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Predictive Role of Sociodemographic and Health Factors on Psychological Resilience during the COVID-19 Pandemic: A Cross-Sectional Study in Turkey

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Abstract: Recent global changes, including increased health risks and economic instability associated with the coronavirus (COVID-19) pandemic, highlight the need for mental health researchers to regularly and frequently monitor sociodemographic shifts. To minimise the risk of psychological complications arising from adverse events, we need to identify and understand the factors linked to psychological resilience in different populations. To this end, we collected data in Turkey during the third wave of the pandemic (June 2021). The aims were to identify how the level of perceived psychological resilience changed: (1) across sociodemographic groups (age, gender, perceived economic security, caregiver status, perceived socioeconomic status, education level, perceived social isolation, and presence of acquaintances who had contracted COVID-19); (2) across health groups (smoking status, psychological or chronic illness status, and having had COVID-19); and (3) in relation to changes in fear of COVID-19. Regression analyses showed that age, gender, economic security, socioeconomic status, and illness status were factors influencing resilience, and fear of COVID-19 was negatively correlated with resilience. Young adults, females, nonbinary individuals, a low socioeconomic status, and economically insecure groups as well as people with a psychological condition were identified as lower resilience groups. The results provide insights about the predictors of perceived psychological resilience during a global crisis and help identify vulnerable populations.

Keywords: resilience; global crisis; sociodemographic factors; COVID-19; mental health

1. Introduction

Adverse life events, from losing a job and developing a serious illness to large-scale crises such as natural disasters and pandemics, are an unavoidable part of human life. Thus, we need to continually monitor how our physical and psychological health changes in response to disruptive events, and track the changes in risk and protective factors for health. A key protective factor against psychological distress is the ability to successfully adapt and respond to adverse life experiences, known as *resilience* [1]. The coronavirus (COVID-19) pandemic provided a context for exploring the relationship between adverse life events and psychological resilience. Long-term rules around physical distancing, uncertainty about the future of the virus, and pandemic-related economic instability disrupted everyday lives globally, leading to heightened feelings of social isolation, anxiety, and depression (for a review, see Serafini et al. [2]). Resilience was one of the central traits that could buffer against pandemic-related psychological distress [3].

Since the onset of the COVID-19 pandemic at the end of 2019, researchers all across the globe have been examining the associations of mental health with sociodemographic and other health-related factors, with the hope of identifying pandemic-related trends. An early meta-analysis of longitudinal and experimental studies conducted across the continents during the first wave of the pandemic reported a small effect of the lockdowns

on mental health, indicating that people were generally resilient [4]. Yet, the authors emphasised that the heterogeneity in the data might have overshadowed the differences across different social groups, contexts, and countries. In fact, many studies from various countries have identified differences between sociodemographic groups in mental health during the COVID-19 pandemic. A U.K. study from the early months of the pandemic found that females, young people, and those with young children had the highest levels of mental distress [5]. In Israel, Laufer and Bitton showed that females had higher levels of anxiety, depression, and somatisation as well as lower levels of resilience and higher levels of worry about the economic situation compared with men [6]. A longitudinal study from the U.S. conducted over the 2 years of the pandemic (18 surveys between April 2020 and January 2021) reported that people between the ages of 18 and 34 had the highest mental distress and loneliness, and lowest resilience [7]. Furthermore, the study found that resilience moderated the effects of loneliness, stress, and perceived risk on mental distress. Other studies from Hong Kong [8] and Israel [6] also reported stronger resilience in older adults during the pandemic. Further support for the link between economic factors and resilience came from a study conducted in Turkey with healthcare workers. The researchers observed that as socioeconomic status (SES) increased, resilience increased [9]. Similarly, a study from China that used monthly household income and education as the two indicators of SES reported that higher levels of income and education were associated with higher resilience [10].

In addition to the demographic and economic influences, psycho-social and health-related factors must also be taken into account for a more complete picture of resilience. A recent review of resilience in family caregivers of people with chronic neurological conditions found that as the caregiving burden increased, resilience decreased [11]. Another study that investigated the link between resilience, fear of catching COVID-19, and social isolation among university students in Pakistan reported that those who had a fear of catching COVID-19 were more likely to engage in social isolation, which in turn negatively affected mental wellbeing, but the effect was less for those who had higher resilience [12]. A study from China that investigated the protective and risk factors of resilience showed that resilience negatively correlated with fear of COVID-19, family conflict, number of stressful events, worry, and alcohol use [13]. Increases in maladaptive coping behaviours, including alcohol use and smoking, were reported among healthcare workers in the U.K. [14]. A study from Australia also found that people with higher psychological distress increased their alcohol intake and smoking during the pandemic [15]. Indeed, low mood, fatigue, low energy, disturbances in sleep and eating habits, somatic complaints, and heavy drinking are among the responses people exhibit in stressful environments (for a review, see Babić et al. [16]). Resilience may serve as a protective factor against substance use in stressful and traumatic situations, reducing the risk of damage to mental and physical health. Both in the mental and physical domains, high resilience prevents the onset of illness and facilitates recovery [16].

As reviewed above, resilience plays a central role in mental health. Thus, in order to manage future crises and predict their mental health consequences, risk factors need to be identified. To this end, the present study investigated the association between resilience and demographic factors (age and gender), economic factors (education level, self-perceived economic security, and SES), psycho-social factors (caregiver status, social isolation, fear of COVID-19, and presence of acquaintances who had contracted COVID-19), and health-related factors (smoking status, psychological or chronic illness status, and having had COVID-19) in an adult sample in Turkey during the third wave of the COVID-19 pandemic (June 2021).

2. Materials and Methods

2.1. Participants and Procedure

A cross-sectional, web-based survey was conducted in Turkey over 15 days between 31 May 2021 and 15 June 2021. The questionnaires were administered using Google Forms

in the Turkish language. Participant recruitment was achieved via social media, using snowball sampling. The participation inclusion criteria included being between the ages of 18 and 65 and residing in Turkey for at least the past eight consecutive months. Participants who clicked on the study link were taken to the survey website, which presented the information about the study and the online consent form. In total, 993 participants gave their consent electronically and proceeded with the online survey. Participants could withdraw from the study at any time and they were not given any incentives for their participation. Ethics approval was obtained from the Scientific Research and Publication Ethics Committee at the Middle East Technical University, Northern Cyprus Campus. The study was conducted in accordance with the Declaration of Helsinki.

2.2. Ethics Statement, Pre-Registration, and Data Availability

A pre-registered statistical analysis of the moderated mediation model was not implemented. The initial model, which emphasised the effect of fear of COVID-19 on career future perception, was developed and pre-registered in the context of COVID-19 pandemic lockdowns by student researchers. The model involved hopelessness as a mediator and resilience as a moderator. As a team, we were not able to write up the manuscript for publication during the planned timeframe. Thus, after the student researchers' write-up of the first draft, the project came to a halt. One and a half years later, the primary investigator used these data to investigate the relationship of psychological resilience with the sociodemographic and health variables. The current model involved resilience as the outcome variable and demographic and health characteristics as well as fear of COVID-19 as the predictor variables.

2.3. Survey Questionnaires

2.3.1. Variables

The survey included demographic and health questions, and validated questionnaires on resilience, fear of COVID-19, hopelessness, and career future perception. Resilience was tested by the Turkish version of the Brief Resilience Scale [17]. Fear of COVID-19 was measured by the Turkish version of the Fear of COVID-19 Scale [18]. The data involved information on age (18–34 years, 35–50 years, and 51–65 years), gender (male, female, and other), perceived economic security (yes and no), caregiver status (yes and no), perceived SES (low, medium, and high), education level (primary school graduate, mid-secondary school graduate, secondary school student/graduate, university student/graduate, and postgraduate student or higher), smoking status (not smoking, less than 10 a day, and more than 10 a day), illness status (none, psychological disorder, chronic illness, and both), perceived social isolation (yes and no), having had COVID-19 (COVID-19 status; yes and no), and the presence of acquaintances who had contracted COVID-19 (COVID-19 others; yes and no). Two attention check questions were embedded in the survey, prompting the participant to select *yes* if they read the attention question. All questions were presented in the native language of the participants (see Supplementary Materials Table S1 for the list of questions in Turkish and English).

The initial model design involved data on hopelessness and career future perception, so data for these two variables were also collected. However, they were not included in the analysis.

2.3.2. Brief Resilience Scale (BRS)

The Turkish version of the Brief Resilience Scale (BRS; Smith et al. [19]) developed by Doğan [17] was used to measure resilience, defined as the ability to "bounce back or recover from stress" [19]. The BRS is a unidimensional scale consisting of the following 6 items, each rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree): "I tend to bounce back quickly after hard times"; "I have a hard time making it through stressful events" (reverse coded); "It does not take me long to recover from a stressful event"; "It is hard for me to snap back when something bad happens" (reverse coded); "I

usually come through difficult times with little trouble"; and "I tend to take a long time to get over set-backs in my life" (reverse coded). Higher total scores corresponded with higher resilience. The Cronbach's alpha internal consistency coefficient was 0.82, both in the Turkish BRS scale [17] and in the present study.

2.3.3. Fear of COVID-19 Scale

The Turkish version of the Fear of COVID-19 Scale (Ahorsu et al. [20]) developed by Bakioğlu et al. [18] was used to measure fear of COVID-19. The 1-factor scale consisted of 7 items, each rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree): "I am most afraid of coronavirus-19"; "It makes me uncomfortable to think about coronavirus-19"; "My hands become clammy when I think about coronavirus-19"; "I am afraid of losing my life because of coronavirus-19"; "When watching news and stories about coronavirus-19 on social media, I become nervous or anxious"; "I cannot sleep because I'm worrying about getting coronavirus-19"; and "My heart races or palpitates when I think about getting coronavirus-19". Higher total scores corresponded with a greater fear of COVID-19. In the Turkish scale, the Cronbach's alpha internal consistency coefficient was 0.82 and in the present study it was 0.88.

2.4. Statistical Analysis

First, univariate and multivariate outliers were identified and removed. Participants who failed either of the attention check questions were excluded. Univariate and multivariate outliers for resilience and fear of COVID-19 were then identified and deleted according to the criteria proposed by Leys et al. [21]. Univariate outliers were detected based on the median absolute deviation (MAD; b = 1.4826, threshold = 3). Multivariate outliers were identified using the Minimum Covariance Determinant approach (MCD; h = 0.75, alpha = 0.01).

After the outlier exclusion, descriptive statistics of the variables were calculated to observe the sample characteristics. Means and standard deviations (SDs) were calculated for resilience and fear of COVID-19; frequencies were calculated for age, gender, economic security, caregiver status, SES, education level, smoking status, psychological or chronic illness status, social isolation, COVID-19 status, and COVID-19 others.

The relationship of resilience with the categorical variables was tested using *t*-tests and ANOVAs, and with the single continuous variable (i.e., fear of COVID-19), using a correlation test. Variables that had a significant relationship with resilience were entered into the multiple regression analysis as predictors. All predictor variables were entered in the same step. Based on this output, individual predictors that significantly contributed to the model's predictive ability of resilience were further investigated with post hoc tests. For pairwise comparisons, Games–Howell post hoc tests were used due to the different sample sizes across the groups. For all tests, analyses were conducted to ensure that the assumptions of normality, heteroscedasticity, linearity, and/or multicollinearity were not violated. The data cleaning and analysis were performed in *R* version 3.6.3 [22].

3. Results

3.1. Outlier Analysis

Among the 993 participants, 63 failed the attention test. Univariate and multivariate outlier analyses conducted with 930 participants revealed no univariate outliers and 20 multivariate outliers. The statistical analysis was conducted with 910 participants.

3.2. Demographic and Health Characteristics

Data from 910 people were included in the final analysis. The frequencies can be seen in Table 1. Of the 910 participants, 64.18% were between 18 and 34 years, 27.14% between 35 and 50 years, and 8.68% between 51 and 65 years. In total, 38.90% were male, 58.24% were female, and 2.86% were nonbinary/other. A total of 51.87% felt economically insecure and 58.46% did not have caregiving responsibilities. The majority of the participants had

middle SES (78.79%) and were either an undergraduate student or graduate (69.23%). In total, 61.32% did not smoke; 74.51% did not have a psychological or a chronic condition, 15.16% had a chronic condition, and 7.58% had a psychological condition. The majority of the participants felt socially isolated (83.41%), had never been infected by COVID-19 (80.22%), and knew someone who had contracted COVID-19 (82.53%). The mean score for fear of COVID-19 was 16.44 (SD = 6.48), with a minimum possible score of 7 and a maximum of 35.

Table 1. Sample characteristics and the relationship of resilience with study variables (*N* = 910).

			Resilience			
Characteristics	**Categories**	***N* (%)**	**Mean**	**SD**	**Test Statistic**	***p*-Value**
Age	18–34 years	584 (64.18%)	18.49	4.82	**24.4** [1]	**0.000**
	35–50 years	247 (27.14%)	20.39	4.78		
	51–65 years	79 (8.68%)	21.66	4.56		
Gender	Male	354 (38.90%)	20.53	4.66	**19.66** [1]	**0.000**
	Female	530 (58.24%)	18.48	4.96		
	Other	26 (2.86%)	18.58	3.62		
Economic security	Secure	438 (48.13%)	20.41	4.78	**6.85** [2]	**0.000**
	Insecure	472 (51.87%)	18.23	4.80		
Caregiver status	Yes	378 (41.54%)	20.23	5.00	**4.94** [2]	**0.000**
	No	532 (58.46%)	18.60	4.74		
SES	Low	130 (14.29%)	17.74	5.23	**11.78** [1]	**0.000**
	Medium	717 (78.79%)	19.39	4.80		
	High	63 (6.92%)	21.22	4.57		
Education level	Primary school graduate	24 (2.64%)	20.83	5.71	**3.33** [1]	**0.02**
	Secondary school graduate	98 (10.77%)	20.05	5.38		
	Undergraduate student or graduate	630 (69.23%)	18.95	4.76		
	Postgraduate student or graduate	158 (17.36%)	19.87	4.95		
Smoking status	Not smoking	558 (61.32%)	19.36	4.91	0.19 [1]	0.83
	Less than 10 a day	182 (20.00%)	19.18	4.52		
	More than 10 a day	170 (18.68%)	19.13	5.31		
Illness status	None	678 (74.51%)	19.69	4.70	**14.09** [1]	**0.000**
	Psychological	69 (7.58%)	16.22	5.20		
	Chronic	138 (15.16%)	19.30	4.97		
	Both	25 (2.75%)	16.36	5.62		
Social isolation	Yes	759 (83.41%)	19.22	4.91	0.83 [2]	0.41
	No	151 (16.59%)	19.58	4.93		
COVID-19 status	Yes	180 (19.78%)	19.71	5.14	1.25 [2]	0.21
	No	730 (80.22%)	19.17	4.85		
COVID-19 others	Yes	751 (82.53%)	19.18	4.94	1.30 [2]	0.20
	No	159 (17.47%)	19.73	4.77		
Fear of COVID-19		M = 16.44 SD = 6.48			−0.24 [3]	**0.000**

Significant values are given in bold. [1] Analysis of variance; [2] *t*-test for independent groups; [3] Pearson *r* correlation.

3.3. Association Analysis

No violation of the linear model assumptions was observed in any of the models. Table 1 shows the differences in the resilience scores according to the participants' characteristics and the correlation between resilience and fear of COVID-19. The relationships between resilience and age ($F(2, 907) = 24.4$, $p = 0.000$), gender ($F(2, 907) = 19.66$, $p = 0.000$), economic security (Welch's *t*-test, $t(903.7) = 6.85$, $p = 0.000$), caregiver status (Welch's *t*-test, $t(785.1) = 4.94$, $p = 0.000$), SES ($F(2, 907) = 11.78$, $p = 0.000$), education level ($F(3, 906) = 3.33$, $p = 0.02$), and illness status ($F(3, 906) = 14.09$, $p = 0.000$) were significant. Resilience was not significantly associated with smoking status, social isolation, COVID-19 status, or COVID-19 others ($p > 0.05$). The Pearson correlation analysis revealed a significant relationship between resilience and fear of COVID-19 ($r(908) = -0.24$, $p = 0.000$). All the variables that had a significant relationship with resilience were entered into the multiple regression model as predictors.

3.4. Multiple Regression Analysis

Table 2 shows the results of the multiple regression analysis. The model explained 20% of the variance in the level of resilience ($F(15, 894) = 15.24$, $p = 0.000$, $R^2 = 0.20$). When all of the variables were taken into account, age, gender, economic security, SES, illness status, and fear of COVID-19 were associated with resilience ($p < 0.01$) whereas caregiver status and education level were not ($p > 0.05$). The tolerance and variance inflation factor (VIF) confirmed the absence of multicollinearity. All of the model assumptions were met.

Table 2. Results of multiple regression analysis for resilience ($N = 910$).

Characteristics	Categories	Resilience					Collinearity Statistics	
		B	SE	β	t	*p*-Value	*Tolerance*	*VIF*
Age	18–34 years	-	-	-	-	-	-	-
	35–50 years	1.22	0.45	0.11	**2.71**	**0.007**	0.532	1.881
	51–65 years	2.31	0.62	0.13	**3.73**	**0.000**	0.704	1.421
Gender	Male	-	-	-	-	-	-	-
	Female	−1.41	0.32	−0.14	**−4.42**	**0.000**	0.872	1.147
	Other	−0.80	0.90	−0.03	−0.89	0.374	0.944	1.059
Economic security	Secure	-	-	-	-	-	-	-
	Insecure	−1.02	0.33	−0.10	**−3.09**	**0.002**	0.789	1.267
Caregiver status	Yes	-	-	-	-	-	-	-
	No	−0.58	0.40	−0.06	−1.47	0.143	0.558	1.793
SES	Low	-	-	-	-	-	-	-
	Medium	1.17	0.45	0.10	**2.60**	**0.009**	0.637	1.569
	High	2.39	0.73	0.12	**3.26**	**0.001**	0.621	1.610
Education level	Primary school graduate	-	-	-	-	-	-	-
	Secondary school graduate	−0.27	1.03	−0.02	−0.26	0.794	0.212	4.725
	Undergraduate student or graduate	−1.05	0.96	−0.10	−1.10	0.273	0.110	9.081
	Postgraduate student or graduate	−1.16	0.99	−0.09	−1.17	0.241	0.152	6.583

Table 2. *Cont.*

Characteristics	Categories	Resilience					Collinearity Statistics	
		B	**SE**	**β**	**t**	**p-Value**	*Tolerance*	*VIF*
Illness status	None	-	-	-	-	-	-	-
	Psychological	−2.56	0.57	−0.14	**−4.51**	**0.000**	0.952	1.050
	Chronic	−0.82	0.43	−0.06	−1.92	0.056	0.917	1.091
	Both	−2.59	0.90	−0.09	**−2.86**	**0.004**	0.981	1.020
Fear of COVID-19		−0.17	0.02	−0.22	**−7.04**	**0.000**	0.915	1.092

Significant values are given in bold. B denotes unstandardised coefficients and β denotes standardised coefficients.

Following the regression analysis, differences between the groups in terms of their resilience were tested by post hoc *t*-tests. Table 3 shows the results of the Games–Howell post hoc tests, which revealed significant differences in resilience among the groups of age, gender, economic security, SES, and illness status. The 18–34-year-old group had less resilience than the 35–50-year-old group (M_d = 1.91, 95% CI: 1.05, 2.76) and the 51–65-year-old group (M_d = 3.17, 95% CI: 1.86, 4.48). Compared with males, less resilience was reported by females (M_d = 2.06, 95% CI: 1.26, 2.83) and nonbinary individuals (M_d = 1.96, 95% CI: 0.11, 3.81). Those who did not feel economically secure had less resilience than those who felt secure (M_d = 2.18, 95% CI: 1.55, 2.80). The low SES group had less resilience than the medium SES group (M_d = 1.65, 95% CI: 0.49, 2.82) and the high SES group (M_d = 3.48, 95% CI: 1.74, 5.23); the medium SES group had less resilience than the high SES group (M_d = 1.83, 95% CI: 0.39, 3.28). Participants who had a psychological and a chronic condition reported less resilience than the no-diagnosis group (M_d = 3.34, 95% CI: 0.21, 6.46) and participants with a psychological condition reported less resilience than the chronic condition-only group (M_d = 3.09, 95% CI: 1.12, 5.05) and the no-diagnosis group (M_d = 3.48, 95% CI: 1.77, 5.19).

Table 3. Group differences in predictors of resilience (*N* = 910).

Pairwise Comparisons	t	p-Value	Post Hoc
Age			
18–34 years (a)—35–50 years (b)	**5.24**	**0.000**	**a < b**
18–34 years (a)—51–65 years (c)	**5.76**	**0.000**	**a < c**
35–50 years (b)—51–65 years (c)	2.12	0.089	
Gender			
Male (a)—female (b)	**6.26**	**0.000**	**b < a**
Male (a)—nonbinary (c)	**2.60**	**0.037**	**c < a**
Female (b)—nonbinary (c)	0.13	0.990	
Economic security			
Secure (a)—insecure (b)	**6.85**	**0.000**	**b < a**
SES			
Low (a)—medium (b)	**3.35**	**0.003**	**a < b**
Low (a)—high (c)	**4.73**	**0.000**	**a < c**
Medium (b)—high (c)	**3.04**	**0.009**	**b < c**
Illness status			

Table 3. *Cont.*

Pairwise Comparisons	*t*	*p*-Value	Post Hoc
None (a)—psychological (b)	**5.34**	**0.000**	**b < a**
None (a)—chronic (c)	0.85	0.831	
None (a)—both (d)	**2.93**	**0.034**	**d < a**
Psychological (b)—chronic (c)	**4.08**	**0.000**	**b < c**
Psychological (b)—both (d)	0.11	1.00	
Chronic (c)—both (d)	2.45	0.088	

Significant values are given in bold.

4. Discussion

This study aimed to investigate the sociodemographic and health-related factors associated with resilience in the context of a global crisis, specifically, the COVID-19 pandemic. The level of resilience differed between age, gender, SES, economic security, and illness status groups, and higher resilience was associated with a lower fear of COVID-19. Caregiver status, smoking status, education level, social isolation, and COVID-19 status of self or acquaintances did not predict resilience.

The present finding, indicating lower resilience in people with a psychological condition than other groups, was in line with past research that established the negative relationship between resilience and psychological symptoms [23,24]. Plus, lower resilience scores corresponding with higher levels of fear of COVID-19 were also observed in past studies [25,26]. Both of these findings further add to the literature, which highlights the protective role of resilience against the negative psychological outcomes of adverse events. Our findings extend the knowledge from the literature that resilience factors must be an important target for psychological interventions.

A key finding of the present study was that the youngest group had less resilience than the other two groups. This observation was in agreement with many past findings [9,27,28]. A study conducted during the COVID-19 pandemic to examine differences in resilience between Generation Z (18–24 years) and Generation X (40–50 years) also reported that the younger generation was less resilient [29]. In older people, more experience of challenges throughout their lifetime, a higher economic security, stronger social support, and positive coping strategies may enhance emotion regulation and psychological strength during difficult times [9,30]. Yet, it is important to note that the link between age and resilience may be more complicated than it seems. For instance, a recent study found a curvilinear relationship between perceived resilience and age, with higher resilience reported by the youngest (age 18–25) and the oldest (age 56+) groups [31]. Future research might focus on both linear and nonlinear relationships between age and resilience.

Another important finding of the present study was that females and nonbinary individuals had less resilience than males. The results from Lowe et al. provide important insights into the link between resilience and differences between males and females [32]. When the authors took into account the contextual effects of pre-pandemic burnout and pandemic-related concerns around family, infection, and work, the direct effect of gender on psychological symptoms disappeared. As discussed by the authors, gender disparities in occupation status, social responsibilities such as caregiving, and financial and family concerns may explain the gender differences in psychological symptoms, including depression, anxiety, post-traumatic stress disorder, and resilience. Such contextual influences need to be taken into account when examining gender differences [32].

Similar to females, nonbinary individuals also reported lower resilience than males. The nonbinary group may have been subject to similar environmental influences as females. In addition, lower resilience in this population may have been due to the systematic oppression and violence they experience for being gender-nonconforming or nonbinary [33]. Higher levels of social stress due to violence and stigma as well as the absence of social

support and adequate coping skills are associated with higher levels of mental health problems in gender minority groups [34].

It is important to note that the relatively higher resilience commonly reported by men may explain only one dimension of resilience, specifically, *perceived* resilience, in contrast to *manifest* resilience. Resilience has a complex set of features, so it is not easy to settle on a single definition and methodology. Recently, Nishimi et al. addressed this issue of incongruency between resilience measures, which might have led to inconsistent findings or inaccurate generalisations about the predictors and health outcomes of resilience in the previous literature [31]. The authors investigated the relationship of different resilience measures with sociodemographic factors and a physical health indicator (i.e., body mass index) among adults exposed to childhood maltreatment. Based on previous research, they created the following four resilience measures: a self-report scale, assessing perceived trait resilience; a binary category of the presence or absence of psychological distress; a binary category of the presence or absence of psychological distress plus positive affect/functioning; and a continuous variable reflecting the symptom and distress level relative to the level of adversity exposure (relative resilience). The correlations between the resilience measures were weak to moderate, but the patterns of relationship were similar for the sociodemographic factors. A key finding was that women had higher *relative* resilience but lower *perceived* resilience compared with men. In other words, women had relatively lower distress, despite a similar level of trauma exposure, but described themselves as less resilient than men. This observation suggests that women may underestimate their resilience relative to their manifest resilience whereas men may report higher resilience whilst experiencing elevated psychological and/or physiological distress. Future research must continue to address the different dimensions of resilience when investigating the differences between sociodemographic groups.

The negative relationship of resilience with SES and perceived economic security found in the present study confirmed a prevalent finding in the literature: people from economically disadvantaged backgrounds have poorer prospects in life (for a review, see Friedli [35]). A longitudinal study conducted in the context of the COVID-19 pandemic found that adults with low and normal resilience experienced increases in mental distress whereas those reporting high resilience reported no change in mental distress during the course of the pandemic and that adults living below the poverty line were less likely to report high resilience [36]. Similarly, another recent study conducted with patients with a chronic physical condition found that those with a higher level of education and higher family income reported higher resilience [10]. In Nishimi et al., a lower SES tended to show lower resilience in all of the four resilience measures [31]. The negative association between economic factors and resilience appears to be due to the high SES group having more access to individual, social, and environmental resources. As discussed by Wister et al. [37], these resources—including individual resources such as SES, social support, and health behaviours—need to be accessed and activated in the face of adversity for a positive adaptation to changing circumstances. Access to these resources can be supported by reducing inequalities in income, education, and public services, including healthcare services.

Our results should be considered in light of a few limitations. In this study, an online cross-sectional survey was administered to a snowball sample. People without the digital capacity to provide online self-report information and those older than 65 years of age did not participate in the study. Therefore, our sample may not represent the general adult population in Turkey. Moreover, the cross-sectional data were collected in a short period of time during the pandemic. Thus, the observed trends might have changed after the data collection period. Despite these limitations, the present findings underscore the importance of investigating the relationship of resilience with sociodemographic and health characteristics in order to capture the disparities across different demographic groups. Pandemic outbreaks and emerging diseases will continue to impact on our mental health. To minimise the risk of psychological complications arising from regional and global crises, we need to identify and understand the factors linked to resilience in different populations.

5. Conclusions

The study examined the sociodemographic and health characteristics associated with resilience in the context of the COVID-19 pandemic. Young adults, females, and nonbinary individuals as well as people with a low SES, economic insecurity, a psychological condition, and high fear of COVID-19 reported less psychological resilience. The results reflect the situation in Turkey during the third wave of the COVID-19 pandemic and provide important insights into high-risk groups. Research must continue to monitor the changing patterns in the protective and risk factors in mental health.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/covid3040039/s1, Table S1: Sociodemographic and health-related questions.

Author Contributions: Conceptualisation: Ş.Ç., B.Ş., A.T., B.T., A.Z. and Ö.K.; Methodology: Ş.Ç., B.Ş., A.T., B.T., A.Z. and Ö.K.; Formal analysis and investigation: Ö.K.; Writing—original draft preparation: Ş.Ç., B.Ş., A.T., B.T. and A.Z.; Writing—review, editing, final draft preparation, and revision: Ö.K.; Supervision: Ö.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of Middle East Technical University Northern Cyprus Campus (protocol code 347433, approved on 11 May 2021).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets generated and analysed during the current study are available on the Open Science Framework (OSF) at https://osf.io/hwftk/files/osfstorage (accessed on 5 April 2023).

Conflicts of Interest: The authors declare no conflict of interest.

Author Contributions: The first five authors, Şevval Çay, Beyzanur Şen, Atacan Tanaydın, Büşra Tosun, and Anıl Zerey, contributed equally to the study. Their names are listed in alphabetical order by last name. The last author is the primary investigator and the research supervisor.

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