	.33	
<i>Indirect Effect</i>						
SenS.	→	Res →	SubV.	.22	.15	.29
SenS.	→	Res →	Happy.	.21	.14	.30

Note: SenS = Sensation Seeking; Res = Resilience; SubV.= Subjective Vitality; Happy = Happiness.

According to the results in Table 4, we can say that resilience has an important role on happiness and subjective vitality.

## Discussion

This study examined the mediating effect of resilience in the relationship between sensation seeking, subjective vitality, and happiness among university students. Findings from this study show that sensation seeking and resilience significantly predict subjective vitality and happiness levels in university students. The results provide insights into how resilience affects the relationship between sensation seeking and subjective vitality and happiness.

The research findings show that sensation-seeking predicts subjective vitality and happiness positively. Studies supporting this finding of the study are available in the literature. Furnham and Christoforou (2007) reported that sensation-seeking (looking for success, excitement, adventure, etc.) would predict happiness. Sensation-seeking can be viewed as a personality dimension that motivates individuals to seek new, complex and more intense experiences (Cheung et al., 2017). In this sense, individuals' sensation-seeking behavior can motivate joy, well-being, and vitality. Exciting activities can increase positive emotions, such as individuals' increased energy, enthusiasm and joy. In short, the search for excitement can improve psychological cohesion.

This study shows the indirect effect of sensation-seeking on happiness through resilience. This finding indicates that the effect of resilience on the happiness levels of individuals is more effective than the sensation-seeking variable. In other words, with an increase in psychological resilience, happiness levels may also increase. In line with current literature, the same studies concur that resilience predicts happiness (Benada & Chowdhr, 2017; Fredrickson et al., 2003). Chung et al. (2017) and Altuntas and Genc (2020) revealed that psychological solidity positively predicts happiness, while positive relationships have been discovered in line with resilience and well-being (Sagone & De Caroli, 2014), as well as life satisfaction (Shi et al., 2015) which support the results of this study. Those with high psychological resilience may exhibit high levels of happiness, as they can cope with negative situations (Sood, 2013). According to Yildirim (2019), those with high resilience have a lower fear of happiness. Results in the field thus support the findings of this research. The protective character of psychological resilience can better enable individuals to protect themselves and increase their happiness levels when faced with negative experiences. Individuals with a higher level of resilience are duly more likely to experience fewer mental, social, and physical health problems.

Consistent with another finding of the study, a mediating effect was demonstrated between psychological resilience, sensation seeking, and subjective vitality. The results show that the effect of Sensation Seeking on subjective vitality decreases with resilience. This finding suggests that the effect of resilience on subjective vitality of individuals is more effective than that of the Sensation Seeking variable. In other words, as resilience increases, people's level of subjective vitality may increase.

The results of this study support the findings of other studies that show that resilience predicts subjective vitality (Garg, 2017; Garg & Sarkar, 2020; Kent et al., 2015). The presence of features such as coping strategies (Southwick et al., 2005), positive emotions and optimism (Ong et al., 2006) within the concept of resilience may increase subjective vitality.

Resilience is a protective factor that reduces the risk factors caused by stressful life events and their outcomes (Hu et al., 2015). Therefore, resilience can positively affect subjective vitality's positive, energetic, lively, cheerful,

active, and enthusiastic characteristics (Fini et al., 2010). This can lead to an increased subjective vitality level, with Eksi et al. (2019) finding a negative association between psychological vulnerability and subjective vitality.

## Conclusion

The current results indicate the importance of resilience in the relationship between sensation seeking and happiness and subjective vitality. The results of the study show that the effect of resilience is strong on both happiness and subjective vitality. Consistent with the assumptions of Positive Psychology, resilience affects happiness and subjective vitality of individuals. Psychological resilience, which affects the relationship between sensation seeking and subjective vitality and happiness, can positively influence individuals' mental health. Therefore, identifying the role of resilience could be considered key to understanding the psychological relationships underlying subjective vitality and happiness.

## Recommendations

The study has a number of limitations. First, although the reliability and validity of the scales used in the research are adequate, the current research findings are based on self-report measures alone. Thus, other evaluation methods (for example, peer and parental report) should be used in later studies. Second, the study design was relational and does not determine a causal relationship. Third, the current research findings can only be generalized around Turkish university students. Therefore, these findings still need to be tested in other populations in the future, such as children, adolescents, and older adults. This study was done by creating an online scale because schools continue to study online, unlike most previous research. A larger sampling can be applied to ensure the reliability and validity of the study results.

## Author(s) Contribution Rate

In the study, the subject was determined by AP and KS. The entry of the study was made by AP, and the management by FK. FK made the findings of the article and AP made the discussion.

## Conflicts of Interest

There is no conflict of interest between the authors

## Ethical Approval (only for necessary papers)

Throughout the research process, research and publication were bore in mind. In this context, carried out within the scope of the permission obtained based on the Ethics Committee of X University Institute of Educational Sciences, Educational Sciences Department. The green light was given on 01/10/2020 and numbered 56785782-050.02.04-E.2000250261.

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