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The relationships between resilience of the adults affected by the covid pandemic in Turkey and Covid-19 fear, meaning in life, life satisfaction, intolerance of uncertainty and hope

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ABSTRACT

The current study was conducted to investigate the association between the resilience of the adults affected by the Covid-19 pandemic and Covid-19 fear, meaning in life, life satisfaction, intolerance of uncertainty, hope gender, psychological trauma history and the presence of the individuals diagnosed with Covid-19 around. A total of 929 adults with the mean age of 41.58 participated in the current study. Findings from the study indicated that hope, meaning in life, life satisfaction, not having the experience of psychological trauma positively and significantly predict resilience while intolerance of uncertainty and Covid-19 fear negatively and significantly predict resilience. The presence of people diagnosed with Covid-19 and gender on the other hand were found to not significantly predict resilience.

1. Introduction

In December 2019, scientists identified the coronavirus (Covid-19), whose origin is suspected to be zoonotic in Wuhan, China. In a few weeks, more than a hundred thousand cases and thousands of deaths were confirmed globally and their number has been increasing with each day (Garfin et al., 2020). The coronavirus Covid-19 outbreak is the most important global health crisis of our time and the biggest challenge we have faced since the Second World War. Countries try to slow the spread of the virus by testing and treating patients, tracking contacts, limiting travel, quarantining citizens and cancelling large meetings such as sports events, concerts and schools. Every day, people lose their work and income without knowing when their normal will return, or they are negatively affected by this epidemic psychologically (United Nations Development Programme, 2020). Covid-19 has brought about extremely difficult and stressful situations and events for the world and Turkey.

1.1. Resilience

The concept of resilience, which affects individuals in terms of coping with difficult situations, is often described in the literature as an ability to overcome the state of extreme distress and stress (Garmezy, 1991; Masten, 2001). Resilient people who have the ability to “survive”

and sustain their interaction with the environment despite all kinds of environmental problems are people who do not usually get frustrated in the face of stressful events, on the contrary, can quickly recover, and even get stronger and are able to get rid of troubles and adverse environmental conditions (Henderson & Milstein, 1996).

Three common points are expressed in various definitions of the concept of resilience. These are; a) risk and/or difficulty, b) positive adaptation, coping, competence and c) protective factors. In this case, resilience is “a phenomenon that occurs as a result of the pronounced interaction of protective factors associated with healthy adaptation and contributing to this adaptation process with existing risk factors” (Windle, 1999). It is observed that resilient individuals who can cope with difficulties, easily recover from difficult situations and are psychologically flexible possess some certain characteristics. Krovetz (1999) talks about four basic characteristics of resilient individuals. These characteristics are; (1) Social competence: Ability to create positive impressions in others and thus to establish positive relationships with both adults and their peers. (2) Problem solving skills: Skills necessary to ask for help from others and to plan activities to occur under one’s own control. (3) Autonomy: Ability of a person to possess his/her own identity, to behave independently and to establish control on his/her environment. (4) Having goals and sense of future: Sense of having some goals, educational expectations, hope and bright future.

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Within the concept of resilience, two main factors have been emphasized. The first one focuses on getting rid of stressful life events and is the ability to quickly balance and recover from stress to return to a healthy initial state. The second factor is sustainability. It can be expressed as the ability to sustain healthy reactions in other stressful situations as a result of giving healthy reactions to stressful life events (Reich et al., 2010). The American Psychological Association (2014) defines resilience as a process of adaptation to adversity, trauma, tragedy, threat and important stressors.

According to some authors, resilience refers to a dynamic development process that is associated with maintaining positive adaptation under life-threatening conditions (Luthar et al., 2000; Masten, 1999). According to Higgins (1994), resilient individuals are people who have positive relationships, are skilled in solving problems and have motivation to improve themselves. These individuals participate in social changes and activities, they are faithful; many have the ability to extract meaning and benefits from the troubles, traumas and worries in their lives. The existing research has revealed that resilience is associated with problem solving (Neenan & Dryden, 2012); stress and exhaustion (Hao et al., 2015); locus of control (Dunn & Brody, 2008); family support (White et al., 2008); social support (Nikmanesh & Honakzahi, 2016; Şahin Baltacı & Karataş, 2015); hope (Duggal et al., 2016); pessimism and positive affectivity (Tugade & Fredrickson, 2004) and life satisfaction (Akbar et al., 2014; Şahin Baltacı & Karataş, 2015); depression (Şahin Baltacı & Karataş, 2015), self-esteem and hopelessness (Karatas & Savi-Çakar, 2011), hope and life satisfaction (Shetty, 2015); life satisfaction, stress and social support (Yang et al., 2018).

1.2. Hope

According to the theory of hope put forward by Snyder (1995), hope is the process of thinking that includes two factors: agency (goal directed determination) and pathway (planning of ways to meet goals). The fact that the model is cognitive does not mean that it is free of emotions. Emotions reflect the perceived level of hope, and therefore people with high levels of hope are more positive, happier, optimistic and have better coping skills when reaching their goals. Seen from this perspective, hope is thought to be related to resilience.

The importance of hope is perhaps best understood by the consequences of its absence. Hopelessness can be a condition that causes depression and loss of desire to live. Hope is often an important component in dealing with stress, while hopelessness is expressed as a predictor of depression and suicidal ideation. In addition, hope is a positive state of motivation oriented to the target (Elliott & Oliver, 2002; Folkman, 2010). Research shows that hope is positively correlated with coping with stress (Folkman, 2010); meaning in life (Kim et al., 2005); pessimism, self-efficacy and well-being (Magaletta & Oliver, 1999). Given the delineations above, it can be concluded that people with high level of hope and meaning in life can more easily cope with difficult conditions of life and are more resilient.

1.3. Intolerance of uncertainty

Intolerance to uncertainty is defined as the tendency of the individual to think about the possibility of facing a threatening negative event regardless of the possibility of its actual occurrence. Uncertain information for these people is interpreted as threatening (Carleton et al., 2007). The current Covid-19 outbreak has increased uncertainty about economy, employment, finance, relationships and, of course, physical and mental health, and it challenges people even more because of the uncertainty it creates. People want to feel safe and have control over their lives. Fear and uncertainty can make people feel stressed, anxious, and weak. Everyone is different about being able to tolerate uncertainty in life. Some people like to take risks and live unpredictable lives, while others find the uncertainty of life profoundly frustrating (Freeston et al., 2020).

1.4. Covid-19 fear

Fear is an adaptable emotion that activates energy to deal with a potential threat. However, fear will not be compatible with the real threat, and this situation may have negative consequences both individually and socially. Covid-19 not only affects people's health and well-being, but also causes fear, stress and anxiety (Wang et al., 2020). Satici et al. (2020) found that covid-19 fear associated with psychological distress and life satisfaction in Turkey. Bakioglu et al. (2020), indicated that covid-19 fear related with intolerance of uncertainty, depression, anxiety and stress. It becomes more important for individuals to manage stress and fear in cases of multiple uncertainties. Some people more tend to experience fear and anxiety than others. It is stated that especially intolerance of uncertainty is associated with fear of coronavirus (Morris et al., 2019).

1.5. Meaning in life

Meaning in life includes global meaning and situational meaning. Global meaning refers to one's basic goals and beliefs about the world and himself/herself. Situational meaning is to find meaning to a particular life situation and its outcome (Park et al., 2008) Meaning in life is considered a positive variable as the facilitator of coping in life and the indicator of prosperity. Frankl (2018) stated that meaning in life has a positive effect on the ability to cope with the difficult conditions of life. In relation to his personal experiences in the concentration camp, Frankl also stated that people who protect their causes of life, hope for salvation are more resilient and cope with the negative conditions they experience more easily (Mascaro & Rosen, 2006). It is known that meaning is an important factors associated with the ability to cope with anxiety and negative emotions and thoughts caused by Covid-19 fear and with resilience.

Despair and destructive humour negatively predict presence of meaning in life and pessimism positively predicts presence of meaning in life (Şahin Baltacı and Tagay, 2015). In the literature, there are studies reporting positive correlations between meaning in life and coping with stress (Halama & Bakošová, 2009); resilience (Halama, 2014); hope (Feldman & Snyder, 2005); life satisfaction (Steger & Kashdan, 2007); psychological well-being (Temane & Wissing, 2006).

1.6. Life satisfaction

Life satisfaction is related to how the individual evaluates the difference between what he/she has and his/her expectations. In other words, it is the subjective evaluation of the individual regarding the extent to which his/her needs, goals and wishes are met. It is known that individuals who balance their life conditions and who have positive judgments about their standards and expectations are also highly satisfied. Research has revealed that life satisfaction is positively correlated with resilience (Morris et al., 2019); perfectionism and humour (Çalışandemir & Tagay, 2015); gender roles and self-esteem (Matud et al., 2014); pessimism (Collins et al., 2007). It seems that the level of resilience and life satisfaction are also related.

2. Study purpose

It is a safe conclusion that Covid-19 pandemic period can be highly difficult and stressful period for people. Turkey has continued its struggle against the Covid-19 pandemic. Although it seems that the pandemic in Turkey is under control, the Covid-19 outbreak has the potential to get out of control at any time. New normalization process has been initiated with the government decision since June 1, 2020 in Turkey.

Under these conditions, it is important to know the approach of the society to the phenomenon, to make plans and change the practices accordingly. Anxieties and fears from the Covid-19 pandemic persist,

and the important thing is to increase ways to deal with these anxieties and fears. As it is known, the uncertainty of the pandemic affects individuals negatively and it becomes more important for individuals to deal with negative situations in this period. At this point, it is thought that determining the relationships between hope, meaning in life, life satisfaction, Covid-19 fear, and intolerance to uncertainty, psychological trauma history and the presence of the individuals diagnosed with Covid-19 around and resilience is important in terms of planning mental health services for the society. Therefore, it will be important to identify the factors affecting adults' resilience during the pandemic. In this regard, the purpose of the current study is to investigate the association between the resilience of the adults affected by the Covid-19 pandemic and Covid-19 fear, meaning in life, life satisfaction, intolerance of uncertainty and hope, gender, psychological trauma history and the presence of the individuals diagnosed with Covid-19 around.

3. Method

3.1. Research model

The current study employed the cross-sectional research aimed to investigate the resilience of adults living in Turkey in relation to life satisfaction, meaning in life, intolerance of uncertainty, hope, Covid-19 fear, gender, psychological trauma history and the presence of the individuals diagnosed with Covid-19 around.

3.2. Study group

The study group of the current research is comprised of 929 adults with the mean age of 41.58. In the selection of the sample, the convenience sampling method, one of the non-random sampling selection methods, was used. The demographic features of the participants selected in this way are given below;

Of the participants, 52.50% (n = 488) are female adults and 47.50% (n = 441) are male adults and 20.10% (n = 187) of them are in the age group 25-30, 22.30% (n = 207) in the age group 31-37, 18.80% (n = 175) in the age group 38-44, 14.60% (n = 136) are in the age group 45-50, 18.90% (n = 176) are in the age group 51-60 and 5.20% (n = 48) in the age group 65 and over. While 18.20% (n = 169) of the participants have psychological trauma histories, 81.80% (n = 760) do not have such an experience. While 8.10% (n = 75) have people infected with Covid-19 around, 91.90% (n = 854) do not have.

3.3. Data collection tools

3.3.1. Personal information form

A personal information form was developed by the researchers in order to obtain information about the gender, age, level of education, psychological trauma history and the presence of people infected with Covid-19 around of the adults participating in the study.

3.3.2. Resilience scale for adults

The Resilience Scale for Adults was developed by Ryan and Calta-biano (2009). The scale was adapted to Turkish culture by Savi-Çakar et al. (2014). The scale consists of 25 items designed in the form of a five-point Likert scale. Higher scores taken from the scale indicate increasing level of resilience. The scale has five sub-dimensions (self-efficacy, locus of control, family and social networks) and a total score can be taken from the scale. The general internal consistency coefficient of the scale is 0.71. Sample items of the scale; "I can get through tough times", "I can control my own life" (Savi-Çakar et al., 2014).

3.3.3. Life satisfaction scale

The Life satisfaction Scale was developed by Diener et al. (1985). The scale was adapted to Turkish culture by Dağlı and Baysal (2016). The scale has 5 items designed in the form of a five-point Likert scale. Higher

scores taken from the scale indicate increasing level of life satisfaction. The scale is uni-dimensional. The internal consistency coefficient of the scale is 0.88. Sample items of the scale; "My living conditions are perfect", "I am satisfied with my life" (Dağlı & Baysal, 2016).

3.3.4. Meaning in life scale

The Meaning in Life Scale was developed by Steger et al. (2006). The scale was adapted to Turkish culture by Demirbaş (2010). The scale has 10 items designed in the form of a seven-point Likert scale. The scale has two sub-dimensions (searching for meaning in life and presence of life in meaning) and a total score can be taken from the scale. The general internal consistency of the Meaning in Life Scale is 0.86. Sample items of the scale; "I am aware of the meaning of my life", "I'm always looking for the purpose of my life" (Demirbaş, 2010).

3.3.5. Intolerance of uncertainty scale

The Intolerance of Uncertainty Scale was developed by Carleton et al. (2007). The scale was adapted to Turkish culture by Sarıçam et al. (2014). The scale has 12 items designed in the form of a five-point Likert scale. The scale has two sub-dimensions (future-oriented anxiety and debilitating anxiety) and a total score can be taken from the scale. The general internal consistency coefficient of the Intolerance of Uncertainty scale is 0.88. Sample items of the scale; "Unexpected events bother me so much", "I have to stay away from all uncertain situations" (Sarıçam et al., 2014).

3.3.6. Dispositional hope scale

The Dispositional Hope Scale was developed by Snyder et al. (1991). The scale was adapted to Turkish culture by Tarhan and Bacanlı (2015). The scale has 12 items designed in the form of an eight-point Likert scale. The scale has two sub-dimensions (agency and alternative pathways) and a total score can be taken from the scale. The general internal consistency of the scale is 0.86. Sample items of the scale; "A problem has many solutions", "I reach the goals I set for myself" (Tarhan & Bacanlı, 2015).

3.3.7. Covid-19 fear scale

The Covid-19 Fear Scale was developed by Ahorsu et al. (2020). The scale was adapted to Turkish culture by Satıcı et al. (2020). The scale has 7 items designed in the form of a five-point Likert scale. The scale is uni-dimensional. Higher scores taken from the scale indicate increasing level of Covid-19 fear. The general internal consistency coefficient of the Covid-19 Fear Scale is 0.85. Sample items of the scale; "I am very afraid of coronavirus", "My hands are sweating when I think of the coronavirus" (Satıcı et al., 2020).

3.4. Data collection

The application form of the current study was prepared by the researcher as Turkish online form with the help of the Google Forms application to collect data. Then this online form was shared in social networks widely used in Turkey and the data were collected in April 2020. In the introduction part of the online form, required explanations are made on the content and scales. The participants read and signed the consent form having the sentence "I have read the explanations. I have understood the purpose of the study. I accept to participate in this study" and the research process was continued with these voluntary participants. The data obtained from the scales administered to the participants were entered into SPSS 20.0 program.

3.5. Data analysis

Multiple linear regression analysis was used to analyze the data. Multiple regression analysis is a type of analysis used to predict the state of the dependent variable on the basis of two or more independent variables (predictor variables) related to the dependent variable.

Multiple regression analysis is used for two different research purposes; estimation and explanation. A theory is required to understand the process of criteria for explanation. Estimation is the best guide to develop measurements for variables (Jeon, 2015).

The assumptions of multiple linear regression analysis were tested before analysis. It was determined that the normality and linearity assumptions of multiple linear regression analysis were met. In order to test whether each variable satisfies the normality assumption, Kurtosis and skewness coefficients were checked. The Kurtosis and skewness coefficients were found to be within the reference range ranging from -1.0 to +1.0. Thus, it can be said that the data distributed normally (Çokluk et al., 2014).

In order to determine the outliers in the data set, univariate and multivariate outlier analyses were conducted. First, z test was conducted for univariate outlier analysis, as the sampling size is larger than 100, z score in the range between -4.0 and +4.0 was taken as the reference value (Mertler & Vannatta, 2005). A total of 22 cases having z score in the range between -4.0 and +4.0 were found to be univariate outliers and thus they were deleted and four other cases were determined through Mahalonobis distance as multivariate outliers and then were deleted (Tabachnick & Fidell, 2007).

Durbin-Watson coefficient was used to test autocorrelation. Durbin-Watson value was found to be 1.963 and this value is expected to be ranging between 1.5 and 2.5. In order to determine whether there is a multicollinearity problem, simple (paired) correlations between the variables were checked. As a result of the analysis, the paired correlation values between the variables were found to be lower than 0.90 (Tabachnick & Fidell, 2007). Moreover, The variance inflation factor (VIF) and condition index (CI) values were also checked to determine whether there is a multicollinearity problem in the data set; for all the items, VIF values were found to be lower than 10 and CI values were found to be lower than 30 (Field, 2009). Thus, it can be said that there is no multicollinearity problem between the variables.

Finally, in order to find answers to research questions, Multiple Linear Regression Analysis was conducted to determine the extent to which the participating adults' life satisfaction, meaning in life, intolerance of uncertainty, hope, Covid-19 fear, psychological trauma history and the presence of people infected with Covid-19 around predict their level of resilience. The categorical variables including gender, psychological trauma history and the presence of people infected with Covid-19 around were converted into dummy variables by assigning codes as 0 and 1 and they were prepared to be suitable for regression analysis. In this regard, the categories of being a male, not having psychological trauma history and the presence of people infected with Covid-19 around were coded as 1. All these statistical analyses were conducted by using SPSS 20.0 program and the significance level was set to be 0.05.

Table 1
Between-variables Pearson product-moment correlation coefficients.

Variables	\bar{X}	S	Cronbach alpha	1	2	3	4	5	6	7	8	9
1. Resilience	93.322	10.221	0.85	1								
2. Life satisfaction	16.421	3.822	0.88	0.473**	1							
3. Meaning in life	50.013	10.953	0.86	0.464**	0.444**	1						
4. Intolerance of uncertainty	36.822	8.664	0.89	-0.338**	-0.210**	-0.273**	1					
5. Hope	50.991	7.281	0.89	0.752**	0.494**	0.405**	-0.215**	1				
6. Covid-19 fear	18.453	5.602	0.87	-0.168**	-0.025	-0.151**	0.250**	-0.079*	1			
7. Gender	0.522	0.491		0.015	0.028	0.011	0.095**	0.033	0.205**	1		
8. Psychological trauma history	0.181	0.383		0.138**	0.161**	0.109**	-0.117**	0.067*	-0.094**	-0.163**	1	
9. The presence of people infected with Covid-19 around	0.082	0.272		-0.014	-0.012	0.021	-0.039	-0.018	0.080*	0.116**	0.075*	1

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

4. Results

Before conducting the regression analysis, in order to determine whether there is a multicollinearity problem between the dependent and independent variables, paired correlation coefficients were calculated and the results are presented in Table 1.

As can be seen in Table 1, there is a positive and significant correlation between resilience in adults and their life satisfaction, meaning in life, hope and psychological trauma history and a positive but insignificant correlation between resilience and gender. Moreover, a negative and significant correlation was found between resilience in adults and intolerance of uncertainty and Covid-19 fear and a negative but insignificant correlation between resilience and the presence of people infected with Covid-19 around.

The results of the multiple regression analysis conducted to determine whether life satisfaction, meaning in life, intolerance of uncertainty, hope, Covid-19 fear, gender, psychological trauma history and the presence of people infected with Covid-19 around significantly predict resilience in adults are presented in Table 2.

According to the results of the multiple regression analysis seen in Table 2, life satisfaction, meaning in life, intolerance of uncertainty, hope, Covid-19 fear, gender, psychological trauma history and the presence of people infected with Covid-19 around altogether significantly predict the level of resilience in adults and the model constructed for the regression seems to be significant ($R = 0.793$, $R^2 = 0.630$, $F_{(8,920)} = 195.440$, $p < .01$). All these variables in the constructed regression model have a large effect on the level of resilience in adults ($R^2 > 0.26$) (Cohen, 1988).

As can be seen in Table 2, life satisfaction, meaning in life, intolerance of uncertainty, hope, Covid-19 fear, gender, psychological trauma

Table 2
Results of the linear regression analysis conducted to determine the extent to which different variables predict resilience in adults.

Variables	B	β	t	p
Constant	47.249*	-	21.097**	0.000
Life satisfaction	0.172	0.065	2.623**	0.009
Meaning in life	0.116	0.125	5.287**	0.000
Intolerance of uncertainty	-0.158	-0.134	-6.149**	0.000
Hope	0.889	0.634	26.512**	0.000
Covid-19 fear	-0.123	-0.068	-3.175**	0.002
Gender	-0.729	-0.036	-1.704	0.089
Psychological trauma history	1.514	0.057	2.755**	0.006
The presence of people infected with Covid-19 around	-0.896	-0.024	-1.175	0.240

$R = 0.793$ $R^2 = 0.630$ $R^2_{ch} = 0.626$ $F = 195.440$ ** $df = 8/920$.
** p < .01.
* p < .05.

history and the presence of people infected with Covid-19 around together explain 63.00% of the total variance in the level of resilience in adults.

When the t-test results related to the significance of the regression coefficients are examined, it is seen that life satisfaction, meaning in life, hope and psychological trauma history are significant and positive predictors of the level of resilience in adults while intolerance of uncertainty and Covid-19 fear are significant and negative predictors of the level of resilience in adults. Gender and the presence of people infected with Covid-19 around aren't significant predictors of the level of resilience in adults.

According to the standardized regression coefficient (β), the order to the relative importance of the predictor variables in terms of predicting the level of resilience in adults is as follows; hope ($\beta = 0.634$, $t = 26.512$), intolerance of uncertainty ($\beta = -0.134$, $t = -6.149$), meaning in life ($\beta = 0.125$, $t = 5.287$), Covid-19 fear ($\beta = -0.068$, $t = -3.175$), life satisfaction ($\beta = 0.065$, $t = 2.623$) and psychological trauma history ($\beta = 0.057$, $t = 2.755$).

In light of these findings, it can be argued that hope, meaning in life, life satisfaction and not having psychological trauma experience will make positive contributions to resilience in adults while intolerance of uncertainty and Covid-19 fear will make negative contributions to resilience in adults.

5. Discussion

When the results of the current study are examined, it can be concluded that life satisfaction, meaning in life, intolerance of uncertainty, hope, Covid-19 fear, gender, psychological trauma history and the presence of people infected with Covid-19 around altogether significantly predict the level of resilience in adults and the model constructed for the regression seems to be significant. According to the findings of the current study, it can be argued that the resilience of the individuals having a high level of hope, meaning in life and life satisfaction and not having psychological trauma experience is higher and these variables positively and significantly predict resilience.

The period of pandemic is a relatively new process difficult to understand for people. Research to be carried out in this period is important to determine the effect of this situation on people. One of the most important results obtained from the current study is that individuals with more hope were found to be more resilient during the pandemic which includes difficult living conditions. Another variable that positively predicts resilience is meaning in life. This shows that adults who have high hopes and find meaning in their life have more resilience.

Wong (2012) determined that individuals with a high level of hope who find meaning in their lives under difficult life conditions cope well with these conditions and are more resilient. In addition, Wu (2011) states that hope and meaning in life encourage individuals to cope with difficult situations and also that hope is an emotion that affects the meaning in life in difficult life events. It is known that individuals with high levels of hope during fear periods also have high levels of resilience. According to the studies in the literature, it is seen that hope and meaning in life have a positive relationship with resilience in difficult periods of life. This seems to be in compliance with the findings obtained in the current study.

Life satisfaction is a reflection of the balance between individual wishes and the current state of the individual. In other words, the greater the gap between the level of individual wishes and the current state of the person, the lower the satisfaction (Pavot & Diener, 1993). Resilience is the person's ability to achieve biological-psychological-cognitive balance when confronted with dangerous conditions and this is associated with life satisfaction (Conner & Davidson, 2003). The individuals who are dissatisfied with their life will have negative perspectives of life and the problems they will encounter in their life. Therefore, it is an expected result that life satisfaction is positively associated with resilience. In addition, there are some studies revealing that resilience is

associated with self-esteem and hopelessness (Karatas & Savi-Çakar, 2011); psychological well-being (Ifeagwazi et al., 2014); life satisfaction (Akbar et al., 2014; Jokar, 2007; Şahin Baltacı & Karataş, 2015); meaning in life and hope (Halama, 2014; Kim et al., 2005); hope and life satisfaction (Shetty, 2015; Yang et al., 2018) and hope (Duggal et al., 2016).

People who can successfully cope with mild or moderate stress in childhood (for example, a friend's or a parent's disease) are also more resilient against other stress factors, which is expressed as stress vaccination (Feder et al., 2011). Children with a history of psychological trauma were found to have a lower level of resilience than those without (Cicchetti & Rogosch, 2012).

According to another result of the current study, there is a negative and significant relationship between the intolerance of uncertainty and fear of Covid-19 and resilience. These variables predict resilience negatively. As is known, people experience more stress in situations which they cannot control and predict. In other words, uncertainties about when something will happen, what it will be or what its results will be cause more stress in individuals, and hope is an important factor in coping with this process (Kirmani et al., 2015). Uncertainty increases fear, and these days when Covid-19 fear is common, individuals appear to be worried the most because of uncertainty (Garfin et al., 2020). People who are intolerant of uncertainty find uncertainty stressful and frustrating and believe that uncertainty is negative and should be avoided; thus, they experience difficulties in situations that create uncertainty. It is known that people experience uncertainty during the Covid-19 pandemic process, and in this case, individuals' resilience levels are expected to be low (Robichaud, 2013). Similarly, Lee (2018) revealed that individuals with high levels of intolerance of uncertainty have low levels of self-regulation skills, interpersonal relationships, positive tendencies and resilience. According to the results of the current study, there is a significant negative relationship between intolerance of uncertainty and Covid-19 fear and resilience and this result concurs with the literature.

6. Implications and limitations

Resilience is a multidimensional and complex structure and is a relatively new field of research. In the current study, it was aimed to identify the factors that can be particularly effective in dealing with difficult situations such as Covid-19 pandemic period and developing resilience and thus to provide guidance for future studies. On the basis of the results of the current study, it was concluded that in difficult periods such as Covid-19 pandemic period, people's finding meaning in their lives, having high levels of hope and life satisfaction positively affect the level of resilience while intolerance of uncertainty and Covid-19 fear negatively affect. For this reason, studies aimed at increasing the resilience level of individuals can be organized through trainings on hope, meaning in life and life satisfaction. In addition, since the presence of childhood psychological traumas negatively affects resilience, education to be given to families about raising their children will also be effective. The participants of the current study are adults; similar studies can be carried out with children and adolescents.

First, self-reported measure was used to collect data. Therefore, future research should examine the association between variables using different data collection approaches (e.g., quantitative). The findings obtained in the current study are limited to the study group researched and the pandemic period in which the data were collected. Further research should investigate whether the obtained results can be replicated in other populations to enhance the generalizability of the findings.

CRedit authorship contribution statement

Zeynep Karataş: Conceptualization, Methodology, Validation,

Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. **Özlem Tagay:** Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization.

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