

Effects of Resilience on Life Satisfaction Among Employees During COVID-19 Pandemic

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Abstract

While the COVID-19 pandemic maintains its full effect on all over the world, both governments and employers experience serious panic about the process. Individuals experience enormous anxiety with the fear of getting sick and this makes people irritated and uncomfortable in their workplaces too. In this study, resilience, one of the four psychological capitals widely accepted by positive psychologists, individuals' power to bounce back from adversity and get better, is assumed to be effective in experiencing life satisfaction of employees during a traumatic process created by COVID-19 pandemic. With the aim of examining the assumed relationship we have applied a field research on 191 people and we analyzed the data in SPSS 20, Correlation and regression analyzes have been conducted to see the assumed relationships. Results confirmed the assumption that more resilient employees have higher life satisfaction during COVID-19.

Keywords

COVID-19; Resilience; Life satisfaction; Employees

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COVID-19 Salgını Sırasinda Psikolojik Dayanıklılıđın alıřanların Yařam Doyumu Üzerindeki Etkisi

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Özet

COVID-19 salgını tüm dünyada etkisini tam olarak sürdürürken, hem hükümetler hem de işverenler süreçle ilgili ciddi panik yaşamaktadırlar. Bireyler hastalanma korkusuyla büyük kaygı yaşamakta ve bu da insanları iş ortamında da rahatsız etmektedir. Bu çalışmada, pozitif psikologlar tarafından yaygın olarak kabul edilen dört psikolojik sermayeden biri olan psikolojik dayanıklılıđın, bireylerin sıkıntılardan sıyrılıp iyileşme gücünün, COVID-19'un yarattığı travmatik süreçte çalışanların yaşam doyumunu deneyimlemede etkili olduğu varsayılmaktadır. Varsayılan ilişkiyi incelemek amacıyla 191 kişi üzerinde bir saha araştırması yapılmış ve verileri SPSS 20'de analiz edilmiştir. Tahmin edilen olası ilişkilerin test edilmesi için korelasyon ve regresyon analizleri uygulanmıştır. Sonuçlar, psikolojik dayanıklılıđı daha yüksek olan çalışanların COVID-19 sırasında daha yüksek yaşam doyumuna sahip olduğu varsayımını doğrulamıştır.

Anahtar Kelimeler

COVID-19; Psikolojik Dayanıklılık; Yaşam Doyumu; Çalışanlar

Introduction

The disease COVID-19 is one of the central and most pervasive health crises of this century (Shanafelt et al. 2020). COVID-19 is a highly infectious and detrimental pandemic hazardous for both physical and psychological health (Li et al., 2020) whose declaration as a detrimental pandemic has given way to an enormous panic and anxiety in many countries (Nicola et al., 2020). That is why, many governments have embraced border shutdowns and mobility restrictions and social isolation. The illness has loaded many burdens on individuals (Van Bavel et al., 2020) like staying at home during quarantine, more emphasis on hygiene and being unable to continue with their normal social life. Workplaces also paid more attention to hygiene and tries their best to shift to remote working (Ramesh, Siddaiah and Joseph, 2020).

The COVID-19 outbreak has made us better feel the difficulties of living in modern era. The ongoing COVID-19 pandemic created uncertainty and anxiety. The fear of death, economic crises and career breakdown (Trzebiński, Cabański and Czarnecka, 2020:1) make people vulnerable to many psychological problems. Unfortunately, large scale disasters and traumas as in the case in COVID-19 which is a pandemic illness giving way to increased levels of depression and considerable number of mental and behavioral problems including post traumatic disorder, anxiety, depression and panic attacks (Galea, Merchant and Lurie 2020:871). As Peteet (2020) suggests many people suffer from infection anxiety and grief.

COVID-19 also has affected, businesses and organisations globally, causing problems in financial markets and the global economy (Nicola et al., 2020). Without doubt, for employees this COVID-19 process has been more difficult and it is expected that being obliged to work will make people more anxious. However the study conducted by Zhang et al. (2020) examined 369 employees in China regarding their mental health conditions during COVID-19. They found that about 38% of the participants were working from home and about %25 stopped working owing to the pandemic and those who have quitted from work are in a worse mental health condition compored to the ones continuing working. While designing this study we have assumed that greater levels of psychological resilience will affect individuals life satisfaction and will make their life more comfortable during the pandemic. That is why, in this study, in Turkish context we wanted to examine whether during COVID-19 process resilience levels of Turkish professionals have affect their life satisfaction levels or not.

COVID-19 and Negative Emotions

The fear occuring among people amidst infectious outbreaks is quiete-common since anyone of any age, gender, and status can be infected (Ho et al., 2020:1). As Behavioral Immune System (BIS) theory suggest individuals tend to develop negative emotions like aversion, anxiety and fear for their self-protection and develop avoidant behaviors and obey social norms strictly when faced with a risky situations (Li et al., 2020). In fact, recommendations and minute-by-minute updates on COVID-19 by global media, health organizations health experts (Torales et al., 2020) and ever increasing data collected about pandemic's route, symptoms, and

outcomes (Corman et al., 2020) nourish individuals' perceptions regarding the pandemic process. Actually, it has triggered various psychological problems, like panic disorder, anxiety and depression (Qui et al., 2020:1). Unfortunately, all crises including the COVID-19 pandemic carry the risk of creating an overreaction in case of less appropriate guidance, that can give way to excessively avoidant behaviors or too much conformity (Li et al., 2020). Peteeet suggests that in those kind of crises establishing daily rhythms; remaining mindful, physically and mentally active, self-compassionate and being connected with other people are important for struggling with the negative effects of the pandemic.

Possible consequences of the COVID-19 pandemic are rather unpredictable for both individuals and corporations. In these kind of situations, individuals' perceptions may be influenced by assumptions rather than knowledge. Individuals' convictions can affect their understanding of events and pressure of these kind of unusual circumstances can create irrational or exaggerated perceptions (Trzebiński, Cabański and Czarnecka, 2020:2). In this point, Tan et al. (2020) examined the immediate psychological effects and preventive measures taken for workforce returning to work during the COVID-19 pandemic. From 673 respondents, 10.8% of showed post-traumatic stress disorder (PTSD) (3.8%) anxiety, (3.7%) depression, stress (1.5%). Contrary to expectations of the researchers results did not reveal severe psychological reactions to returning to work during the pandemic. Huand and Zhao (2020) also conducted a study by collecting data from 7,236 self-selected Chinese participants about COVID-19 related symptoms. Results revealed that 35.1% of the participants had general anxiety disorder 20.1% depression, and 18.2% sleep disorder and older people reported higher general anxiety disorder and depressive symptoms compared to youngs. In their study among 17865 Weibo users Li et al. (2020) found that after COVID-19 outbreak negative emotions like anxiety, depression and indignation increased, whereas positive emotions and life satisfaction decreased. Although not exactly the same, in a similar situation in SARS-CoV experienced in 2003 in Taiwan, many patients, emergency department staff and healthcare staff developed post-traumatic stress disorder (Torales et al., 2020). According to perceived risk theory people who face the risks of the pandemic more frequently are more inclined to perceive negative emotions (Slovic, 1987).

Life Satisfaction

Life satisfaction refers to a cognitive and judgmental mechanism wherein individuals make a global assessment regarding their own lives according to the criteria they choose themselves. That is to say, it is based on a comparison with a standard that each person sets for him/herself; it is not something externally imposed (Diener et al., 1985:71). Regarding life satisfaction different sets of motivators can be important for different people (Baykal, 2020b). In fact, life satisfaction is an element of subjective well-being life satisfaction it is both related to and only partially independent of emotional aspects of subjective well-being (Pavot and Diener, 2008:138). Actually, the importance given to particular life domains change from person to person and the importance given to a particular domain indicates that life domain makes it a significant source in forming judgments

about life satisfaction. Life satisfaction judgments can be affected by one's personality traits and important changes in his/her life domains (Pavot and Diener, 2008:140). Actually, as Schimmack et al. (2002) suggest changes in life satisfaction can be associated with changes in chronically accessible domains, in contrast to random and temporary factors. Individuals' health status is important in creating life satisfaction. In a study, conducted by Strine et al. (2008) in USA it has been revealed that there is a close relationship between life satisfaction and health. As health status of individuals deteriorates their life satisfaction diminishes. Similarly, Wurm, Tomasik and Tesch-Römer (2008) revealed the effects of subjective health experienced by individuals on their life satisfaction levels. Marques et al. (2017) also confirmed the positive relationship between satisfaction from health and satisfaction from life. These empirical proves has made us think that COVID-19 may have lowered life satisfaction levels of individuals but resilience can act as a mechanism counterbalancing it and increasing life satisfaction.

Resilience

Resilience research is significant in helping to complement conventional disorder-focused approach (Baykal, 2020a). Resilience research tries to figure out why some individuals develop stress-related psychological dysfunctions and some other do not. This approach is about prevention of stress-related disorders, rather than treatment (Kalisch et al., 2017: 784). In technical terms resilience explains the return rate to equilibrium upon a perturbation (Folke et al., 2010:20). It is a quick recovery from a stressor. As Russo et al. (2012) indicates resilience is not a mere inertia or insensitivity to adversities, in contrast it is the result of dynamic adaptation process involving interaction between risk factors and protective resources (Liu, Wang, Zhou, and Li, 2014:92).

Early studies on resilience mostly focused on risk factors while recent studies focuses more on identification of strengths of individuals (Richardson, 2002:309). In this study, we focus on psychological resilience which refers to the capacity of thriving in the face of risk and adversity, that is important for individuals' psychological and physical health (Kong, Wang, Hu and Liu, 2015:165). As Fredrickson and Branigan (2005) suggest, considering the theoretical and experimental background of resilience, it is seen that positive emotions have a positive effect on flexibility and problem-solving skills of the person and eliminate negative thoughts. In fact, psychological or individual resilience is a personality trait reflecting an individual's capacity to adapt to changing environments and giving adaptive responses like identifying opportunities, adapting to constraints, and bouncing back from misfortune (Cohn et al., 2009:392). It is the capacity to bounce back and even get better in response to a disadvantageous, traumatic condition or adversity (Bonanno, 2004).

Masten and Reed (2002) suggest that resilience is more likely to occur when individuals have the necessary emotional, social, and material resources. Moreover, positive experiences, riveted self-confidence and sense of self-efficacy also trigger the formation of resilience. Actually the term is also covered in positive organizational behavior literature as one the main psychological capacities (Narcikara, 2017: 10).

Psychological capital is defined as a whole of positive and developable features that the individual has. Compared to other positive-oriented approaches, it has a more proactive, original and open-minded approach, focusing on strengths. It is characterized by self-efficacy, psychological resilience, optimism and hope (Luthans et al., 2004). In positive organizational behavior literature, resilience is an important concept since it connotes the positive internal resource that employees use in navigating stress at work (Avey, Luthans and Jensen, 2009), facilitated and supported by the organization (Prayag et al., 2020: 1221). As Luthans et al. (2006) suggest resilient employees thrive, rather than merely surviving, actually they can bounce back and learn from adversities and uncertainties. Individual resilience is related to some significant life experiences like peaceful early childhood (Conway and McDonough, 2006), better interpersonal relationships and give way to lower levels of depression and more thriving after tragedies (Fredrickson et al., 2003). Supporting this view, Bonanno et al. (2007) conducted a study after September 11, 2001, terrorist attack. Results revealed that resilient individuals had low levels of posttraumatic stress disorder symptoms.

Effects of Resilience on Life Satisfaction

Broaden-and-build theory of Fredrickson's (2001) on positive emotions indicates that individuals' positive emotions trigger evolved adaptations that give way to long lasting psychological resources. Resilience is also a protective positive psychological capacity contributing to quality of life thus, enhancing life satisfaction (Liu, Wang and Li, 2012:834). As Fredrickson and Cohn (2008) indicate, positive emotions have the potential to broaden thought– action repertoires of individuals thus producing novel and creative thoughts and more flexible goals and mindsets. Several studies have revealed the links between resilience and mostly satisfactory functioning in the aftermath of a traumatic incident (Bonanno, et al., 2002; Bonanno, et al., 2005) and there are considerable number of empirical proof about effects of resilience on life satisfaction. For instance; Fredrickson et al. (2008) revealed the positive effect of resilience on greater life satisfaction and reduced depressive symptoms. Cohn et al. (2009) also examined the relationship between resilience and satisfaction from life. Their results confirmed that resilience mediated the link between positive affections and increased life satisfaction, confirming their suggestion that happy individuals become more satisfied not simply because they are happy but because they have the capacity to develop necessary psychological resources for having a better life. Moreover, Kong et al. (2015) studied neural correlates of resilience and life satisfaction link. They identified the brain regions related to resilience and they examined how resilience-related regions give way to life satisfaction. Later Karatepe and Karadas (2015) conducted a study in Romania in hospitality industry, their results revealed that psychological capital of individuals including resilience increases work engagement which in turn gives way to greater to job, career and life satisfaction. Recently, Prayag et al. (2020) also examined effects of resilience on life satisfaction on tourism industry and confirmed its positive effects on employees. In this paper, we also examined the possible effect of resilience of employees on their life satisfaction during COVID-19 pandemic. Thus our hypothesis is:

H1: Resilience has a positive effect on life satisfaction of individuals.

Methodology

Sample and Data Collection

Random sampling method has been embraced in collecting data in the related field research. The field research has been applied among white collar employees from both private and government companies located in Turkey. Six items used for measuring resilience. Five questions measuring psychological resilience have been adopted from Luthans et al.'s (2005) psychological capital scale which have been adapted to Turkish by Çetin and Basım (2012). Moreover a 5-item scale developed by Dağlı and Baysal (2016) has been used for measuring satisfaction with life. Data has been collected during COVID-19 pandemic between the time period 14 May 2020 to 23 June 2020. Online surveys have been preferred in collecting data. Responses have been collected with five-point Likert Scale. In the related field research we have sent 1021 online surveys via LinkedIn and we obtained 191 usable answers. All of the participants are currently working employees of organizations located in Turkey. %27 of the participants works in public offices other work in private companies. %35 of the participants were female and other are male. Our sample is highly educated. %16 have high school degree, %53 of the participants have university degree, %24 have completed graduate school and %7 have Phd degree.

Analyzes and Hypothesis Testing

Before applying statistical tests we have examined the normality of the data. For this purpose we examined skewness of our data. Skewness is the measure of the symmetry of a distribution; it is comparison made to a normal distribution. Skewness values falling inside the range of -1 to +1 designates an acceptable normal distribution in social sciences (Hair, Black, Babin & Anderson, 2013). In our study answers had a skewness of 0.762 which makes it a proper value for moving on with the analysis. On the other hand, a kurtosis value between ± 1.0 is accepted as excellent for most psychometric purposes (George and Mallery, 2012) and we had a kurtosis value of 0.862 making our sample a plausible data set for tests. Furthermore, Kaiser-Meyer-Olkin Measure of Sampling Adequacy analysis was conducted to test whether the data from the study sample were sufficient. The sufficiency coefficient of the sample was found to be 0,873 and and Barlett score was found to be under 0,001 which were meaningful values to continue with making factor analysis.

Exploratory factor analysis has been used to test if the observed variables have been loaded in the supposed dimensions. Cronbach's alpha coefficients for each of the scales have been computed in order to see the internal consistency of the measuring instruments and factor analysis has been conducted in order to see whether the items have been loaded in the assumed dimensions. Results of factor analysis and Cronbach Alfa values have been summarized below in Table 1.

Table 1. Factor Analysis

	Component		Cronbach Alfa
LS1	0,837		0.876
LS2	0,812		
LS3	0,795		
LS4	0,819		
LS5	0,710		
RS1		0,611	0.700
RS2		0,522	
RS4		0,757	
RS5		0,855	
RS6		0,797	

Examination of the correlation between the resilience and life satisfaction revealed that they were highly significant. As seen in Table 2 these two variables are correlated with each other and are moving in the same direction, meaning that higher levels of resilience is seen with higher levels of life satisfaction ($\rho < 0.01$, $\rho < 0.05$ level).

Table 2. Correlation Analysis

Correlations		Life Satisfaction	Resilience
Life Satisfaction	Pearson Correlation	1	,502**
	Sig. (2-tailed)		0
	N	191	191
Resilience	Pearson Correlation	,502**	1
	Sig. (2-tailed)	0	
	N	191	191

**_. Correlation is significant at the 0.01 level (2-tailed).

Lastly in order to test our hypothesis we conducted regression analysis. As seen in Table 3. below, results of the analysis (Adjusted R square:;248, Sig:;.000, t:7.970***) confirmed our assumption regarding the positive effects of resilience on life satisfaction of individuals.

Table 3. Regression Analysis

Life Satisfaction		
Independent Variable	Unstandardized	
	Beta	t
Resilience	0.652	7.970***
F	63,526	
Adjusted R Square	0.248	
Sign.	0.000	

According to the results of our field research, it is confirmed that in case individuals are more resilient they tend to be more satisfied with their life despite the traumatic and anxiety provoking process stemming from COVID-19. Moreover

our study revealed that men are more resilient and more satisfied with their lives. Moreover, although there is not a difference between life satisfaction variances between public and private sector workers, private sector employees tend to be more resilient. This may be stemming from the dynamics of private sector. It is more challenging and competitive, making individuals more resilient in the long run in order to maintain their careers' sustainability.

Discussion

Resilience explains the phenomenon of maintaining mental health in times of adversities (Kalisch et al., 2017:784). Resilience literature involves many studies confirming the positive effect of resilience in enhancing life satisfaction (Fredrickson et al., 2008; Abolghasemi and Varaniyab, 2010; Liu, Wang and Li., 2011; Mak, Ng, and Wong, 2011; Akbar et al., 2014 Shi, Wang, Bian and Wang, 2015). Previously it was widely accepted that resilience to trauma, a deep grief or anxiety evoking event was a rare inclination that can be seen only in extra healthy and psychologically powerful individuals (Bonanno, 2005; Baykal, 2018). In fact, during the normal course of life as in the case with COVID-19 we come across many risk, traumas and life threatening events, but latest researches show that more common reaction among adults exposed to such kinds of adversities events is a surprisingly healthy functioning experienced with the long-term potential for positive affect (Bonanno, 2005, Bonanno, Galea, Bucciarelli and Vlahov, 2007).

Our results are in parallel with the other recent studies investigating resilience-life satisfaction relationship during COVID-19 pandemic. The analyses made by Trzebiński, Cabański and Czarnecka (2020) in Poland revealed that stronger basic hope and meaningful life and satisfaction from life correlate with lower anxiety and stress related to COVID-19. Satici et al. (2020) examined the links among fear of COVID-19, stress, and life satisfaction and found statistically meaningful relationship between fear of COVID-19 and the two dependent variables. Yıldırım and Aslan (2020) also examined the relationship between resilience and psychological health during early stages of COVID-19 pandemic. Results of the study revealed that hope and resilience levels of individuals have important contributions to psychological health and subjective well-being. Similarly, our study confirmed that more resilient individuals will also have higher levels of satisfaction from their life during the COVID-19 pandemic supporting the above mentioned studies.

Managerial Implications

In this study, we have empirically proved that individuals can experience life satisfaction if they have the necessary psychological capitals to bounce back from adversity. Employers should be aware of the fact that resilient employees can better combat with the difficulties of life and they can be more satisfied with their life even in times of great anxiety evoking events like COVID-19 pandemic. Hence, they should give importance to both choosing resilient employees and boosting resilience of their existing employees.

Further Studies

Similar to Turkish case, The first COVID-19 case in Northern Cyprus was seen on March 10, 2020. Schools were closed on March 12 in Northern Cyprus and many precautionary measures were taken to prevent transmission of the disease. In this sense, the presidential election to be held in the Turkish Republic of Northern Cyprus on April 26, 2020 was postponed for 6 months. Total number of cases in the region is 894, and the total lost is 5 people. Numbers are much lower compared to Turkey, in which total number of cases is 359.00 and patients lost is 9727. In Further studies considering the geographical and cultural proximity and the differences between numbers, we will test the model for comparing the differences between Turkey and North Cyprus.

References

- Abolghasemi, A., & Varaniyab, S. T. (2010). Resilience and perceived stress: Predictors of life satisfaction in the students of success and failure. *Procedia Social and Behavioral Sciences*, 5, 748–752.
- Akbar, M., Akram, M., Ahmed, M., Hussain, M. S., Lal, V., & Ijaz, S. (2014). Relationship between resilience and life satisfaction among nomadic. *International Journal of Innovation and Applied Studies*, 6(3), 515.
- Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management*, 48(5), 677–693.
- Bardoel, E. A., Pettit, T. M., De Cieri, H., & McMillan, L. (2014). Employee resilience: an emerging challenge for HRM. *Asia Pacific Journal of Human Resources*, 52(3), 279-297.
- Barrios, J. M., & Hochberg, Y. (2020). Risk perception through the lens of politics in the time of the covid-19 pandemic. *National Bureau of Economic Research*.
- Baykal, E. (2018). Promoting Resilience Through Positive Leadership During Turmoil. *International Journal of Management and Administration*, 2(3), 34-48.
- Baykal, E. (2020a). Effects of Servant Leadership on Psychological Capitals and Productivities of Employees. *Ataturk University Journal of Economics & Administrative Sciences*, 34(2).
- Baykal, E. (2020b). A Comparison About Eudaimonic Wellbeing in Authentic and Spiritual Leadership. *Uluslararası Hukuk ve Sosyal Bilim Araştırmaları Dergisi*, 2(1), 61-73.
- Bentzen, J. (2020). In crisis, we pray: Religiosity and the COVID-19 pandemic. *Covid Economics*. 20(1), 52-109.
- Bentzen, J. S. (2019). *Why are some societies more religious than others*. In *Advances in the Economics of Religion* (pp. 265-281). Palgrave Macmillan, Cham.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience. *American Psychologist*, 59, 20–28.
- Bonanno, G. A. (2005). Resilience in the face of potential trauma. *Current Directions in Psychological Science*, 14(3), 135-138.
- Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology*, 75(5), 671.
- Brennen, J. S., Simon, F. M., Howard, P. N., & Nielsen, R. K. (2020). *Types, Sources, and Claims of Covid-19 Misinformation*. Reuters Institute.
- Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: positive emotions increase life satisfaction by building resilience. *Emotion*, 9(3), 361.
- Conway, A. N., & McDonough, S. C. (2006). Emotional resilience in early childhood: Developmental antecedents and relations to behavior problems. *Annals of the New York Academy of Sciences*, 1094, 272–277.
- Corman, V. M., Landt, O., Kaiser, M., Molenkamp, R., Meijer, A., Chu, D. K., Bleicker, T., Brünink, S., Schneider, J., Schmidt, M. L., Mulders, D. G., Haagmans, B. L., van der Veer, B., van den Brink, S., Wijsman, L., Goderski, G., Romette, J.-L., Ellis, J.,

- Zambon, M., & Drosten, C. (2020). Detection of 2019 novel coronavirus (2019-nCoV) by real-time RT-PCR. *Eurosurveillance* 25, 2000045.
- Çetin, F., & Basım, H. N. (2012). Örgütsel psikolojik sermaye: Bir ölçek uyarlama çalışması. *Amme İdaresi Dergisi*, 45(1), 121-137.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Folke, C., Carpenter, S. R., Walker, B., Scheffer, M., Chapin, T., & Rockström, J. (2010). Resilience thinking: integrating resilience, adaptability and transformability. *Ecology and Society*, 15(4), 20-30.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226.
- Fredrickson, B. L., & Branigan, C. A. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion*, 19(3), 313–332.
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*, 95, 1045–1062.
- Fredrickson, B. L., Tugade, M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84, 365–376.
- Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. *JAMA Internal Medicine*, 180(6), 817-818.
- George, D., & Mallery, P. (2012). SPSS Statistics 21: Step by Step. Boston: Allynand Bacon.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2013). *Multivariate Data Analysis*. Always learning.
- Ho, C. S., Chee, C. Y., & Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Ann Acad Med Singapore*, 49(1), 1-3.
- Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Research*, 112954.
- Kalisch, R., Baker, D. G., Basten, U., Boks, M. P., Bonanno, G. A., Brummelman, E., ... & Geuze, E. (2017). The resilience framework as a strategy to combat stress-related disorders. *Nature Human Behaviour*, 1(11), 784-790.
- Karatepe, O. M., & Karadas, G. (2015). Do psychological capital and work engagement foster frontline employees' satisfaction? *International Journal of Contemporary Hospitality Management*. 27(6), 1254-1278
- Kong, F., Wang, X., Hu, S., & Liu, J. (2015). Neural correlates of psychological resilience and their relation to life satisfaction in a sample of healthy young adults. *Neuroimage*, 123, 165-172.

- Li, S., Wang, Y., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of COVID-19 epidemic declaration on psychological consequences: a study on active Weibo users. *International Journal of Environmental Research and Public Health*, 17(6), 2032.
- Liu, Y., Wang, Z. H., & Li, Z. G. (2012). Affective mediators of the influence of neuroticism and resilience on life satisfaction. *Personality and Individual Differences*, 52(7), 833-838.
- Liu, Y., Wang, Z., Zhou, C., & Li, T. (2014). Affect and self-esteem as mediators between trait resilience and psychological adjustment. *Personality and Individual Differences*, 66, 92-97.
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior*, 27(3), 387-393.
- Mak, W. W. S., Ng, I. S. W., & Wong, C. C. Y. (2011). Resilience: Enhancing well-being through the positive cognitive triad. *Journal of Counseling Psychology*, 58, 610-617.
- Marques, A., Mota, J., Gaspar, T., & de Matos, M. G. (2017). Associations between self-reported fitness and self-rated health, life-satisfaction and health-related quality of life among adolescents. *Journal of Exercise Science & Fitness*, 15(1), 8-11.
- Masten, A. S., & Reed, M. J. (2002). *Resilience in Development*. In C. R. Snyder & S. J. Lopez (Eds). *Handbook of Positive Psychology* (pp. 74-8). London: Oxford University Press.
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., ... & Agha, R. (2020). The socio-economic implications of the coronavirus and COVID-19 pandemic: a review. *International Journal of Surgery*. 78(1), 185-193.
- Pargament, K. I. (2001). *The Psychology of Religion and Coping: Theory, Research, Practice*. Guilford press.
- Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The journal of positive psychology*, 3(2), 137-152.
- Peteet, J. R. (2020). COVID-19 Anxiety. *Journal of Religion and Health*, 1.
- Prayag, G., Spector, S., Orchiston, C., & Chowdhury, M. (2020). Psychological resilience, organizational resilience and life satisfaction in tourism firms: Insights from the Canterbury earthquakes. *Current Issues in Tourism*, 23(10), 1216-1233.
- Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General Psychiatry*, 33(2).
- Ramesh, N., Siddaiah, A., & Joseph, B. (2020). Tackling corona virus disease 2019 (COVID 19) in workplaces. *Indian Journal of Occupational and Environmental Medicine*, 24(1), 16.
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58, 307-321.
- Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*, 102083.

- Russo, S. J., Murrrough, J. W., Han, M.-H., Charney, D. S. & Nestler, E. J. (2012). Neurobiology of resilience. *Nat. Neurosci.* 15, 1475–1484
- Satici, B., Gocet-Tekin, E., Deniz, M. E., & Satici, S. A. (2020). Adaptation of the Fear of COVID-19 Scale: Its association with psychological distress and life satisfaction in Turkey. *International Journal of Mental Health and Addiction*, 1.
- Shanafelt, T., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *Jama*, 323(21), 2133-2134.
- Sher, L., 2020. COVID-19, anxiety, sleep disturbances and suicide. *Sleep Med.* <https://doi.org/10.1016/j.sleep.2020.04.019>
- Shi, M., Wang, X., Bian, Y., & Wang, L. (2015). The mediating role of resilience in the relationship between stress and life satisfaction among Chinese medical students: a cross-sectional study. *BMC Medical Education*, 15(1), 16.
- Slovic, P. (1987). Perception of risk. *Science*, 236(4799), 280-285.
- Strine, T. W., Chapman, D. P., Balluz, L. S., Moriarty, D. G., & Mokdad, A. H. (2008). The associations between life satisfaction and health-related quality of life, chronic illness, and health behaviors among US community-dwelling adults. *Journal of Community Health*, 33(1), 40-50.
- Tan, W., Hao, F., McIntyre, R. S., Jiang, L., Jiang, X., Zhang, L., ... & Zhang, Z. (2020). Is returning to work during the COVID-19 pandemic stressful? A study on immediate mental health status and psychoneuroimmunity prevention measures of Chinese workforce. *Brain, Behavior, and Immunity*. 0889-1591 <https://doi.org/10.1016/j.bbi.2020.04.055>
- Torales, J., O'Higgins, M., Castaldelli-Maia, J. M., & Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry*, 0020764020915212.
- Trzebiński, J., Cabański, M., & Czarnecka, J. Z. (2020). Reaction to the COVID-19 pandemic: the influence of meaning in life, life satisfaction, and assumptions on world orderliness and positivity. *Journal of Loss and Trauma*, 1-14.
- Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Drury, J. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 1-12.
- Wurm, S., Tomasik, M. J., & Tesch-Römer, C. (2008). Serious health events and their impact on changes in subjective health and life satisfaction: The role of age and a positive view on ageing. *European Journal of Ageing*, 5(2), 117-127.
- Yildirim, M., & Arslan, G. (2020). Exploring the associations between resilience, dispositional hope, subjective well-being, and psychological health among adults during early stage of COVID-19. *Current Psychology*, 1-11.
- Zhang, S. X., Wang, Y., Rauch, A., & Wei, F. (2020). Unprecedented disruption of lives and work: Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry Research*, 112958.