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A Model of Well-Being to Protect Mental Health during COVID-19 Pandemic Process

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Abstract

This study aimed to examine the mediating role of hope in the relationship between psychological resilience and the psychological wellbeing of teachers at the beginning of the COVID-19 epidemic. A total of 1059 teachers serving in Turkey, 729 female (%68.8) and 330 male (%31.2), whose ages vary between 21 and 62 ($\bar{X}$=35.83; SD=9.17), participated voluntarily in this study. The brief resilience scale, dispositional hope scale, and psychological wellbeing scale were used for data collection. In this study, a structural model for the psychological wellbeing of teachers at the beginning of the COVID-19 epidemic was constructed. Testing the hypothetically determined model was carried out with the Structural Equation Modelling technique, and the significance of its indirect effects was assessed by bootstrapping analysis. As a result, a structural wellbeing model has been obtained for teachers to protect their mental health. It was proved that hope has a fully mediating role in the relationship between psychological resilience and wellbeing.

Keywords: COVID-19 pandemic, resilience, hope, psychological wellbeing, teacher

Introduction

The new type of disease, called COVID-19 by the World Health Organisation, spread worldwide in 2020. It has been accepted as a pandemic and acute respiratory syndrome with serious consequences (WHO, 2020). A large part of the world's population had to comply with the house restriction to prevent the spread of the virus. The unexpected spread of the virus has brought universal psychological consequences such as sensitivity, anxiety, and stress, according to the World Health Organisation (WHO, 2020). Previous studies on pandemics have shown that mental wellbeing can be heavily affected during a major international pandemic (Sim & Chua, 2004; Wu et al., 2009). However, research shows that after the pandemic process is over, the negative psychosocial effects of the pandemic may continue in the long term (Shigemura et al., 2020).

Studies examining the psychological effects of quarantine on individuals show that hysteria, anxiety, and stress may increase in society due to the loss of control (Rubin & Wessely, 2020). In addition, in the first phase of the pandemic process, parents' separation from each other due to uncertainty in the development of the disease, insufficient access to basic needs, financial losses, and the increased risk perception due to information pollution from media or wrong sources may cause these psychological symptoms to increase even more (Maunder et al., 2020; Brooks et al., 2020). Past epidemic outbreaks have shown that the quarantine process has sudden effects such as irritability, fear of getting infected or spreading viruses to family members, anger, confusion, frustration, loneliness, denial, anxiety, depression, and insomnia, and destructive effects such as suicide (Hawryluck et al. 2004). It has been observed that the suspicion of being infected with the virus and quarantined cases about their own health status increases; they may have recurrent obsessive symptoms, and they show signs of post-traumatic stress disorder due to prolonged quarantine periods (Brooks et al., 2020). As can be understood from all these effects, the pandemic process is a versatile and difficult chaos process to control.

Turkey also experienced great chaos, has begun to take quarantine measures, and people have tried to establish a new order in this chaos. At the beginning of this process, education, health, work, and social life conditions were rearranged, and a struggle to adapt to the new order began. Education, one of the most affected areas by the COVID-19 pandemic, has become an important issue in which one of the biggest chaos is experienced and needs to be resolved quickly. The Ministry of National Education quickly established a new order and started the distance education process on 16 March 2020. Students, parents, and teachers trying to adapt to the distance

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education process while keeping up with quarantine and social isolation faced various disadvantages in this process. On the one hand, teachers having responsibilities such as online lectures and sharing course content, have struggled with new experiences and have become vulnerable to the negative psychosocial risks of the pandemic (Kırmızıgül, 2020).

In recent studies, it has been emphasised that it is necessary to develop protective activities immediately by identifying the psychosocial risks of COVID-19 and support individuals by identifying the protective factors for mental health for different sample groups (Dubey et al., 2020; Sood, 2020; Seçer & Ulaş, 2020; Rajkumar, 2020). The current research was carried out with certain sample groups such as students, healthcare professionals, and patients diagnosed with COVID-19. It was found that anxiety and stress were high in these groups (Lai et al., 2020; Wang et al., 2020; Seçer & Ulaş, 2020). In addition, students continuing their education at home with the closure of schools have difficulties following their online lessons, keeping up with technology, and getting enough support from their parents in dealing with the stress caused by the pandemic (Dubey et al., 2020). On the other hand, it was challenging for teachers to balance their personal and professional lives. For instance, some of the teachers have other responsibilities like monitoring and supporting online learning activities of their children or dealing with the negative emotions related to family members or friends (MacIntyre, Gregersen & Mercer, 2020). It can be said that teachers have a great role in healthily managing this process.

Sharma and Chopra (2020) emphasise in their study the role of teachers in the COVID-19 process and certain life skills they should acquire during the pandemic and afterwards that there is a need for more research on teachers. They also argue that teachers should be supported with training on leadership, emotional intelligence, creative thinking, adaptation to change, and technological skills (Sharma & Chopra, 2020). Many studies related to teachers in the Covid-19 pandemic focused on the effects of the Covid-19 conversion to online teaching (MacIntyre et al., 2020; Talidong & Toquero, 2020; Zhou & Yao, 2020; Matiz et al., 2020). Substantial levels of stress were reported by teachers in the study, examining correlations with stress, wellbeing, and negative emotions of teachers dealing with online teaching in the pandemic (MacIntyre et al., 2020).

In addition to the fact that teachers should have certain life skills, it is thought that there is a need to examine the factors threatening their psychological health. Protective strategies providing wellbeing should be developed since the pandemic may cause long-term permanent undesirable behaviours. The chaos created by the pandemic may affect education and teachers for a long time. In this respect, this research aims to examine hope as a mediator in the relationship between teachers' psychological resilience and wellbeing during the COVID-19 pandemic. In this context, this study suggests a model of wellbeing for teachers in Turkey to protect their mental health during the COVID-19 pandemic.

Theoretical Framework

Psychological Resilience and Psychological Well-Being

Psychological resilience is one of the prominent concepts of positive psychology, and it has entered the literature with a wide variety of definitions. Psychological resilience is often defined as the ability of individuals to maintain a stable balance when they encounter traumatic or stressful events (Bonanno, 2004). According to the definition made by the American Psychologists Association (APA, 2010), psychological resilience is a *"good adaptation process to important stressors such as negativity, trauma, tragedy, threats, family and relationship problems, serious health problems, workplace and financial stressors"*. As can be understood from the definitions, to observe psychological resilience, the triggering factor creating a negative condition, trauma, or stress must occur (Wright et al., 2013). In the literature, risk factors revealing psychological resilience are examined as individual, familial, and environmental factors. It is stated that the situations frequently seen in environmental factors are traumatic situations in all societies, such as social violence, war, natural disasters, diseases, and nuclear disasters (Masten & Reed, 2002). From this perspective, it is seen that the COVID-19 pandemic is an important environmental factor affecting psychological resilience.

Experts emphasise that the COVID-19 epidemic has psychosocial effects worldwide. Symptoms like anxiety and panic that seriously threaten mental health may occur, and fear and panic will bring more than the damage caused by the COVID-19 virus in the long term (Zhou et al., 2020). Therefore, there is a need to support individuals to sustain their psychological wellbeing in this process and cope with the psychological problems experienced during and after the pandemic.

Studies on mental health are based on the medical model, which has focused on symptoms and treatments for problems over the years (Seligman and Csikszentmihalyi, 2000). But in recent years, the missing part of the traditional medical model focused on psychopathology has been completed with the effect of postmodernism, and the positive mental health dimension has taken its place in the definitions of mental health. This view, the basis

of positive psychology, explains mental health with positive functionality called wellbeing rather than explaining it with any illness or disorder (Keyes et al., 2002). The World Health Organisation (2001) also adopted a positive mental health perspective in the definition of mental health. They defined it as a state of wellbeing in which individuals can be aware of their abilities and capacities, cope with stressful situations they encounter, and work efficiently and contribute to society.

In the COVID-19 process, sustaining and improving psychological wellbeing has an important place in the mental health of individuals. Psychological wellbeing is a six-dimensional wellbeing model developed by Ryff (1989) based on the potentials and functionality of human nature (Ryan & Deci, 2001). These dimensions provide a comprehensive roadmap to develop individuals' potentials, including self-acceptance, autonomy, individual development, life purpose, positive relationships, and environmental domination (Ryff, 1989; Keyes et al., 2002). Studies on psychological wellbeing suggest that psychological wellbeing is closely related to various variables. Psychological wellbeing has been widely explained by associating with concepts such as happiness (Bradburn, 1969), spiritual power (Lawton, 1983), depression (Waterman, 1993), optimism (Souri & Hasanirad, 2011), psychological resilience (Nath & Pradhan, 2012), life satisfaction (Ozpolat et al., 2012), personality traits (Garcia, 2011), positive and negative affect (Garcia & Moradi, 2013), and self-esteem (Rosenberg, 1965).
There are some studies in the literature examining the relationship between psychological resilience and wellbeing. Some researchers state that individuals being psychologically well experience less psychological stress in stressful or traumatic situations, they can recover themselves easily and quickly, and their psychological wellbeing is also at a good level (He et al., 2013; Ryff & Singer, 2003; Sagone & Caroli, 2014). Similarly, many of the studies conducted show that psychological resilience has an effect of increasing psychological wellbeing and there is a positive, meaningful relationship between the two concepts (Allen, 2016; Altıntaş, 2019; Malkoç & Yalçın, 2015; Conversano et al., 2010; Ghadami & Khalatbari 2015; Karacaoğlu & Köktaş, 2016; McDermott et al., 2010; Pidgeon & Keye, 2014; Sagone & Caroli, 2014; Souri & Hasanirad 2011; Yağmur & Türkmen, 2017). Based on this, it can be said that psychological resilience has an important place in ensuring individuals' psychological wellbeing.

Hope as a Mediator

The concept of hope was first explained as the individual's focus on goals and the power the individual perceives towards achieving these goals. In this context, Snyder (2002), who argued that the basis of human behaviour is goal-oriented, first developed the theory of hope and defined the concept of hope as the perceptions individuals have towards achieving their goals. Scioli (2007) formulated the concept of hope as a complex emotion with cognitive, social, and spiritual dimensions by the theory of hope he developed. According to this theory, hope is an emotional network that includes biological, psychological, and social resources. It is also a holistic concept including attachment, domination, struggle, and spirituality, which facilitates the evaluation of wellbeing.

Individuals are expected to have some strong features as a mental health indicator with a positive psychology trend. From this perspective, wellbeing can be sustained by developing strong psychological aspects such as hope and psychological resilience in individuals (Seligman, 2002). It is thought that being hopeful is closely related to a positive mood, acts as a protective shield against compelling mental illnesses such as depression, and can activate psychological resilience while in a troubled state (Chang, 2003; King et al., 2006; Peterson et al., 2007). According to Park, Peterson, and Seligman (2004), positive personality traits such as hope, curiosity, gratitude, and love have a strong relationship with life satisfaction.

In addition, many studies in the literature claim that the concept of hope is a strong predictor of wellbeing (Charles, 2013; Toner et al., 2012). For example, Charles (2013) concluded that hope has a positive, meaningful relationship with wellbeing and psychological resilience in his study investigating the relationship between hope, psychological resilience, and wellbeing. In addition, some research has revealed that hope is an important resistance factor in maintaining psychological wellbeing (Lloyd & Hastings, 2009; Shorey et al., 2007). Rustoen, Cooper, and Miaskowski (2010) stated that patients' hope has an intermediary role in the relationship between psychological distress and life satisfaction in their research with cancer. Satıcı (2016) concluded that hope has a mediating role in the relationship between psychological vulnerability, psychological resilience, and subjective wellbeing in his research. Similarly, in a study examining the relationship between psychological resilience, hope, wellbeing, and burnout, it was found that those who did not show burnout symptoms had higher levels of psychological resilience, hope, and wellbeing (Vetter et al., 2018). Therefore, hope is thought to have an intermediary effect between psychological resilience and psychological wellbeing.

Purpose of the Present Study

This research provided a conceptual framework grounded in positive psychology concepts, multidimensional hope theory, psychological wellbeing and resilience, and introduced these concepts and their relationship. In light of the information above, a structural model was designed for the psychological wellbeing of teachers during the beginning of COVID-19 (during the lockdown in Turkey) and to examine hope as a mediator in the relationship between psychological resilience and psychological wellbeing. Accordingly, the research questions are:

(H1) Does psychological resilience positively predict hope?
(H2) Does hope positively predict psychological wellbeing?
(H3) Does psychological resilience positively predict psychological wellbeing?
(H4) Does hope to have a mediating effect on the relationship between psychological resilience and psychological wellbeing?

Research conducted on mental health and related concepts before and during the pandemic was examined. A model based on the relationship between teachers' psychological resilience and wellbeing levels and the mediating role of hope has not been found in the literature. In this respect, it is thought that this research will make an important contribution to future preventive and remedial activities. For this purpose, the hypothetical model created within the framework of the related literature is presented in Figure 1 below.

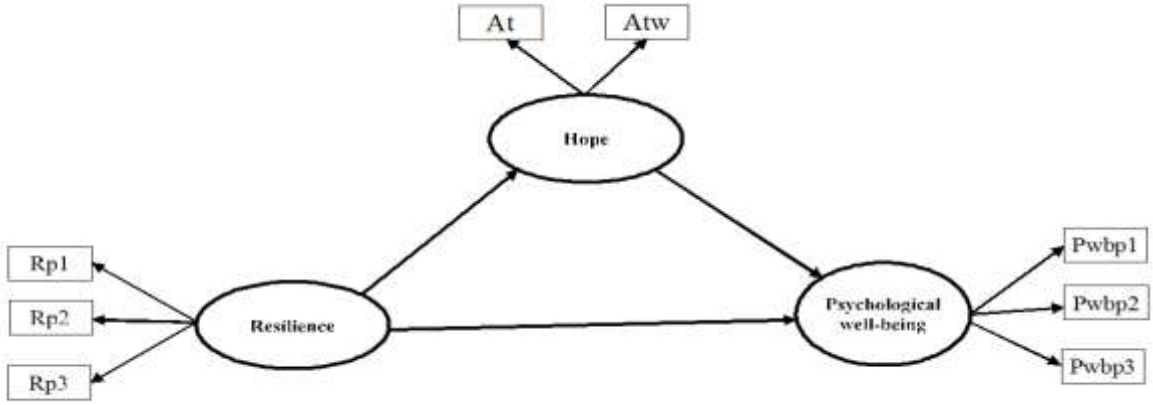

Figure 1. Hypothetical model

Method

Participants and Procedure

The survey was administered via Google Docs between 8 - 18 May 2020. The participants were reached via social media platforms and personal email contacts. The snowball sampling method was used to collect the data. Participants were required to respond to informed consent to take part in the study. At the end of the 10-day data collection, the survey was responded to by 1059 participants. They were not allowed to miss a value while filling out the survey questionnaires by using a feature of the Google Docs system. Through an online survey, a total of 1059 teachers serving in Turkey, 729 female (%68.8) and 330 male (%31.2), whose ages vary between 21 and 62 (X=35.83; SD=9.17), participated voluntarily in this study.

Data Collection Instruments

The Brief Resilience Scale, Dispositional Hope Scale, and Psychological Well-Being Scale were used in the data collection process.

Brief Resilience Scale (BRS): In this study, the Brief Resilience Scale (BRS) developed by Smith et al. (2008) and adapted to Turkish by Doğan (2015) was used. Its validity and reliability analyses were carried out. BRS consists of 6 items, and it is a one-dimensional 5-point Likert type measurement tool. BRS's score calculation is as follows: high scores after reverse scoring that individuals have high psychological resilience. The construct validity was made by Doğan (2015) with exploratory and confirmatory factor analysis. As the exploratory factor analysis results, a single factor measurement tool explaining 54% of the total variance was obtained. Factor loadings ranged from .63 to .79. As the results of the confirmatory factor analysis, goodness of fit values were found as $\chi 2$ / sd

(12.86 / 7) = 1.83, NNFI = 0.99; AGFI = 0.96; IFI = 0.99; GFI = 0.99; NFI = 0.99; CFI = 0.99, and RMSEA = 0.05. In the reliability analysis results, the internal consistency coefficient of (BRS) was found to be .83 (Doğan, 2015). The internal consistency coefficient obtained within the scope of this study is 0.84.

Dispositional Hope Scale (DHS): In this study, Dispositional Hope Scale (DHS) developed by Snyder et al. (1991), adapted to Turkish by Tarhan and Bacanlı (2015), was used. Its validity and reliability analyses were carried out. DHS is a two-dimensional 8 point Likert type measurement tool. These dimensions are alternative ways of thinking and actuating thinking. The DHS's score calculation is as follows: high scores indicate that hope levels have increased. Construct validity was examined by exploratory and confirmatory factor analysis. A two-factor structure that explains 61% of the total variance was obtained in the exploratory factor analysis. As a result of confirmatory factor analysis, goodness of fit values were revealed as NNFI = .94; AGFI = .92, GFI = .96; RFI = .90, CFI = .96, and RMSEA = .077. The internal consistency reliability analysis findings showed that the DHS's internal consistency coefficient was 0.84 (Tarhan & Bacanlı, 2015). The internal consistency coefficient obtained within the scope of this study is 0.91.

Psychological Well-Being Scale (PWBS):
In this study, the Psychological Well-Being Scale (PWBS) developed by Diener et al. (2009), adapted to Turkish by Telef (2013), whose validity and reliability analyses were performed, was used. PWBS has 8 items and is a one-dimensional 7-point Likert type measurement tool. In the calculation of the PWBS score, high scores mean that individuals have high psychological wellbeing. Construct validity was evaluated by Telef (2013) with exploratory and confirmatory factor analysis. As a result of the exploratory factor analysis, a single factor structure that explains 41.94% of the total variance was obtained. As a result of confirmatory factor analysis, goodness of fit values were found as $\chi 2$/sd (92,90/20= 4.64); NFI= 0.94; CFI= 0.95; RFI= 0.92; IFI= 0.95, and RMSEA= 0.08. In the reliability analysis findings, the Cronbach alpha coefficient was 0.80 (Telef, 2013). The internal consistency coefficient obtained within the scope of this study is 0.89.

Validity and Reliability Analysis of Measures within the Current Study

In the study, the reliability analysis of the measurements was examined with an internal consistency coefficient. In addition, to ensure the study's validity, the construct validity of the scales used in the measurements were taken into consideration. At this point, construct validity was evaluated by the confirmatory factor analysis technique. Table 1 below shows the internal consistency coefficients regarding the reliability and fit indices for confirmatory factor analysis.

Table 1. Results for validity and reliability analysis of measures

Parameter	BRS	DHS	PWBS
x^2/sd	4.01	3.40	4.81
RMSEA	.05	.04	.06
GFI	.99	.98	.98
CFI	.99	.99	.98
AGFI	.97	.97	.96
TLI	.98	.98	.97
Cronbach's Alpha	.84	.91	.89

Note. BRS: Brief Resilience Scale; DHS: Dispositional Hope Scale; PWBS: Psychological Well-Being Scale

Data Analysis

Preliminary analyses such as normality, homoscedasticity, and multicollinearity were performed before data analysis. After preliminary analysis, the data were analysed by two-step structural equation modelling (Kline, 2015). The measurement model was tested first; then, the structural model was tested. The maximum likelihood estimation technique was used. In addition, chi-square ($\chi 2$), $\chi 2$/sd ratio, CFI, TLI, GFI, NFI, and RMSEA fit index values were used in this study. $\chi 2$/sd ≤ 5; CFI, TLI, GFI and NFI $\geq .95$; RMSEA $\leq .60$ was determined as a reference point (Hu & Bentler, 1999).

Since psychological resilience and wellbeing scales consist of a single dimension, the parcelling method created virtual factors in structural equation modelling. The parcelling method assigns the scale items to the parcels based on the item-total correlation values within the framework of the determined parcel number. With this method, three parcels were produced for the implicit variables: psychological resilience and psychological wellbeing.

Thus, the reliability of the measurements is increased by decreasing the number of variables observed with the parcelling method, and it helps the data to show normal distribution. (Alhija & Wisenbaker, 2006).

A mediation test was carried out, taking into account the assumptions of Baron and Kenny (1989). Finally, the significance of its indirect effects was evaluated by bootstrapping analysis (Shrout & Bolger, 2002). At this point, bootstrap coefficient, lower and upper limit confidence intervals were obtained by creating 10000 resampling with bootstrapping analysis. As a result of the bootstrapping analysis, when the lower and upper limits in the confidence interval do not cover zero, their indirect effects are significant (Hayes, 2017).

Results and Findings

Preliminary Analysis

In the preliminary analysis section, the normality, homoscedasticity, and multicollinearity assumptions were evaluated. In addition, descriptive statistics and bivariate correlations analysis were carried out. In this context, for the normality assumption, kurtosis and skewness coefficients were first examined. It was found that the kurtosis and skewness coefficients of the seven variables in the study were below +/- 1.5, but the kurtosis coefficient of the Pwbp2 variable was 2.59. These conditions confirmed the normality assumption of distribution (Tabachnick & Fidell, 2007). In addition, the Levene test was used to assume the covariance of the data. In the Levene test results, it was found that the level of significance was higher than p> .05 in all variables except Awt. In this case, the covariance assumption of the data has been proved. Finally, the assumption of multicollinearity was examined. Accordingly, bivariate correlation coefficients, VIF (variance inflation factor), and tolerance values were examined. The bivariate correlation coefficients are suggested to be lower than .90, tolerance values to be higher than .10, and VIF values to be lower than 10 to meet this assumption (Kline, 2015). In the current data set, the bivariate correlations ranged between .27 and .72, tolerance values ranged between .41 and .52, and VIF values ranged between 1.89 and 2.39. Thus, all the bivariate correlations, tolerance, and VIF values satisfied the suggested criteria and showed that the multicollinearity assumption was met. Table 2 below presents the means, standard deviations, skewness, kurtosis, and bivariate correlations values.

Table 2. Means, standard deviations, skewness, kurtosis and bivariate correlations

Variable	1	2	3	4	5	6	7	8
(1) Rp1	1							
(2) Rp2	.69	1						
(3) Rp3	.57	.64	1					
(4) Awt	.39	.43	.48	1				
(5) At	.30	.36	.43	.67	1			
(6) Pwbp1	.37	.38	.47	.55	.61	1		
(7) Pwbp2	.29	.29	.40	.57	.59	.71	1	
(8) Pwbp3	.27	.27	.36	.51	.51	.71	.72	1
M	6.91	7.07	7.00	25.75	24.72	16.05	17.32	11.19
SD	1.97	1.83	1.73	4.50	4.48	3.45	2.70	2.13
Skewness	-.19	-.28	-.11	-.79	-.74	-.78	-.1.14	-.91
Kurtosis	-.59	-.20	-.36	.81	.77	.68	2.59	.92

**Note. ***p<.01; Rp1, Rp2, Rp3= Parcels of resilience; Awt: Alternative Ways Thinking; At: Actuating thinking; Pwbp1, Pwbp2, Pwbp3= Parcels of psychological well-being. All correlations is significant at the .01 level.

Testing Structural Equation Modelling

Testing the Measurement Model

In the first stage of structural equation modelling, the measurement model was tested. The measurement model consists of three implicit variables (psychological resilience, hope, and psychological wellbeing) and eight observed variables. As a result of the measurement model, it is seen that the standardised factor loads of the observed variables related to all implicit variables in the model vary between .66 and .91, and all of them are statistically significant. Since goodness of fit indices are found as [$\chi 2$ (15, 1059) = 68.74, $\chi 2$/sd = 4.58, p < .01; CFI = .99, TLI = .98, GFI = .99, NFI = .99; RMSEA = .06 90% CI (.05, .07)], the measurement model has been

proved to be well fit and validated. Table 3 below shows the factor loads, standard errors, t-values, and explained variances of the measurement model. After the measurement model was verified, the structural model was tested.

Table 3. Factor loadings, standard errors, t-values, and r^2 for the measurement model

Latent Variable and Measurement	Unstandardized Factor Loadings	SE	Standardized Factor Loadings	t	R^2
Resilience					
Rp1	0.85	0.04	0.66	17.36*	0.43
Rp2	0.89	0.04	0.74	19.13*	0.55
Rp3	1	-	0.88	-	0.77
Hope					
At	1	-	0.83	-	0.69
Awt	0.99	0.03	0.81	26.74*	0.66
Psychological well-being					
Pwbp1	1.87	0.07	0.91	26.87*	0.83
Pwbp2	1.47	0.05	0.91	26.89*	0.83
Pwbp3	1	-	0.79	-	0.62

Note. All *t* values were significant. p<.01; SE: Standard Error; Rp1, Rp2, Rp3= Parcels of resilience; at: Actuating thinking; Awt: Alternative Ways Thinking; Pwbp1, Pwbp2, Pwbp3= Parcels of psychological well-being.

Testing the Structural Model

When the structural model was tested, the goodness of fit indices found as [$\chi2$ (15, 1059) = 68.74, $\chi2$ / sd = 4.58, p <.01; CFI = .99, TLI = .98, GFI = .99, NFI = .99; RMSEA = .06 90% CI (.05, .07)] and were at an acceptable level. According to the goodness of fit indices, the data proved to fit well with the model. The path coefficients and factor loads for the tested model are shown in Figure 2 below. Since the coefficient of the path from psychological resilience to psychological wellbeing was not statistically significant (β=0.06, p>0.05), this path was removed from the model. The model was re-tested and the goodness of fit indexes were determined as [$\chi2$ (16, 1059) = 71.40, $\chi2$/sd = 4.46, p < .01; CFI = .99, TLI = .98, GFI = .98, NFI = .99; RMSEA = .06 90% CI (.04, .07). While the coefficient of the path from psychological resilience to psychological wellbeing was significant (β=0.50, p<0.05) when the effect of hope was eliminated in the model, it was found that it was not significant when hope was added to the model. This finding proves that hope has a fully mediating effect in the relationship between psychological resilience and wellbeing considering the mediation effect assumptions of Baron and Kenny (1989). Finally, it is necessary to clarify the meanings of model fitness coefficients and the standardised values of the model and the direct, indirect, and mediation relations. The effect size of the coefficients in the developed model was also considered in the evaluation of the model, shown in Table 4 below.

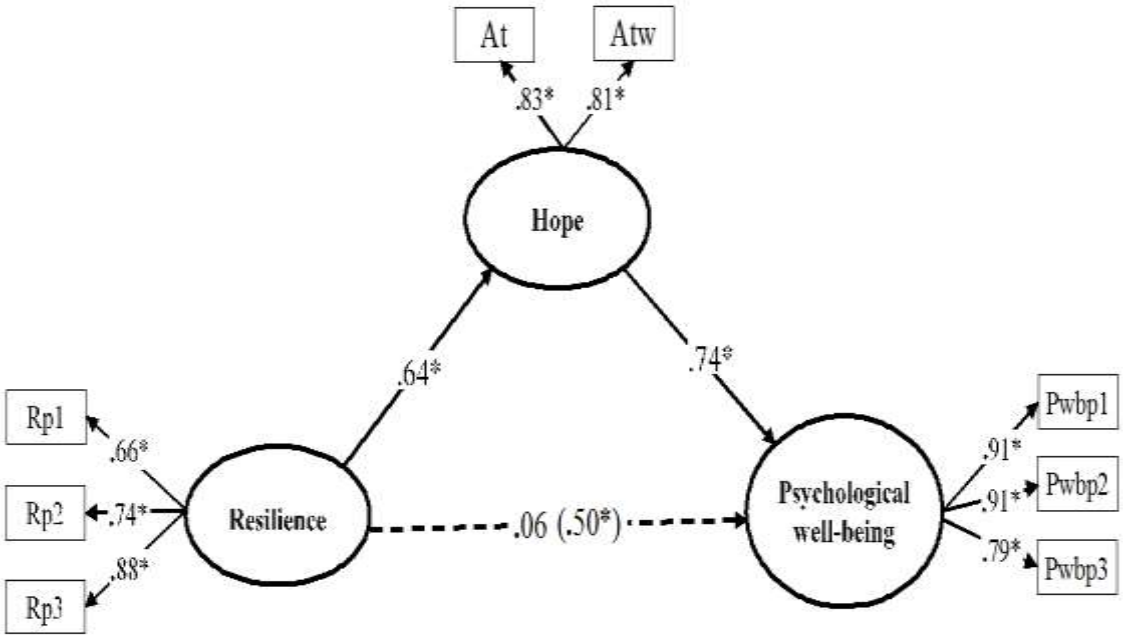

Figure 2. Standardized path coefficients of the structural model

Note. *p<.01, SE: Standard Error; Rp1, Rp2, Rp3= Parcels of resilience; At: Actuating thinking Awt: Alternative Ways Thinking; Pwbp1, Pwbp2, Pwbp3= Parcels of psychological well-being

Table 4. Evaluation of the final model

Model pathways	Standardized Coefficients	Effect Size
Direct effect		
Hope→Psychological Well-Being	0.74	High
Resilience →Psychological Well-Being	0.06	Low
Resilience →Hope	0.64	High
Mediator Effect		
Resilience →Hope →Psychological Well-Being	0.47	Moderate
Total Effect		
Resilience →Psychological Well-Being	0.53	High

Table 4 above shows the standardised path coefficient of independent variables on psychological wellbeing. Kline (2015) classifies path coefficients effect size as low below .10, medium below .30, and high above .50. According to this, the strongest predictor in the model is hope. A one-unit increase in hope increases psychological wellbeing by .74. The second predictor in the model is resilience. A one-unit increase in resilience quality increases psychological wellbeing by .06 points. The mediating effect for hope between resilience and psychological wellbeing in the model is 0.47. Based on this, the standardised total effect size of resilience quality on psychological wellbeing is 0.53.

Boottsrapping Process

Bootstrapping analysis with 10,000 resamplings was conducted to provide additional evidence of whether teachers' hope has a significant mediating role between psychological resilience and wellbeing. The coefficient for the indirect effect resulting from this bootstrapping analysis and the confidence intervals for this coefficient is given in Table 5 below.

Table 5. Bootstrap estimates of ındirect effects

Model pathway	Effect	95% CI	
		Lower	Upper
Indirect effect			
Resilience →Hope →Psychological Well-Being	.47	.40	.56

Note. Bootstrapping process was confirmed with 10.000 bootstrap samples. *p<.05

Considering the bootstrapping coefficient and the confidence intervals of this coefficient presented in Table 5 above, it is seen that the confidence intervals of the indirect path coefficient of hope between psychological resilience and wellbeing do not include zero; in other words, it is meaningful (b = .47, 95% CI= .40, .56). When all these results are evaluated, teachers' hope proves that they play a fully mediating role between psychological resilience and wellbeing. As a result of the evaluation of the variances explained in the model, it is determined that the psychological resilience variable explains about 41% of the hope variable and that psychological resilience and hope variables explain approximately 61% of the psychological wellbeing variable

Discussion

It is known that the COVID-19 pandemic affecting the whole world and causing many casualties negatively affects the psychological wellbeing of individuals and causes many psychological problems (Prime et al., 2020; Zhou et al., 2020). Dodge et al. (2012) define wellbeing as a state of balance between available resources and challenges. Psychological resilience is required (Rutter, 1985) to provide the necessary balance for wellbeing and benefit from resources in the face of troubles. The concept of hope, whose mediating role between psychological resilience and wellbeing was examined in this study, is accepted as a basic resource that helps people cope with life difficulties (Kylma, 2005) and a power that supports the maintenance of their wellbeing (Holdcraft & Williamson, 1991; Snyder et al., 1991). In this context, this study aimed to examine hope as a mediator in the relationship between psychological resilience and psychological wellbeing in a study group consisting of teachers at the beginning of the COVID-19 epidemic.

The results show a fully mediating role of hope in the relationship between psychological resilience and wellbeing. In other words, the fact that teachers have high feelings of psychological resilience enables them to experience higher hope, which increases their psychological wellbeing. Noddings (2005) explained that the happiness of a

teacher could affect the classroom climate and, therefore, students. According to Barker and Martin (2009), happy teachers teach students better. However, in a study, a significant positive relationship was found between the psychological wellbeing of teachers and students. A significant negative relationship was found between the psychological wellbeing of teachers and the psychological distress levels of students (Harding et al., 2019). Therefore, the high psychological wellbeing of teachers in this epidemic is important for themselves and their students.

This research showed that all of the hypotheses established for the research were confirmed and that psychological resilience and hope had significant positive relationships with psychological wellbeing. Although studies deal with hope as a mediator in the relationship between psychological resilience and subjective wellbeing (Ghavidel & Zarei, 2018; Satıcı, 2016), they did not focus on psychological wellbeing as a construct. Nevertheless, previous studies showing that psychological resilience (Harding et al., 2019; Keye & Pidgeon, 2014; Malkoç & Yalçın 2015; Mayordomo et al., 2016; Souri & Hasanirad, 2011) and hope (Charles, 2013; Faso et al., 2013; Toner et al., 2012; Vacek et al., 2010; Yeung et al., 2015) predict psychological wellbeing, support the results of this research. Additionally, our hypothesis that psychological resilience predicts hope has also been confirmed.

Scioli (2007) defines the concept of hope as a protective factor for psychological resilience and a structure that supports wellbeing in the multidimensional hope theory he has developed. Similarly, Horton and Wallander (2001) revealed that hope functions as a psychological resilience factor against psychological distress in their study. According to Seligman and Csikszentmahalyi (2000), the two pioneers of the positive psychology movement, psychological wellbeing can be improved by increasing hope and psychological resilience. The findings of this research are in line with previous studies examining the relationship between these structures.

Conclusion

This study reveals the mediating role of hope in the relationship between psychological resilience and psychological wellbeing for a group of teachers who work in different branches and levels in Turkey. This study aiming to determine the factors that will contribute to psychological wellbeing provides a model of wellbeing for researchers, practitioners, and decision-makers to protect teachers' mental health during and after the pandemic.

Limitations

There were some limitations to this study. First, we conducted the study thoroughly online during the COVID-19 pandemic. Therefore, it was difficult to control the side effects. Secondly, this study was conducted only via a quantitative method; however, qualitative research methods would be helpful to understand the protective needs of teachers' wellbeing. Thirdly, the study participants are composed only of the population who have a suitable electronic device for completing the instruments; therefore, those without suitable electronic tools have been eliminated from the study.

Recommendations

Some suggestions have been made for further research within the framework of the findings of this study. Snyder (2002) suggested that the theory of hope can be applied to different segments of society on a larger scale to reduce risk and instil hope against despair. According to Vander Weele et al. (2020), positive psychological conditions such as a sense of purpose, a feeling of life satisfaction or optimism are associated with physical and mental wellbeing. Based on this, researchers, healthcare professionals, decision makers, and policy makers should first evaluate the protective and healing effects of psychological resources such as psychological resilience and hope against all psychological disorders occuring during the COVID-19 pandemic. Secondly, positive psychology practices based on psychological sources such as psychological resilience, hope, and psychological wellbeing can be applied nationally and locally to interfere with the psychological problems caused by the COVID-19 pandemic. These interventions can be carried out through online applications to eliminate the risk of COVID-19 contamination and reach more people in less time. Online interventions were successfully carried out in China during the COVID-19 pandemic (Liu et al. 2020). For this purpose, different online tools like Online Photovoice (OPV) can examine the main three concepts through qualitative and/or mixed methods. Finally, to increase the psychological wellbeing of teachers, psycho-education programs can be offered within the scope of in-service training. These programs should have some modules such as psychological resilience, hope, and psychological wellbeing.

Acknowledgements or Notes

Compliance with Ethical Standards

All procedures performed in studies involving human participants were in accordance with the ethical standards and the Helsinki Declaration and its later amendments or comparable ethical standards. The authors declare that they have no conflict of interest. Informed consent was obtained from all participants included in the study. We did not receive any financial support for the research, authorship, and/or publication of this article.

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