

The Role of Positivism and Intolerance of Uncertainty in the Students' Fear of Covid-19

Karim Sevari^{1*}

Abstract

Objective: Fear of Covid 19 is one of the topics that human beings experienced in 2019 that threatened the individuals' physical health and life, increased their stress, and triggers a wide range of psychological problems such as anxiety and depression. In the present study, the role of positivity and intolerance of uncertainty in the fear of developing Covid 19 was investigated.

Method: The study population included all the boy and girl university students studying in psychology, educational sciences, and counseling at Payame Noor University, Khuzestan Province. Among them, 269 students were voluntarily selected through the social network WhatsApp. The study method is correlational. The data were gathered with the assistance of positivism, uncertainty intolerance, and fear of Covid-19 questionnaires. SPSS software was used to analyze the data.

Result: The results of regression analysis indicated that positivism and intolerance of uncertainty are predictors of fear of Covid-19 that account for 16% of the variance of fear of Covid-19 ($P < 0.05$).

Conclusion: The present study indicates that in order to reduce the fear of Covid-19, shifting from the negative attitude to the positive attitude and intolerance of uncertainty to the tolerance of uncertainty is necessary.

Keyword: Fear of Covid-19, Positivism, Intolerance of Uncertainty.

Introduction

Corona Virus is one of the recent worries of human beings; it is a new infectious disease that broke out in 2019 in Wuhan in China (Zhu et al., 2020) and its outbreak was declared by World Health Organization (2020) as a public health emergency situation and also an international concern. With the outbreak of the Corona Virus in China in December 2019, and in Europe in February 2020, the national surveys indicated an intensive increase in fear and worries about the Virus (Asmundson & Taylor, 2020; McCarthy, 2020). Iran, like other countries, has been affected by Covid 19 (Alipour, Ghadami, Alipour & Abdollahzadeh, 2020).

A survey of 44,000 participants in early April 2020 in Belgium found that during the corona outbreak, 20% of people were anxious and 16% were depressed and the number of cases of Covid 19 was more than 55 million and the number of death was more than one million three hundred and twenty thousand (World Health Organization, 2020a). Covid 19 not only affects physical health, but also has adverse consequences for mental health (Fiorillo & Gorwood, 2020) and it has extremely challenged the experts of psychological health (Chang et al., 2020). Covid-19 is expected to have individual, national, and international effects (Pakpour & Griffiths, 2020). In this regard, some of the studies have shown that a pandemic disease like Covid-19 threatens the individuals' physical health and life, increases their

1. Associate Professor, Department of Educational psychology, Payame Noor University, Iran.

*Corresponding Author: Karim Sevari, Email: K_Sevari@pnu.ac.ir

stress level, and causes the stimulation of a wide range of psychological problems like anxiety and depression (Harper et al., 2020; Pakpour & Griffiths, 2020; Taylor et al., 2020).

Recent studies have reported that the fear of Covid-19 is accompanied by an increase in the level of depression, anxiety, and stress as well as a reduction in life satisfaction and resilience (Bitan et al., 2020; Chang et al., 2020; Doshi et al., 2020; Haktanir et al., 2020; Sakib et al., 2020; Satici et al., 2020). Some investigations indicated that suicide has been increased amongst the people of the US, Turkey, Italy, and France due to the fear of Covid-19 and the economic growth has been decreased (Bitan et al., 2020; Griffiths & Mamun, 2020; Mamun & Griffiths, 2020; World Health Organization, 2020b). The early reports are indicative of the increase in the negative attitudes towards the citizens of the countries that have been intensively influenced by the Corona Virus (Sorokowski et al., 2020).

Fear has always been one of the interesting subjects drawing the attention of a lot of researchers. The experts of this field agree that fear is necessary for human beings because it is an essential element for survival that works through creating a response to the potentially threatening events and incidents. In other words, fear is an emotional and adaptive feeling that arises in the face of a perceived real threat and prepares the body to respond appropriately in the form of physiological symptoms such as increased pulse, muscle stiffness, and rapid breathing in times of danger. Fear also causes some changes in the cognitive system, such as level of attention (Dozois et al., 2019). However, during the hard periods of the epidemic, fear can even increase anxiety and stress in healthy individuals and create short- or long-term psychological outcomes by intensifying the symptoms in the individuals inflicted with prior psychological disorders (Gao et al., 2020; Wang et al., 2020). Fear is also associated with worse mental

health outcomes such as depressive disorder, anxiety, post-traumatic stress disorder, and suicide (Brooks et al., 2020; Ornell et al., 2020, Tso & Park, 2020). In this regard, one of the most prominent examples of fear was the outbreak of Covid 19 disease, which affected life. In general, the prevalence of Covid 19 disease can lead to feelings of insecurity, anxiety, fear, depression, insomnia and sleep deprivation, behavioral problems, irritability, post-traumatic stress disorder, and obsessive-compulsive disorder, which can lead to many mental health problems (Ghosh et al., 2020; Alizadehfard & Safarineya, 2019 quoted by Shariatmadar and Ghaseminiyai, 2020). To answer the question of how we can prevent this dangerous virus we can refer to some variables such as positivism and intolerance of uncertainty.

Positivism is one of the concepts that according to new research evidence is associated with the fear of Covid 19 and has been considered in the positive psychology movement. Effort for embedding positivism in psychology was started by Martin Seligman, the head of the American Psychological Association (APA) (Seligman & Csikszentmihalyi, 2000). Until then, as warned by Abraham Maslow 50 years ago, psychology had succeeded in the negative realm instead of the positive realm (Maslow, 1954). In this regard, Diner et al. (1999) found that the ratio of studies examining positive psychological states to those who had studied negative psychological states was lower. McGrath (2004) stated that positive thinking is a concept that reflects an optimistic or positive or emotional attitude. According to him, positivism is a sort of attitude that includes thoughts, words, and images that contribute to growth and success. Negativity, on the other hand, consists of content that implies self-criticism or incompetence. In this regard, the investigations' results indicated that the individuals who think negatively would not find everything going on according to the plans and expect bad results. Therefore, people who think

negatively cannot cope with the daily stressors and are more likely to have mental and physical problems. Instead, the individuals who believe that they can reach their intended results, keep on their endeavors even if they are advanced slowly or difficult, whereas those who think that they cannot achieve their goals give up their efforts and deviate their goals (Scheier & Carver, 1993).

In regard of the importance of positivism, some individuals such as Fredrickson (2009) assert that positive thinking causes the provocation of good feelings in the individuals, changes the method of the mind's functioning, metamorphoses the future and curbs the negativities. According to Fredrickson (2009), being positive provides the individuals with this opportunity to take a step towards the next stage, opens the mind, and contributes to the process of constructing a good future. Being positive can uniquely cause the revitalization of ideologies, mental energies, relations and potentials of the individuals. Positivity is a developable property (Naragon & Watson, 2009). Some studies have shown that intolerance, uncertainty, depression, anxiety and stress can be considered as factors that negatively affect positivity (Satici et al., 2020a). In this regard, the results of the study by Bakioğlu et al. (2020) indicated that there is a positive relationship between the fear of Covid-19 and intolerance of Uncertainty, depression, anxiety, and stress and that there is a negative relationship between the fear of Covid-19 and positivism.

Intolerance of uncertainty during Covid-19 outbreak was an interesting subject that attracted the attentions of the researchers. Intolerance of uncertainty has been defined as the individual's tendency towards avoiding the acceptance of the negative happenings even though it seems unlikely (Dugas et al., 2001). Considering the fact that many of the life's aspects are full of uncertainty, intolerance of uncertainty is expected to be very challenging for the individuals.

In this regard, Buhr and Dugas (2002) believe that intolerance of uncertainty has four aspects. The first dimension is that uncertainty makes one feel incapable to act. Second, it is stressful and upsetting. The third aspect is that the unexpected happenings are negative hence they should be avoided. The fourth aspect is that the uncertainty about the future is unfair. In this regard, Satici et al. (2020b) believe that the intolerance of uncertainty is a structure related to fear and anxiety and it can be an indicator of the destructive and false appraisals and influence positivity (Satici et al., 2020b). In this regard, some experts like Carleton et al. (2007) realize intolerance of uncertainty as possessing two key and important elements, namely prospective anxiety and inhibitory anxiety. From their viewpoint, the prospective anxiety is pertinent to the anxiety in predicting the uncertainty while the inhibitory anxiety is related to the inactivity when faced with uncertainty.

Furthermore, if the events and incidents are considered uncontrollable, unpredictable, or uncertain and be associated with a large part of life such as parents, personal relationships, or success, the danger of stress is increased (Taylor, 2006). The increase in the intensity of fear plays a role in the increase in uncertainty intolerance. On the other hand, increasing the intolerance of uncertainty has a negative effect on the positive level. In this regard, some researchers believe that the individuals who experience intolerance of uncertainty are likely to consider the prospective negative incidents as threatening (Dugas et al., 2001). In general, one negative feeling causes another negative and makes the situation worse (Satici et al., 2020b). The results of studies suggest that the level of intolerance of uncertainty may increase the fear of Covid 19. In other words, the increase in fear may increase the level of intolerance of uncertainty, depression, anxiety, and stress (Satici et al., 2020a; Harper et al., 2020; Taylor et al., 2020). In this regard, the results

of the study by Bakioğlu et al. (2020) indicated that there is a positive relationship between the fear of Covid-19 and intolerance of uncertainty, depression, and stress and a negative relationship between the fear of Covid-19 and positivism. Since several variables are related to the fear of Covid-19 and considering that so far less research has been done in this regard in Iran, so variables such as positivity and intolerance of uncertainty can influence the fear of Covid-19, and by examining the intolerance of uncertainty and positivism, we can predict the fear of getting Covid 19.

As mentioned before, the fear of Covid-19 has many destructive effects on all aspects of human life, so we can change the negative attitude to a positive attitude and train decreasing the fear of Covid-19 in individuals. Therefore, the authorities can pave the way for the fight against this deadly virus with proper and comprehensive planning. On the other hand, not controlling the fear of Covid-19 can create the impression that this virus is not preventable and cause irreparable damage. Since Covid-19 is an unknown disease and many causes and factors are involved in its development, so knowing these effective factors can help prevent and limit its spread to some extent. A better and more understanding of such factors can pave the way for its control. In this regard, we can point to the role of positivism and intolerance of uncertainty. Considering the above introduction, the present study attempts to investigate this hypothesis that there is a relationship between intolerance of uncertainty and positivism with fear of Covid-19 and the fear of Covid-19 can be predicted by intolerance of uncertainty and positivism.

Method

Participants and Procedure

The research method is correlational. The study population included all the boy and girl students studying in psychology, educational sciences, and

counseling at Payam-e-Noor University, Khuzestan Province. Among them, 269 individuals (27 boys and 242 girls) were selected voluntarily through the social network of WhatsApp. The reason why the number of female subjects is more than boys is due to the higher ratio of the population of females compared to males. For data analysis, Pearson Correlation and Multivariate Regression in SPSS software were utilized and the following questionnaires were employed for data collection. Due to the fact that we are living in a severe outbreak of Covid-19 and the subjects were not available, a link was designed and provided to the subjects and they were asked to refer to the link and complete the questionnaires. Then, SPSS software was used to analyze the collected data. Also, the incomplete questionnaires were excluded from the analysis.

Measures

1. Fear of Covid-19

In order to measure fear of Covid-19, the questionnaire designed by Mertens, Gritson, Doichindam, Salmonic, and Inghard (2020) was employed. This questionnaire is comprised of 8 items from “completely disagree=1” to “completely agree=5” and is scored based on a five-point Likert scale. The reliability of the questionnaire was obtained .78 by its developers. The validity of the questionnaire was investigated through confirmatory factor analysis (RMSEA =.076), which reflects the questionnaire’s appropriate validity.

2. Positivism Questionnaire

To assess positivity, the questionnaire designed by Caprara et al. (2012) was used. It contains 7 items and 4 indicators (attention to one’s own self: 3 items; trust in future: 2 items; trust in others: 1 item, and life satisfaction: 1 item). The questionnaire is scored based on a five-point Likert scale from “generally inappropriate=1” to “completely

appropriate=5". The questionnaire's reliability was obtained .73 through Cronbach's alpha formula. The reliability of the questionnaire was also obtained .74 by the developers. The questionnaire's validity (in Iran) has been investigated and confirmed through confirmatory factor analysis (IFI=.93 and RMSEA=.079). In this study, the Cronbach alpha of this questionnaire in the Iran context was equal to .76.

3. Intolerance of Uncertainty Questionnaire

In order to assess intolerance of uncertainty, the questionnaire designed by Carleton et al. (2007) was used; it contains 12 items and covers two indicators (attention to one's own self: 3 items; trust in future:

questionnaire's validity in this study was evaluated and confirmed through confirmatory factor analysis (IFI=.90 and RMSEA=.076).

Ethical statement

Due to the fact that the students voluntarily participated in this study, they were informed that the data will be kept confidential and their names will be anonymous. The completely answered questionnaires and the field of study of students were among the inclusion criteria and incomplete questionnaires and the other majors were considered as exclusion criteria of the study.

Table 1. Descriptive indicators of research variables

Variable	M	SD	1	2	3
Fear of covid-19	25.93	6.68	-		
Positivism	29.09	5.05	-.23**	-	
Intolerance of Uncertainty	36.94	7.76	.38**	-0.19*	-

*P<0.05 , **P<0.01

2 items; trust in others: 1 item, and life satisfaction: 1 item). The questionnaire is scored based on a five-point Likert scale from "it is completely inconsistent with my personality=1" to "it is completely consistent with my personality=5". Carleton et al. (2007) calculated the questionnaire's reliability based on Cronbach's alpha method and a general alpha coefficient equal to .84 was obtained (.77 for the prospective anxiety and .88 for the inhibitory anxiety). In this study, the Cronbach alpha coefficient was equal to .85, which is sound acceptable. The

Results

Data showed that female students with 242 (90%) and male students with 27 (10%) had the highest and lowest frequency, respectively. Also, their average age was 24.

The results in Table 1 indicated that the fear of Covid-19 has the lowest mean value (25.93) and the intolerance of uncertainty has the highest mean (36.94). It also shows that the significance level of all variables is greater than the alpha value, $P > 0.05$, and this fact indicates the normal distribution of

Table 2. Correlation matrix between research variables

Predicting variables	F	P	R	R ²	B	T	P
Uncertainty intolerance	36.83	.000	.12	.34	.34	6.06	.000
Uncertainty intolerance	25.79	.000	.16		-.20	-3.61	.000
Positivism	.40						

research data. The results of Table 2 showed that there is a significant relationship between the variables, so referring to this table, it can be concluded that the fear of Covid-19 can be determined by the variables of positivism and intolerance of uncertainty.

The results from Kolmogorov-Smirnov test show that the Z value for the positivity variable was 1.04, for the uncertainty intolerance was 1.31, and for the fear of Covid-19 was 1.12, which is more than 5%, so the assumption of normality was observed. To evaluate the error of measurement, the Camera-Watson test was used. The value obtained in this study was 1.90 for the whole sample, and because it is in the range of 2.5-1.5, it indicates that the assumption of error of measurement is observed. In the present study, the multiple linearity of the variables was examined using the tolerance statistic and the variance inflation factor. The results showed that the tolerance statistic and the variance inflation factor for positivity were 1.62 and .61, for intolerance of uncertainty were 1.25 and .79, and for the fear of Covid-19 were 1.31 and .73, respectively. The results of regression analysis showed that 12% of fear of Covid-19 is explained by the intolerance of uncertainty and 4% of fear of Covid-19 is explained by positivism. In addition, the combination of these two variables could explain and predict 16% of fear of Covid-19.

Discussion and Conclusion

As was mentioned earlier, some studies have shown that the epidemic of Covid-19 threatens the physical health and life of people, increase their stress, and causes the arousal of a vast range of psychological problems such as anxiety and depression (Harper et al., 2020; Pakpour & Griffiths, 2020; Taylor et al., 2020). Recent studies have also reported that fear of Covid-19 is followed by elevation of the levels of depression, anxiety, and stress as well as the reduction of life satisfaction and resilience (Bitan et al., 2020; Chang et al., 2020; Haktanir et

al., 2020; Sakib et al., 2020; Satici et al., 2020b). In this regard, one of the distinct examples of fear was the outbreak of Covid-19 that influenced the lives of the individuals. The results of the investigations indicated that the Covid-19 outbreak can lead to the intensification of the feeling of insecurity, anxiety, fear, depression, insomnia and sleeping disorders, behavioral problems, irritability, post-traumatic stress, and compulsive-obsessive disorder, and cause psychological problems (Ghosh et al., 2020).

The results of the present study showed that there is a negative relationship between positivity and fear of getting Covid 19. The findings of Bacuglorial Korkmaz and Arkan Korkmaz (2020) and Satis et al. (a2020) support this finding. Studies of pandemics faced over time, such as SARS, Ebola, H1N1, Equine Flu, and the current Covid-19, show that the psychological effects of contagion and quarantine are not limited to the fear of contracting the virus (Barbisch et al., 2015). There are some elements related to the pandemic that affect individuals, such as separation from loved ones, loss of freedom, uncertainty about the advancement of the disease, and the feeling of helplessness (Li and Wang, 2020). These aspects might lead to dramatic consequences (Weir, 2020) such as the rise of suicide (Kawohl & Nordt, 2020).

The results showed that the two variables of intolerance of uncertainty (12%) and positivity (4%) together were able to explain and predict 16% of the variance of the variable of the fear of Covid-19. Explaining this finding, it can be said that people who experience intolerance of uncertainty are more likely to consider future negative events as threatening and unacceptable due to the low probability of actual occurrence of an event (Dugas, Gosselin, & Ladouceur, 2001). As a result, increasing the fear of Covid-19 may increase their levels of intolerance of uncertainty, depression, anxiety, and stress (Harper, Satchell, Fido & Latzman, 2020;

Satici, Gocet-Tekin, Deniz & Satici, 2020a; Taylor et al., 2020). On the other hand, positive thinking makes people with negative attitudes usually believe that things are not going according to their plan, and hence expect worse results (Bakioğlu, Korkmaz & Ercan, 2020; Satici, Gocet-Tekin, Deniz & Satici, 2020a; Scheier & Carver, 1993). Therefore, people thinking negatively cannot cope with the daily stressors and are more likely to suffer from mental and physical problems. But those who believe that they can achieve their desired results, even if it is slow or difficult, continue to strive, while those who think they cannot achieve their wishes, give up and deviate their goals (Fredrickson, 2009). In this regard, some believe that positive thinking leads to good feelings, changing the way their mind works, transforming the future, and restraining negative thinking. In other words, positivism helps to develop and open the mind and to build a good future. Positivism can revive the worldviews, mental energies, relationships, and potentials of individuals, so it can be developed. Therefore, by invoking the strengths of positive psychology, it can be used to deal with the fear of developing Covid-19 (Naragon & Watson, 2009). Experience shows that when the fear is high, the performance of the person decreases so that he loses his effort in doing things and when he overestimates the problem and does not have the ability to cope, he becomes careless to take the opportunities to deal with negative thoughts. In this regard, efforts should be made to strengthen the elimination of negative thoughts and strengthen the ability to deal with this issue.

The voluntary selection of university students through WhatsApp lowers the generalizability of the findings that is one of the limitations of this research. For further similar studies, it is recommended to do some studies at the universities to provide the setting of teaching positivism and reducing intolerance in difficult situations such as the fear of Covid-19. In

other words, the implication of the findings of this study for the authorities and decision-makers is that the prerequisite to the reduction of the thoughts and the fear of Covid-19 is a shift from negative to a positive attitude and from intolerance of uncertainty to tolerance of uncertainty.

As mentioned earlier, the fear of Covid-19 had unpleasant consequences for human society, so that everything was affected by this dangerous disease. In this regard, all human resources were used to prevent the progression and spread of this disease, and many efforts were made in this regard, which is hopeful. Given that many factors are associated with fear of Covid-19, based on this study, it can be concluded that intolerance of uncertainty and positivity can reduce the effects of the fear of Covid-19 to some extent. In other words, in order to reduce the fear of Covid-19, positivism can be developed and intolerance of uncertainty can be reduced.

References

- Alipour, A., Ghadami, A., Alipour, Z., & Abdollahzadeh, H. (2020). Preliminary validation of the Corona disease anxiety scale (CDAS) in the Iranian sample. *Quarterly Journal of Health Psychology*, 8 (32), 163- 175.
- Asmundson, G. J. G., & Taylor, S. (2020). Coronaphobia: Fear and the 2019-nCoV outbreak. *Journal of Anxiety Disorders*, 70, 102196.
- Bakioğlu, F., Korkmaz, O., & Ercan, H. (2020). Fear of Covid-19 and positivity: mediating role of intolerance of uncertainty, depression, anxiety, and stress. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00331-y>.
- Barbisch, D., Koenig, K., and Shih, F. (2015). Is there a case for quarantine? *Perspectives from SARS to Ebola*. *Dis. Med. Pub. Health Prepar.* 9, 547–553.
- Bitan, D. T., Grossman-Giron, A., Bloch, Y., Mayer, Y., Shiffman, N., & Mendlovic, S. (2020). Fear of Covid-19 scale: Psychometric characteristics,

- reliability and validity in the Israeli population. *Psychiatry Research*, 289,113100.
- Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920.
- Buhr, K., & Dugas, M. J. (2002). The intolerance of uncertainty scale: Psychometric properties of the English version. *Behavior Research and Therapy*, 40(8), 931–946.
- Caprara, G. V., Alessandri, G., Trommsdorff, G., Heikamp, T., Yamaguchi, S., & Suzuki, F. (2012). Positive orientation across countries. *Journal of Cross-Cultural Psychology*, 43 (1), 77–83.
- Carleton, R. N., Norton, M. A., & Asmundson, G. J. (2007). Fearing the unknown: a short version of the intolerance of uncertainty scale. *Journal of Anxiety Disorders*, 21, 105–117.
- Carleton, R. N., Sharpe, D., & Asmundson, G. J. G. (2007). Anxiety sensitivity and intolerance of uncertainty: Requisites of the fundamental fears? *Behavior Research and Therapy*, 45, 2307–2316.
- Chang, K.C., Hou, W. L., Pakpour, A.H., Lin, C. Y., & Griffiths, M.D. (2020). Psychometric testing of three COVID-19-related scales among people with mental illness. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00361-6>.
- Diener, E., Suh, E., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125 (2), 276–302.
- Doshi, D., Karunakar, P., Sukhabogi, J. R., Prasanna, J. S., & Mahajan, S. V. (2020). Assessing corona virus fear in Indian population using the fear of Covid-19 scale. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00332-x>.
- Dozois, D. J. A., Wilde, J. L., & Frewen, P. A. (2019). In: D. J. A. Dozois (Ed.), *Abnormal psychology perspectives* (pp. 95–125). Pearson.
- Dugas, M. J., Gosselin, P., & Ladouceur, R. (2001). Intolerance of uncertainty and worry: Investigating narrow specificity in a non-clinical sample. *Cognitive Therapy and Research*, 25, 551–558.
- Fiorillo, A., & Gorwood, P. (2020). The consequences of the Covid-19 pandemic on mental health and implications for clinical practice. *European Psychiatry*, 63 (1), e32.
- Fredrickson, B. (2009). *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. New York: Random House.
- Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020). Impact of Covid-19 on children: Special focus on psychosocial aspect. *Education*, 31, 34-42.
- Griffiths, M. D., & Mamun, M. A. (2020). Covid-19 suicidal behavior among couples and suicide pacts: Case study evidence from press reports. *Psychiatry Research*, 289, 113105.
- Haktanir, A., Seki, T., & Dilmac, B. (2020). Adaptation and evaluation of Turkish version of the fear of Covid-19 scale. *Death Studies*. <https://doi.org/10.1080/07481187.2020.1773026>.
- Harper, C.A., Satchell, L.P., Fido, D., & Latzman, R.D. (2020). Functional fear predicts public health compliance in the Covid-19 pandemic. *International Journal of Mental Health Addiction*. <https://doi.org/10.1007/s11469-020-00281-5>.
- Kawohl, W., and Nordt, C. (2020). Covid-19, unemployment, and suicide. *Lancet Psych*. 7, 389–390.
- Li, L. Z., and Wang, S. (2020). Prevalence and predictors of general psychiatric disorders and loneliness during Covid-19 in the United Kingdom. *Psych. Res*. 291, 0165–1781.
- Mamun, M. A., & Griffiths, M. D. (2020). First Covid-19 -19 suicide case in Bangladesh due to fear of Covid-19 and xenophobia: Possible suicide prevention strategies. *Asian Journal of Psychiatry*, 51, 102073.
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper.
- McGrath, P. (2004). The burden of RA positive:

- Survivors' and hospice patients' reflection on maintaining a positive attitude to serious illness. *Support Care Cancer*, 12, 25–33. <https://doi.org/10.1007/s00520-003-0547-4>.
- McCarthy, J. (2020). U.S. *Coronavirus Concerns Surge, Government Trust Slides*. <https://news.gallup.com/poll/295505/coronavirus-worries-surge.aspx>.
- Mertens, G., Gerritsen, L., Duijndam, S., Salemink, E., & Engelhard, I. M. (2020). Fear of the corona virus (Covid-19): Predictors in an online study conducted in March 2020. *Journal of Anxiety Disorders*, 74, 102258.
- Naragon, K., & Watson, D. (2009). In S. J. Lopez (Ed.), *The encyclopedia of positive psychology* (pp. 707–711). Malden: Wiley Blackwell.
- Ornell, F., Schuch, J.B., Sordi, A.O., & Paim Kessler, F. H. (2020). Pandemic fear' and Covid-19: Mental health burden and strategies. *Revista brasileiradepsiatria (Sao Paulo, Brazil: 1999)*, 42(3), 232–235.
- Pakpour, A. H., & Griffiths, M. D. (2020). The fear of Covid-19 and its role in preventive behaviors. *Journal of Concurrent Disorders*, 2(1), 58–63.
- Sakib, N., Bhuiyan, A. I., Hossain, S., A, Mamun, F., Hosen, I., Abdullah, A. H., & Sikder, M. T. (2020). Psychometric validation of the Bangla fear of Covid-19 scale: Confirmatory factor analysis and Rasch analysis. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00289-x>.
- Satici, B., Gocet-Tekin, E., Deniz, M. E., & Satici, S. A. (2020a). 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*. <https://doi.org/10.1007/s11469-020-00294-0>.
- Satici, B., Saricali, M., Satici, S.A., & Griffiths, M.D. (2020b). Intolerance of uncertainty and mental wellbeing: Serial mediation by rumination and fear of Covid-19. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00305-0>.
- Shariatmadar, A, and Ghaseminiyai, F (2021). The role of person-media interaction in the context of death news on perceived stress and coping with it during the quarantine of coronary heart disease. *health Psychology*. 10, (1) 21-44.
- Scheier, M. F., & Carver, C. S. (1993). On the power of positive thinking: The benefits of being optimistic. *Current Directions in Psychological Science*, 2(1), 26–30.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14.
- Sorokowski, P., Groyecka, A., Kowal, M., Sorokowska, A., Białek, M., Lebuda, I., Zdybek, P., & Karwowski, M. (2020). Information about pandemic increases negative attitudes toward foreign groups: a case of Covid-19 outbreak. *Sustainability*, 12 (12), 4912.
- Taylor, B. (2006). Vaccines and the changing epidemiology of autism. *Child Care and Health Development*, 32, 11–19.
- Taylor, S., Landry, C. A., Paluszek, M. M., Fergus, T. A., McKay, D., & Asmundson, G. J. G. (2020). Development and initial validation of the Covid-19 stress scales. *Journal of Anxiety Disorders*, 72, 102232.
- Tso, I.F., & Park, S. (2020). Alarming levels of psychiatric symptoms and the role of loneliness during the Covid-19 epidemic: A case study of Hong Kong. *Psychiatry Research*, 293, 113423.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 corona virus disease (Covid-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5).
- Weir, K. (2020). *Grief and Covid-19: Mourning our by gone lives*. Washington: American Psychological Association.
- World Health Organization (2020a). *WHO Corona Virus Disease (Covid-19) Dashboard Corona virus disease (Covid-19) outbreak*. Retrieved from <https://covid19>.

who.int/ (Accessed November 28, 2020).

World Health Organization (2020b). *WHO Director-General's opening remarks at the media briefing on Covid-19-18 March 2020*. Retrieved from <https://www.who.int/dg/speeches/detail/whodirector-general-s-opening-remarks-at-the-media-briefing-on-covid-19%2D%2D-18-march-2020> (Accessed 12 April 2020).

Zhu, N., Zhang, D., Wang, W., (2020) A novel corona virus from patients with pneumonia in China, 2019. *New England Journal of Medicine*, 382, 727–733.

