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# Loneliness and Psychological Distress: A Mediating Role of Meaning in Life during COVID-19 Pandemic

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## Abstract

The COVID-19 pandemic represents a health crisis with a high amount of loneliness, which in turn may be associated with negative mental health outcome like psychological distress. This chapter aimed to investigate if meaning in life mediated the effect of loneliness on symptoms of psychological distress. A young adult sample (N = 605, 75.7% women) completed the measures of loneliness, psychological distress, and meaning in life. The results indicated that meaning in life mediated the relations between loneliness and psychological distress symptoms. This relation was significant at low, medium, and high levels of meaning in life. The study shows that experience of loneliness is associated with symptoms of psychological distress. Level of meaning in life differentiates the direct and indirect effect of loneliness on psychological distress. Knowledge about the effect of loneliness in response to a health crisis is important for developing treatment and prevention strategies for loneliness, psychological distress, and meaning in life.

**Keywords:** COVID-19, loneliness, psychological distress, meaning in life, Turkish youth

## 1. Introduction

On 11 March 2020, the World Health Organization (WHO) declared the COVID-19 pandemic [1]. Currently, the world experiences an unprecedented scenario and disruptions from the pandemic are not only mirrored in daily activities but also in physical and mental health, social security, economy, environment, and other aspects of the society. As of March 21, 2021, more than 122.5 million people around the globe have been infected with the COVID-19 and over 12.7 million deaths have been reported because of the virus. In Turkey, there have been nearly 3 million confirmed cases of COVID-19 with approximately 30 thousand deaths [2].

Unlike to previous infectious diseases like MERS-CoV emerged in the fall of 2012 in the Arabian Peninsula and SARS-CoV occurred in the fall of 2002 in the Guangdong Province, China, global efforts to develop a vaccine have been relatively very successful in record-breaking time to treat and prevent the COVID-19. These accomplishments have not been reflected by similar progresses in applying the principles of mental well-being within health services. While mental health

professionals know a lot about treating mental illness, they know far less concerning promoting of well-being and mental health during the pandemic. The accumulating evidence documented that the above-mentioned pandemic has adversely affected mental health of general population [3]. Therefore, it is important to identify psychological factors to promote psychological health. In this regard, human strengths become focal point of research. In this chapter, I attempted to examine how meaning in life functioned as a mitigating factor in the relationship between loneliness and psychological distress during the COVID-19 pandemic.

### **1.1 Psychological distress**

The current pandemic can be a major stress factor affecting psychological health of people around the world [4]. Psychological distress is a common emotional experience that people are likely to report in adverse life situations. Psychological distress can be a serious mental health issue. If untreated, it can cause adverse mental health challenges such as depression and chronic anxiety [5]. Given the high fear, uncertainty, stress, and unfriendly environment caused by COVID-19 pandemic, people are at risk of developing symptoms of mental health problems. COVID-19 stress has found to be positively associated with depression, anxiety, and stress [6]. A high prevalence of depression, anxiety, stress as well as worry and severity associated with COVID-19 pandemic has been reported [7].

A wide range of critical protective factor for psychological distress have been identified. For example, psychological resources like meaning in life, hope, optimism, resilience, and happiness functioned important roles in reducing the negative psychological impacts of pandemic on mental health and well-being [4, 8, 9]. Another study reported that female gender, older age, being widowed, having lower education level, being unemployed or experiencing financial difficulties, lower perceived social support, and higher degrees of stress were found to be associate with psychological distress [10]. Mental health services and research should be conducted to those with a pre-existing mental health conditions and groups determined as at high risk for high in psychological distress. It is vital for mental health providers to develop intervention and prevention strategies to help people coping with the distress and promote psychological health and positive psychological resources in difficult times.

### **1.2 Loneliness**

Loneliness is one of the negative feelings that people experience during the COVID-19 pandemic. Loneliness is characterized as psychological state represented by a sense of uselessness and emptiness, lack of control, and personal threat [11]. Even though loneliness is an inescapable experience across the lifespan, a considerable body of research, including cross-sectional and longitudinal studies, have indicated that loneliness is an important psychological problem for a substantial portion of the population, experienced more in the young and in women [12]. In a nationally representative sample of 38,217 UK adults during a strict lockdown, Bu, Steptoe and Fancourt [13] identified four classes of loneliness ranging from low to high. In the first a few weeks of lockdown in the UK, levels of loneliness heightened in the highest loneliness group, reduced in the lowest loneliness group, and remained relatively stable in the middle two groups. In their study, younger adults, female gender, individuals with low income, the economically inactive, and people with mental health problems were more likely to experience loneliness at the highest level relative to the lowest. In addition, close friendship or higher social support, living with others or in a rural area can function as protective factors.

Although limited, several longitudinal studies have also been conducted to longitudinally examine the correlates of loneliness and psychological distress in individuals exposed to the COVID-19 lockdown. For example, in a large sample of Spanish adults, Losada-Baltar and his colleagues [14] demonstrated that changes in loneliness indicated a linear longitudinal trajectory over time, while changes in psychological distress indicated a U-shaped association over time. In the same study, older people reported lower level of psychological distress because they tend to be more resilient to protect their mental health in stressful situations. Adolescents and younger adults may be more vulnerable to adverse effects of psychological distress [15]. Another longitudinal study conducted during the COVID-19 pandemic reported that loneliness has a predictive role in explaining higher depression, anxiety, and stress though time. Emotion dysregulation was found to mediate the longitudinal association between loneliness and both depression and stress, but not between loneliness and anxiety [16]. Loneliness can be considered a critical marker to vulnerability of psychopathology, particularly in the face of adversity. Therefore, it is important to provide insights regarding the underlying mechanism between loneliness and possible psychological outcomes like psychological distress. In this regard, psychological strengths, and resources (e.g., meaning in life) can play important roles in mitigating the impact of loneliness on psychological health during coronavirus pandemic.

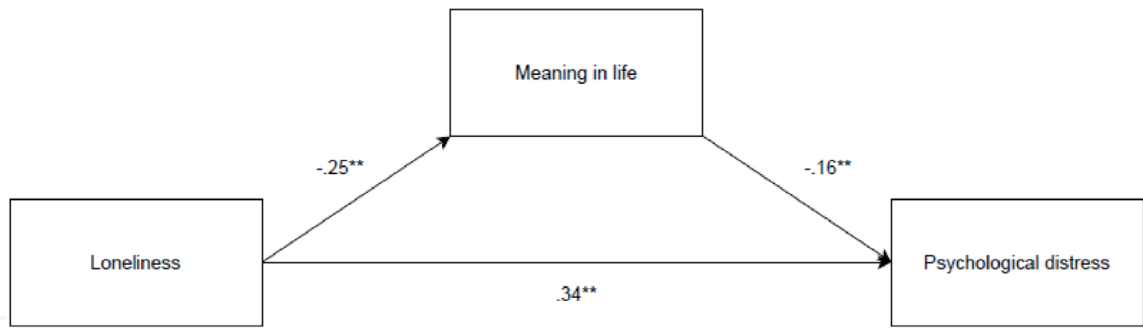
### **1.3 Meaning in life**

The concept of meaning in life has become a topic of scientific examination. Meaning-making model proposes that situational meaning is based on the context of a stressful situation and reflects beliefs regarding this particular stressful situation [17]. Evidence suggests that meaning in life can protect mental health and minimize risk of diseases [18].

The literature is consistent in indicating that meaning in life is a robust predictor of well-being and mental and physical health. A wide body of research suggests that meaning in life has a favorable effect on many mental health outcomes including greater positive affect, lower depression, anxiety, and negative affect [19]. Meaning in life was found to be positively associate with adaptive religious coping and negatively associate with maladaptive religious coping and loneliness in the context of coronavirus pandemic [19, 20]. Meaning in life shows not only importance for well-being and mental health outcomes, but also for physical health. In a systematic review and meta-analysis study including 66 studies and a total of 73,546 participants, meaning in life was found to be an important predictor of physical health with a week-to-moderate effect size [21]. Given the influence of meaning in life on psychological health outcomes, it is critical to understand potential intervention (in this case meaning in life) in enhancing psychological health of people in the face of adversity.

In this chapter, I focused on the link between loneliness and psychological distress in times of health crisis and explore how meaning in life could be more effective to promote psychological health. My central argument is that mental health professionals will need to prioritize human strengths (e.g., meaning in life as presented in this chapter) to promote well-being and mental health rather than treating illnesses.

Most previous research focused on the associations between psychological distress, loneliness, and meaning in life and examining the factors affecting the three. However, studies focus on the mediating effect of a certain factor are limited. Such research in Turkey is still in its infancy particularly in the context of pandemic. The purpose of the study is to examine the mediating role of meaning in life in the



**Figure 1.** Mediation model indicating the mediating effect of meaning in life in the relationship between loneliness and psychological distress.

association between loneliness and psychological distress. Based on the findings of earlier research and theoretical background, I hypothesized that loneliness would have a significant effect on meaning in life. Loneliness and meaning in life would have significant effects on psychological distress. Furthermore, meaning in life would mediate the association between loneliness and psychological distress. The hypothetical model of the relationship between loneliness, meaning in life, and psychological distress is presented in **Figure 1**.

## 2. Method

### 2.1 Sample characteristics

The sample comprised 605 adults (75.7% women) drawn from general public in Turkey. Participants ranged in age between 18 and 58 years ( $M = 26.5$ ,  $SD = 9.7$ ). With regard to the educational level, the majority of participants were university graduate (74.4%), followed by high school and below graduate (16.1%) and post-graduate (9.5%). Concerning perceived socio-economic level, 80.7% of participants reported that they had average economic level, followed by below average (10.6%), and above average (8.8%). Of the participants, 3.5% were confirmed positive with COVID-19.

### 2.2 Measures

#### 2.2.1 Psychological distress

Psychological distress was assessed by the Kessler Psychological Distress Scale (K10; [22]), which includes 10 items, with each being scored from 1 (none of the time) to 5 (all of the time). The total score varies from 10 to 50, with higher scores showing greater severity in distress. The scale has excellent internal consistency reliability estimates among Turkish adults [23]. Excellent internal consistency reliability estimate ( $\alpha = .93$ ) was reported in this study. Internal consistency reliability estimate was .72 in this study.

#### 2.2.2 Loneliness

Loneliness was measured by ULS-8 Loneliness Scale [24], which consists of 8 statements, including 2 positively worded statements (Item 3: “I am an outgoing person,” and Item 6: “I can find companionship when I want it”). Each item is answered a 4-point Likert frequency score, with rating choices ranging from 1



(never) to 4 (always). The total score is between 8 to 32 points, with higher scores indicating a higher degree of loneliness. Satisfactory reliability and validity evidence has been reported for the scale in Turkish [25].

### *2.2.3 Meaning in life*

Meaning in life was measured by Meaning in Life measure [26]. The scale includes 8 items that are clustered into two subscales: experience (4 items) and reflectivity (4 items). Each item is scored a 5-point Likert scale, with rating choices ranging from 1 (strongly disagree) to 5 (strongly agree). The total score for each subscale is between 4 to 20 points, with higher scores reflecting higher levels of experience and reflectivity in meaning in life. The scale has not yet been translated in Turkish. Therefore, I used forward-backward method to adopt this scale in Turkish. I performed exploratory factor analysis (EFA) to examine the factor structure of the scale using the maximum likelihood extraction method with promax rotation. The EFA results indicated that all items loaded on two factors with eigenvalues  $>1$  that explained nearly 45% of the total variance for reflectivity subscale (eigenvalue = 3.53;  $\lambda$  range = .43–.89) and 15% of the total variance for experience subscale (eigenvalue = 1.18;  $\lambda$  range = .45–.60). The internal reliability estimates of the subscales were strong ( $\alpha$  = .85 for experience and .89 for reflectivity). Following exploring the factor structure of the scale, the confirmatory factor analysis (CFA) was carried out to verify the resultant factor structure. The initial model was poor in terms of data-model fit:  $\chi^2 = 167.11$ ,  $df = 19$ ,  $p < .001$ , CMIN/DF = 8.80, CFI = .90, TLI = .85, SRMR = .06, RMSEA [95% CI] = .11, [.10, .13]. After drawing co-variance between the item 1 and item 2 on experience and item 3 and item 4 on reflectivity, the model improved substantially,  $\chi^2 = 65.94$ ,  $df = 17$ ,  $p < .001$ , CMIN/DF = 3.88, CFI = .97, TLI = .95, SRMR = .04, RMSEA [95% CI] = .07, [.05, .09]. The standardized factor loadings ranged from good to excellent (experience  $\lambda$  range = .46—.58 and reflectivity = .71—.79).

## **2.3 Procedure**

A cross-sectional survey design was used to collect the data. This quantitative research was carried out online in Turkey. The inclusion criteria of participants for this study were as follows, (1) eligible participants had at least either smartphone or laptop or any other devices that they could use to participate in the study, (2) having access to the internet (3) showing willingness to take part in the study and (4) being over the age of 18 years. Participants who did not meet the above-mentioned criteria were excluded. Before taking part in the online survey, participants gave their consent. They were assured about the confidentiality and anonymity of responses. They were fully informed about their rights before, during, and after participating in the study.

## **2.4 Data analysis**

Descriptive statistics were used to present sample characteristics and the distribution of main variables (loneliness, meaning in life, and psychological distress). I reported mean with standard deviation, skewness, and kurtosis values for the distribution of main variables. The correlations between the main variables of this study were explored using Pearson correlation coefficients. A simple mediation analysis proposed by Hayes [27] was performed to investigate mediating effect of meaning in life on the association between loneliness and psychological distress. I used 10,000 bootstrap samples with 95% confidence interval. Data were analyzed using IBM SPSS statistics 25 software for Windows.

3. Results

Preliminary results showed that that skewness and kurtosis values fell within the acceptable—good levels (skewness range = .46 and – 1.93; kurtosis range = .10 and 4.06), meaning that the analyzed variables had a relatively normal distribution. Furthermore, reliability analysis demonstrated that all measures revealed good—strong internal reliability estimates with the current sample. Additionally, correlation analysis showed that loneliness had a negative correlation with meaning in life and a positive correlation with psychological distress. Meaning in life was also negatively correlated with psychological distress. Descriptive statistics, correlation analysis and reliability estimate of the variables are presented in **Table 1**.

A simple mediation analysis was conducted to examine mediating effect of meaning in life on the relationship of loneliness with individuals’ psychological distress. Results from mediation analyses indicated that loneliness had a significant negative predictive effect on individuals’ meaning in life and explained 6% of variance in meaning in life. Loneliness had a significant positive predictive effect on

Variable	Descriptive statistics					Correlation		
	Mean	SD	Skewness	Kurtosis	α	1.	2.	3.
1. Loneliness	15.05	4.06	0.48	0.10	0.72	—	–.25**	.38**
2. Meaning in life	33.80	6.13	–1.93	4.06	0.90		—	–.24**
3. Psychological distress	25.02	9.96	0.46	–0.56	0.93			—

*Note. Correlation is significant at the 0.01 level (2-tailed).*  
*\*\*p < 0.01.*

**Table 1.**  
*Descriptive statistics and correlation between the variables.*

Consequent				
M (Meaning in life)				
Antecedent	Coeff.	SE	t	p
X (Loneliness)	–.38	.06	–6.67	<.001
Constant	39.53	.89	44.42	<.001
R <sup>2</sup> = .09 F = 44.43; p < .001				
Y (Psychological distress)				
X (Loneliness)	.83	.09	9.12	<.001
M (Meaning in life)	–.26	.06	–4.25	<.001
Constant	21.27	2.73	–7.78	<.001
R <sup>2</sup> = .16 F = 64.67; p < .001				
Paths	Effect	SE	BootLLCI	BootULCI
Loneliness→meaning in life →psychological distress	.10	.03	.04	.16

*Note 1. SE = standard error. Coeff = unstandardized coefficient. X = predictor; M = mediator variable; Y = outcome variable. Note 2. Number of bootstrap samples for percentile bootstrap confidence intervals: 10,000.*

**Table 2.**  
*Unstandardized coefficients for the mediation model.*

psychological distress and meaning in life had a significant negative predictive effect on psychological distress. Loneliness and meaning in life collectively accounted for 16% of variance in psychological distress. The indirect effect of loneliness on psychological distress through meaning in life was significant since 95% confidence interval did not contain zero. Standardized predictive effects depicting the association between the analyzed variables are presented in **Figure 1**, and **Table 2**. This suggests that meaning in life is a key resource to mitigate the adverse impacts of loneliness on psychological health among Turkish adults during the health crisis.

## 4. Discussion

This research was carried out during the COVID-19 pandemic in the Turkey to examine the specific effect of the loneliness experienced during the COVID-19 pandemic and lockdown on the psychological distress by considering the mediating role of meaning in life. The authorities in the Turkey implemented social distancing and lockdown measures to contain the spread of novel coronavirus infections. However, prolonged lockdown and uncertain experiences related to the virus have likely had psychological outcomes, as COVID-19 significantly changed many individuals' daily lives [4]. As such, it is imperative to identify individuals at an increased risk of experiencing negative influences of this pandemic on the psychological health.

In this study, I aimed to test meaning in life as a mediator between loneliness and psychological distress during COVID-19 pandemic. I tested three hypotheses and drew a conceptual model showing loneliness as a predictor, psychological distress as an outcome variable, and meaning in life as connector. All our hypotheses were confirmed by mediation analysis. More specifically, this study showed that there were direct temporal associations between loneliness and psychological distress. Additionally, meaning in life was a significant mediator in the association between loneliness and psychological distress.

These findings correspond with earlier research demonstrating that loneliness is negatively related to meaning in life [19, 20, 28] and positively related to psychological distress [14, 29] and that meaning in life is a potential factor in reducing psychological distress [30]. The findings of the current study further suggest the existence of meaning in life in the association between loneliness and psychological distress. Moreover, the findings extend the evidence base to general population in Turkey.

The present findings are also in line with earlier research outcomes regarding the association between loneliness and mental health and well-being [31, 32]. More specifically, cross-sectional results from the context of current pandemic showed that loneliness is positively associated with negative indicators of mental health and negatively associated with positive indicators of mental health [19, 20, 33, 34]. Moreover, studies demonstrated that psychological strengths were found to be effective in reducing mental health problems and improving well-being [8, 33]. As such, the relationships between loneliness, meaning in life, and psychological distress found in this study are consistent with prior findings.

### 4.1 Implications and limitations

Based on the current study's findings, several implications can be suggested. First, the mediated effects found in the present study concerning the effectiveness of meaning in life-based therapy on individuals' psychological health suggest that mental health providers should take presenting meaning in life-based therapy into account to mitigate psychological distress among people during difficult times.



With the reduction of loneliness, psychological distress among people may be minimized. Second, given that the current study indicated the direct effect between meaning in life and psychological distress, mental health providers may consider using strength-based approach directly to improve psychological health for people. As a result, people's psychological health may be improved through two pathways: a direct pathway from the reduced loneliness on psychological distress and an indirect pathway from the improved meaning in life.

This study is not without limitations. First, representativeness of the sample needs to be improved. The findings of this study cannot be generalized to all Turkey as this study was limited to those who owned a smartphone/laptop and have access to internet. It is also difficult to generalize the present findings to the populations in other countries. Second, all the measurement employed in this study were self-report. Therefore, the current study suffers from the common biases stemming from subjective measures such as social desirability (i.e., the participants may have tried to overestimate or underestimate their experience of loneliness or distress) and recall biases (e.g., the participants may have had challenges in reporting their loneliness and psychological distress). However, as reported in this and previous studies, all the measures utilized in this study were reliable and valid. Notwithstanding, it is suggested that future research should employ additional measures where appropriate (e.g., peer reports) to offer additional insights in the relationships between the analyzed variables. Finally, although the design used in this study provides partial support for a potential causal effect among the factors of loneliness, meaning in life, and psychological distress, much solid evidence is required to establish the causal effects among the analyzed variables using randomized controlled trials. In particular, randomized controlled trials can facilitate us understand whether the reduction in loneliness leads to reduction in meaning in life, which in turn causes more psychological distress.

## **4.2 Conclusions**

This study provides a clear understanding of how meaning in life can mediate the relationship between loneliness and psychological distress in the face of adversity. In the context of loneliness affecting psychological distress, meaning in life can be regarded as a mediating variable to influence its effect. Loneliness was negatively associated to meaning in life and positively related to psychological distress, and that meaning in life was negative related to psychological distress. I can make full use of this relationship to adjust the impact of loneliness on psychological distress by enhancing meaning in life. Offering more promotion opportunities for people to enhance meaning in life, planning online courses, and paying attention to reduce individual loneliness and psychological distress. In this study, I also provided evidence showing that the Turkish adaptation of Meaning in Life Measure is reliable and valid measure which can be used in research and practice.

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