# Vol. 5, No. 1, Serial Number 11, p.19-30 Winter 2022

Received: 04/28/2021 Accepted: 08/23/2021 Paper Type: Research Paper

# Coronavirus Anxiety: The Predictive Role of Perfectionism and Self-compassion

Sepehr Pourkhalili\*<sup>1</sup>, Elnaz Sadeghi Chookami<sup>1</sup>, Abbas Abolghasemi<sup>2</sup>

#### **Abstract**

**Objective:** The Coronavirus not only affects physical health, but the outbreak of this virus can also have devastating psychological effects. To treat and diagnose, these impacts should be identified. This study aimed to investigate the role of perfectionism and self-compassion in predicting coronavirus anxiety.

**Method:** The sample consisted of 292 participants who responded online to the Coronavirus Anxiety Inventory, the Hewitt and Flett Multidimensional Perfectionism Scale (HF-MPS), and Self-Compassion Scale-Short Form (SCSSF). Data were analyzed by correlation and multiple regression analysis.

Results: The results have shown that Perfectionism and Self-compassion, predict coronavirus anxiety (P < 0.001). Also, mindfulness and common humanity, from self-compassion components, could predict coronavirus anxiety significantly (P<0.001). Besides, Self-oriented perfectionism (SOP), Other-oriented perfectionism (OOP), and Socially prescribed perfectionism (SPP) predicted coronavirus anxiety.

Conclusion: These findings indicate that perfectionism is effective in exacerbating Coronavirus anxiety, and selfcompassion is effective in modulating it. These variables can play an important role in general health policies, the diagnosis, prevention, and treatment of Coronavirus anxiety.

Keywords: Coronavirus, Anxiety, Perfectionism, Self-compassion, Health psychology.

#### **Introduction**

Coronavirus Disease 19, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Gorbalenya et al., 2020), gradually became a worldwide pandemic (World Health Organization, 2020). Despite the short time since the outbreak of the virus, it has given rise to several problems in human relations; medical, economic, social, and psychological in nature (Fard & Saffarinia, n.d.). Due to the high prevalence of the disease, concerns regarding Covid-19 infection affect the behavior of

people at risk (Amin, 2020). According to the Angus Reid Institution, fifty percent of Canadians have expressed concern about themselves or their loved ones being infected with the Coronavirus (Angus Reid Institution, 2020). In a poll in the United States, two-thirds of Americans considered the Coronavirus a "real threat." Fifty-six percent of Americans answered "very worried" and "worried" when asked about the virus (National Public Radio, 2020).

Taylor (2019), in his book, The Psychology of pandemics, citing the effects of the 2015 Ebola virus epidemic, states that the prevalence of fear could be worse than the outbreak of the disease, as the effects of fear and psychological problems are more sustained and widespread than the physical symptoms of the disease. The psychological effects

<sup>1.</sup> Department of General Psychology, Faculty of Human Science, Guilan University, Iran

<sup>2.</sup> Professor, Department of General Psychology, Faculty of Human Science, Guilan University, Iran

Corresponding Author: Sepehr Pourkhalili, Email: sepehr pour@ webmail.guilan.ac.ir

of the SARS and Ebola virus persisted in people for months after recovery. Psychological effects of such fears were even observed among Americans who were living far from affected regions (Taylor, 2019). Nonetheless, not all people respond to crises in the same way, and some personality traits increase a person's vulnerability during crises (Taylor, 2019). Research has shown that clinical depression, living in urban areas, being a woman, and having a friend or family member infected with the Coronavirus increases a person's level of anxiety (Duan et al., 2020). Femininity, being single, and low levels of education also increase the likelihood of psychological effects on individuals (Xiaoming et al., 2020). The role of Coronavirus anxiety in predicting psychological problems, optimism and pessimism, and psychological inflexibility has also been demonstrated (Arslan et al., 2020). Additionally, Numerous studies have shown that social support, symptoms of depression, stress, and anxiety play an important role in vulnerability (Fisher et al., 2020; Fusar-Poli et al., 2020; Teng et al., 2020).

that Coronavirus anxiety and coping strategies are different in athletic and non-athletic students. Consequently, choosing a coping strategy for such a crisis requires taking a variety of them into consideration. As flett and Zanganeh (2020) have pointed out, we are experiencing a period of uncertainty and unpredictability at this time, and such conditions increase individuals' need to find a way of dealing with the anxiety-inducing consequences of a pandemic. Different personalities, stress levels, and social support conditions, affects the choice of coping strategies (DeLongis & Holtzman, 2005). Perfectionism is a variable that plays a role in

Perfectionism is a variable that plays a role in intensifying anxiety. Perfectionism is described as a personality disposition characterized by striving for flawlessness and setting exceedingly high standards of performance, accompanied by overly critical evaluations of one's behavior (Stoeber & Childs, 2010). Perfectionism influences people's choice of strategies for coping with anxiety and stress (Stoeber,

2018b). In one study, positive Perfectionism was associated with positive coping styles and negative Perfectionism was associated with negative coping styles (Larijani & Besharat, 2010). The relationship between Perfectionism and threat appraisal and the avoidant coping style has also been reported (Stoeber & Rennert, 2008). In a study, based on the diathesisstress model, it was shown that socially prescribed Perfectionism is related to both diathesis and stress (Chang & Rand, 2000). Additionally, Perfectionism has a crucial role in choosing a coping strategy for overcoming Coronavirus anxiety. A study showed that there is a difference between adaptive and maladaptive Perfectionism in the choice of a coping strategy to deal with the Coronavirus (Iancheva et al., 2020). Adaptive Perfectionism was correlated with emotional calm, vigor, and cognitive reconstruction, while maladaptive Perfectionism was correlated with tension, fatigue, and depression. Griffiths (2020) also points out that parental burnout in the face of a Coronavirus crisis can lead to child maltreatment and long-term and short-term traumatic consequences, which, according to previous studies (Sorkkila & Aunola, 2020), is likely to be a result of social perfectionism. In this case, parents who work hard to achieve the high standards that they think society has prescribed for them put themselves at greater risk of burnout. Hewitt states in Perfectionism (2017) that one of the basic needs of perfectionists is guaranteed and sustainable security. Such a need stems from a lack of self-confidence, rooted in their attachment styles; In other words, being perfect is not a desire but a need for perfectionists, a need that brings them a sense of security (Hewitt et al., 2017). In the current situation, providing such security is a new challenge for perfectionists, a challenge that can lead them to mental disorders and increase their level of anxiety (Flett & Hewitt, 2020). Homami (2017), has found that there is a relationship between Perfectionism and disease anxiety. A meta-analysis also found that concern about mistakes, doubts, actions, and personal standards had a positive correlation with anxiety, but

self-oriented and socially prescribed perfectionisms were weakly correlated with anxiety (Smith et al., 2018). found that obsessive-compulsive symptoms increased during the Coronavirus period (Cox & Olatunji, 2020). Rodgers (2020) also believes that the outbreak of Coronavirus has serious and destructive effects on the symptoms of eating disorders. One of the factors that can reduce the severity of mental disorders is Self-compassion (Barnett & Sharp, 2016; Ferrari et al., 2018; Mehr & Adams, 2016). Self-compassion is a scale introduced by Neff (2003), in response to criticisms of self-esteem. Self-compassion consists of three components: Self-Kindness rather than self-criticism, Common Humanity rather than Isolation, and Mindfulness rather than over-identifying with themselves (K. Neff, 2003). Macbeth showed via meta-analysis that Self-compassion can increase mental health and reduce mental distress (MacBeth & Gumley, 2012). Besides this, other studies have also emphasized the role of Self-compassion in mental health (K. D. Neff, 2011; K. D. Neff et al., 2007; Raque-Bogdan et al., 2011). These studies show that compassion, as a factor of mental health, can be a barrier to stress in critical situations, and reduce the severity of environmental stressors on mental health. Sirois (2015) revealed that self-compassionate people choose more adaptive coping styles rather than maladaptive ones in the context of chronic illness. Additionally, Self-compassion prevents individuals' vulnerability to depression (Shapira & Mongrain, 2010). Neff (2005) also showed that Self-compassion was associated positively with emotion-focused coping styles and negatively associated with avoidance-oriented strategies (K. D. Neff et al., 2005). It was concluded that concluded that self-compassionate people tend to have positive cognition reconstructing and are less reliant on negative coping strategies like the avoidant styles (Allen & Leary, 2010). Hence, Self-compassion can act as a barrier to the negative mental effects of the Coronavirus and prevent psychological distress.

A study in India also showed that Self-compassion can make people resilient to the anxiety of the Coronavirus (Gupta et al., 2020). Other studies have shown the role of Self-compassion and increasing it in dealing with the psychological consequences of Coronavirus (Mohammadpour et al., 2020). Whilst there have been numerous studies on Perfectionism and self-compassion, few studies have linked these two variables specifically to illness anxiety. Besides, the role of Self-compassion in reducing illness anxiety is still controversial. Although results indicate high rates of anxiety, depression, obsession, and post-traumatic stress among people (Damirchi et al., 2020; González-Sanguino et al., 2020; Moghanibashi-Mansourieh, 2020), the source of Coronavirus anxiety is still not well-understood, and more studies are needed in this area (Lee et al., 2020). So, the purpose of this was to investigate the role of Perfectionism and Selfcompassion in predicting Coronavirus anxiety.

## Method

## **Participants and Procedure**

This descriptive study was conducted with a correlational design. The sample consisted of 292 participants, who voluntarily participated in the study. They participated in the study through an online survey. Based on sample size formulas in regression studies ( $N \ge 8k+50$ ) (Mayers, 2013), the sample size was considered 292 individuals. The sampling method in this study was voluntary. Participants participated in this study through an announcement. The announcement reassured them that their personal information would only be used for research purposes and would be kept with researchers. Apart from this, there is no other ethical consideration for this research. After preparing and compiling the research instruments, 3 questionnaires, namely CDAS, MPS, and SCS-SF, were entered into the Porsline, an online survey making website. After 1 month, 403 people completed 3 questionnaires, and the data were entered in SPSS 24 software,

of which 111 questionnaires were excluded from further analysis due to incomplete and outliers' data. Then the remaining data were analyzed using Pearson correlation coefficient and multiple regression analysis.

## Measures

1. Corona Disease Anxiety scale (CDAS): This scale has been provided and validated by Alipour et al. (2020) in an Iranian population in 2020. This scale has 18 statements and two sub-scales. Items 1 to 9 measure mental symptoms, and items 10 to 18 measure physical symptoms of Coronavirus anxiety. Items are rated on a 4-point scale ranging from 'Never' to 'Always'. The internal consistency is reported as acceptable, the first sub-scale's Cronbach Alfa for which is 0.88, and 0.86 for the second one. Also,  $\alpha$  for the total questionnaire is 0.92 (Alipour et al., 2020). As well, Cronbach's alfa in this study was .87.

2. Multidimensional Perfectionism scale (MPS): The multidimensional scale of Perfectionism was created by Hewitt and Felt in 1991. This scale consists of 30 items that measure the three components of self-oriented, other-oriented, and socially prescribed perfectionism. Each component consists of 10 statements that are answered by a 5-point Likert scale, ranging from "Strongly disagree" to "Strongly agree". In a validation study, in a sample of 480 Iranian students, Besharat (2005) reported adequate and satisfactory internal consistency, the Cronbach's Alfa for which was 0.89 for self-oriented perfectionism, 0.83 for other-oriented perfectionism, and 0.78 for socially prescribed (Besharat, 2005). Cronbach's alfa in this study was .87.

3. Self-Compassion Scale-Short Form (SCS-SF): The Self-compassion scale-short form has 12 statements that have been derived from the Self-compassion scale (2003). This scale has six subscales: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness, and Over-Identification. Items are rated on a 5-point scale ranging from 'Almost Never' to 'Almost Always'.

The internal consistency of the scale was reported by Khanjani (2016). The  $\alpha$  value for the total scale was 0.91, and 0.83, 0.87, 0.91, 0.88, 0.92, and 0.77 for each sub-scale respectively (Khanjani et al., 2016). Cronbach's alpha in this study was lower than .5.

#### **Results**

The study included 292 (206 female, 85 male, and 1 other, and age M= 27.89 SD= 10.69) individuals who voluntarily participated in this study. The sample of the study also included 51% students and, 16.8% self-employees, 12.3% employees, 9.9% housewives, 4.5% people who had a job related to educational fields, 3.8% jobless, 1.7% people who had a job related to hospitals and healthcare. Besides, 37.8% had a high-school diploma or lower, 39.6% had a bachelor's degree, 16.7% had a master's degree, and 5.9% had a doctorate or higher.

As the first step in conducting regression analysis, the normality of distribution was tested with the Kolmogorov-Smirnov test. As shown in Table 1, none of the variables have a normal distribution. However, Kline (2015) states that by referring to the kurtosis and skewness data, it is possible to confirm this assumption in such a way that the kurtosis is less than 8 and the skewness is less than 3 (Kline, 2015). Thus, it can be said that the data have a normal distribution.

Next, the correlation between variables and predictors was measured. Table 2 shows that almost all of the variables are significantly associated with each other.

Three regression analyses with the enter method were conducted to analyze the role of Perfectionism and Self-compassion. In the first analysis, Perfectionism and Self-compassion were examined. At first, two statistical assumptions of Variance Inflation Factor (VIF) and Tolerance were checked. To establish the assumption of variance inflation factor, values greater than 10 are not acceptable. Additionally, to establish the tolerance assumption, the values must be between 0 and 1 (49). Another assumption in

regression analysis is Durbin-Watson, the best values of which must be between 1 to 3. Regarding Table 5, all assumptions have been met. Also, keeping in mind that F=42.3 and P<.001, the linearity assumption of regression analysis has been met. Finally, by taking  $\beta$  values into consideration, Self-compassion ( $\beta$ =0.29) and Perfectionism ( $\beta$ =0.15) are able to predict the Corona Disease Anxiety.

Also, in order to investigate the role of Perfectionism and Self-compassion subscales, each scale was analyzed separately by the Enter method. As shown in Table 3, and as stated earlier, the assumptions of addition, Self-oriented Perfectionism ( $\beta$ =0.23), Other-oriented Perfectionism and Socially prescribed Perfectionism ( $\beta$ =0.17), and Perfectionism ( $\beta$ =0.15) can respectively predict corona disease anxiety (p<.001).

To investigate the role of Self-compassion components, regression analysis was performed by the Enter method and the following results were obtained (Table 5). As it can be seen, Durbin-Watson's assumptions, Variance Inflation Factor, and Tolerance index are met in all cases. Also, due to the fact that F = 42.3 P < .001, the linearity

Table 1. Means, Standard Deviations, and Normality test of data

Variables	M	Sd.	Minimum	Maximum	Kurtosis	Skewness	K-S	P
Coronavirus anxiety	30.18	7.05	18	62	3.00	1.38	0.11	0.00
Coronavirus Mental Anxiety	18.85	4.97	9	36	1.11	0.90	0.11	0.00
Coronavirus Somatic Anxiety	11.32	2.87	9	28	7.92	2.34	0.22	0.00
Perfectionism	87.47	15.22	45	125	-0.35	0.21	0.04	0.02
Self-Oriented	29.35	7.02	13	49	-0.46	0.34	0.08	0.00
Other-Oriented	29.07	6.11	10	46	-0.11	0.00	0.06	0.00
Socially Prescribed	28.87	8.02	13	46	-0.54	0.20	0.06	0.00
Self-Compassion	38.26	4.61	24	50	1.20	-0.22	0.05	0.00
Self-Kindness	6.82	1.82	11 3,11	10	-0.67	-0.18	0.15	0.00
Self-Judgment	6.04	2.06	2	10	-0.83	-0.06	0.11	0.00
Common Humanity	6.66	1.83	علوم السا	10	-0.75	-0.18	0.15	0.00
Isolation	5.66	2.07	2	10	-0.83	-0.05	0.11	0.00
Mindfulness	7.17	1.95	2	10	-0.73	-0.33	0.18	0.00
Over Identification	5.88	1.99	2	10	-0.87	0.02	0.11	0.00

Tolerance, VIF, and Durbin-Watson had acceptable values for Perfectionism subscales. Besides, considering that F=21.19 and P<001, the Linearity assumption in regression analysis was met. Taking the adjusted R2 into account, Perfectionism predicts 17% of Corona Disease Anxiety variances. In

assumption of regression analysis has been met. However, not all subscales could predict anxiety. Rather, only Mindfulness and Common Humanity can significantly predict anxiety. Taking the adjusted R2 into consideration, Mindfulness and Common Humanity are able to predict 22% of Corona Disease Anxiety variances. Mindfulness ( $\beta$ = -0.78 P<.001) and Common Humanity ( $\beta$ =-0.49 P<0.05) respectively predict Corona Disease Anxiety.

# **Discussion and Conclusion**

The purpose of this study was to investigate the role of perfectionism and self-compassion in predicting coronavirus anxiety. The results revealed that all dimensions of Perfectionism have a positive relationship with coronavirus anxiety. Also, all dimensions of self-compassion were significantly correlated with all three dimensions of perfectionism. Self-kindness, common humanity, and mindfulness had a negative association with perfectionism, and self-judgment, isolation, and over-identification had a positive correlation with perfectionism. All sub-scales of perfectionism were correlated with Coronavirus anxiety. However, only mindfulness and common humanity from self-compassion could make significant predictions of Coronavirus anxiety. The results of this study are in line with other studies conducted by Gupta (2020) and Homami (2017). These researcher's findings show that perfectionism and self-compassion play a crucial role in illness anxiety and Coronavirus anxiety.

This study revealed that perfectionism is one of the variables that can predict Coronavirus anxiety. Our results are in line with another study, which was conducted by Gupta (2020). The literature on the relationship between Perfectionism and mental health presents different results. While a study indicated that increasing personal standards among students decreases their levels of depression (Accordino et al., 2000), another study revealed that self-oriented Perfectionism was positively correlated with depression (Flett et al., 2011). A study investigating the relationship between Perfectionism and physical health, showed that self-oriented Perfectionism had a positive correlation with physical health, while this relation was negative in socially prescribed Perfectionism (Molnar et al., 2006). Stoeber (2018) believed that these discordant results may indicate the multi-dimensionality of Perfectionism.

He states that these dimensions should be considered when studying Perfectionism. All dimensions of Perfectionism can be divided into Striving

Table 2. Bivariate correlation among MPS, SCS-SF, and CDAS (N=292)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Coronavirus anxiety	1	2	/·			10.11	1 6,1					
Perfectionism	0.42**	13	ت در	ومطالعا	التاتي	كأ وعلوم	7,0%					
Self-Oriented	0.35**	0.80**	1	201	معرعله	6.11	,					
Other-Oriented	0.30**	0.75**	0.47**	1		.00	4					
Socially Prescribed	0.29**	0.72**	0.31**	0.27**	1							
Self-Compassion	-0.06	0.24**	0.25**	0.07	0.20**	1						
Self-Kindness	-0.26**	-0.25**	-0.20**	-0.18**	-0.18**	0.34**	1					
Self-Judgment	0.22**	0.39**	0.36**	0.24**	0.25**	0.35**	-0.37**	1				
Common Humanity	-0.30**	0.28**	-0.26**	-0.16**	-0.21**	0.30**	0.42**	-0.31**	1			
Isolation	0.19**	0.39**	0.34**	0.15**	0.35**	0.52**	-0.21**	0.30**	-0.31**	1		
Mindfulness	-0.34**	-0.29**	-0.20**	-0.19**	-0.26**	0.38**	0.39**	-0.25**	0.37**	-0.22**	1	
Identification	0.27**	0.52**	0.46**	0.25**	0.44**	0.46**	-0.29**	0.34**	-0.33**	0.56	-0.31**	1

Perfectionism and Concern Perfectionism, the first of which has a positive relationship with health and the second of which a negative relation. Interestingly, we found new results. Stoeber (2018), in response to the question of how Perfectionism endangers people's mental health, states that those Perfectionists who are the most prone to health problems and stress are those who show a Perfectionist reaction. These people are constantly checking the perfection of events in response to the situations and needs of their daily lives, thus, if their experiences are not perfect, they feel self-inadequate, which results in feelings of shame or guilt and stress (Stoeber, 2018a). Flett (2016) also acknowledges that Perfectionism is closely related to stress, and perfectionists are more sensitive to stressors, so they become anxious when confronted with threatening ones (Flett et al., 2016). Given the above, it can be argued that the Coronavirus anxiety experienced by perfectionists is the result of their obsession with examining themselves and their environment during their daily lives to see if they are perfect, and because they are more sensitive, they are more prone to anxiety than non-Perfectionists. The results of this study are explained by the fact that people prioritize their health concerns in the

days of the Coronavirus. As such, when self-oriented perfectionism increases in individuals, Coronavirus anxiety also increases. self-oriented Perfectionism forces people to work harder by constantly creating higher standards. However, not only do such efforts fail at removing the person from threatening situations, but they also cause fatigue and exhaustion. In this situation, self-oriented perfectionism does not guarantee security and health, but instead puts perfectionists in a vicious challenge to fight a virus that can only be overcome by following specific protocols, and it is not necessary to set high standards to fight it. Such standards, as shown, reduce the mental health of individuals in this situation. Since overcoming the Coronavirus requires collective mobilization, perfectionistic reactivity toward others can be a problem for perfectionists. Other-oriented perfectionists, who expect those around them to be perfect, can put massive pressure on themselves and others. Such pressure forces them to try to fight individually and to stay away from dangerous situations as much as possible, or to make efforts and activities to eliminate the danger. These efforts and activities ultimately lead not to the elimination of danger, threat, and pressure, but in fatigue, burnout,

**Table 3.** Results of the regression analysis of MPS and SCS-SF in predicting CDAS

Variables	β	SE	В	T ///	P*,	Tolerance	VIF	$\mathbb{R}^2$	F	P	DW
MPS (Perfectionism)	0.15	0.26	0.33	6.07	0.00	0.86	1.15				
SCS-SF				120	علومرا	20/0. 10	/	0.22	42.37	<.001	1.24
(Self-	-0.29	0.69	-0.23	<b>-</b> 4.19	0.00	0.86	1.15				
compassion)											
Self-oriented	0.23	0.63	0.23	3.74	0.00	0.73	1.35				
Other-oriented	0.17	0.71	0.14	2.40	0.01	0.75	1.32	0.17	21.19	<.001	1.19
Socially prescribed	0.17	0.05	0.17	2.40	0.00	0.88	1.13	0.17	21.19	<.001	1.19
Self-Kindness	-0.25	0.24	-0.06	-1.04	0.29	0.70	1.41				
Self-Judgment	0.20	0.20	0.06	0.99	0.31	0.77	1.29				
Common Humanity	-0.49	0.24	-0.13	-2.04	0.04	0.71	1.39	0.16	10.28	<.001	1.12
Isolation	0.02	0.22	0.00	0.11	0.91	0.65	1.52				
Mindfulness	-0.78	0.22	-0.21	-3.54	0.00	0.76	1.31				
Identification	0.40	0.24	0.11	1.66	0.98	0.61	1.64				

and anxiety.

The results also showed that the less selfcompassionate people are, the greater Coronavirus anxiety is. This result is in line with other studies related to Coronavirus anxiety (Shapira & Mongrain, 2010). Regardless of the Coronavirus, other studies have indicated that Self-compassion plays an important role in cognitive resilience and resistance to psychopathologies. Trompetter (2017) showed that high levels of Self-compassion moderate the relation between negative emotional states and psychopathologies. He argues that this may be due to the robustness of self-compassionate people's mental health, which leads to increased Self-compassion and, consequently, resilience to mental disorders (Trompetter et al., 2017). Selfcompassion can also be a factor in reducing stress by neutralizing negative emotions and creating positive feelings such as kindness and bonding, that act as an emotion regulation strategy (K. D. Neff et al., 2005). It has been shown that Self-compassion can reduce social anxiety by influencing the choice of coping strategies (Ștefan, 2019). Finally, Studies suggest that Self-compassion can directly or indirectly reduce anxiety. In this study, it was showed that Self-compassion could predict a low amount of Coronavirus anxiety. However, not all dimensions of Self-compassion had a meaningful role in predicting anxiety. Only Mindfulness and Common Humanity could predict Coronavirus anxiety significantly. This result is in agreement with the findings of other studies (Saricali et al., 2020; Wielgus et al., 2020). A study has revealed that Mindfulness can decrease Coronavirus pandemic related distress (Conversano et al., 2020). Other research has shown that Mindfulness is closely related to mental health (Greeson, 2009). By reducing rumination (negative mental conflict, about the past or future) and worrying (feeling anxious about real or potential problems), improving working memory capacity (decision-making power and coping strategies), and regulating emotions (ability to manage negative

emotions), Mindfulness reduces anxiety symptoms and protects the person against psychopathologies (Arch & Craske, 2006; Desrosiers et al., 2013; Jha et al., 2010). Also, Coffey states that by reducing the dependency of a person's happiness on conditions, Mindfulness leads to a reduction of anxiety (Coffey & Hartman, 2008). In addition, Roberts (2010) showed that mindfulness results in more physical activity, stronger health perception, less binge eating, better sleep quality, less smoking, and fewer sexual partners throughout life (Roberts & Danoff-Burg, 2010). It has also been shown that when people are not mindful of their pain, they are reluctant to accept it. Such rejection can manifest itself in two ways: as conscious avoidance (Hayes et al., 1996), and as emotional resistance to pain (K. Neff, 2003). Neff defines Mindfulness as a balanced state of awareness in which thoughts and feelings are nonjudgmentally observed, as they are, and without avoiding or changing them, but also without exaggerating them or getting carried away by them (K. D. Neff et al., 2005). Thus, it can be said that during the Coronavirus pandemic, Mindfulness can lead to better mental health by increasing healthy and positive behaviors, which protects the person against Coronavirus anxiety. In other words, although mindful people experience a normal amount of anxiety during Coronavirus pandemic and worry about themselves and their loved ones, they address their behaviors by observing their thoughts and feelings non-judgmentally, which leads to increased mental and physical health. Hence, they experience a lower level of anxiety.

Common Humanity is another component of self-compassion. Neff defines Common Humanity as seeing one's experiences as part of the larger human experience, rather than seeing them as separating and isolating (K. Neff, 2003). Instead of isolating himself from other human beings, he envisions his suffering and perhaps his successes and victories as a part of a global experience that is not unique to him, and is common to all members of the global community. In

this study, it was indicated that common humanity can predict Coronavirus anxiety. This result shows that the knowledge that this crisis is a global issue, and that almost all countries are dealing with it, is a source of calm and a factor against the psychological effects of the pandemic. Knowing others as partners in our sufferings can reduce the anxiety of the Coronavirus. Although the results of previous studies show that Self-compassion and its dimensions play a role in predicting health, only common humanity and mindfulness were able to significantly predict Coronavirus anxiety in this study. This may be due to cultural differences or the limitations of the present study. However, such a finding needs further investigation.

Overall, the results of this study, along with other studies, show that, in addition to dealing with the physical consequences of the Coronavirus, society is also experiencing its psychological impacts. While Perfectionism can be considered as a predisposing factor in this period, self-compassion, as a health factor, can protect individuals' mental health and prevent Coronavirus anxiety.

Despite the consistent and novel explanations obtained from this research, there were some limitations to this research which should be mentioned. First, the sample size was relatively small for a regression study. As such, it is suggested that future studies utilize a larger population. Also, participants answered questions through an online survey, which could influence the reliability of participants' responses. Such an approach also impairs the generalizability of the data due to the fact that the localities from which the respondents participated in the study are not part of the dataset. As a result, it is suggested that other sampling and research methods be used in future studies.

The results of this study can be beneficial in the prediction of Coronavirus anxiety. Regarding the results, perfectionism and its dimensions have a crucial role in Coronavirus anxiety. As such, Coronavirus anxiety can be prevented by identifying

perfectionists and providing related solutions for them. Besides, it was indicated that Self-compassion can play a role in predicting Coronavirus anxiety. These results may influence predicting and treatment of Coronavirus anxiety.

## References

- Accordino, D. B., Accordino, M. P., & Slaney, R. B. (2000). An investigation of perfectionism, mental health, achievement, and achievement motivation in adolescents. *Psychology in the Schools*, *37*(6), 535–545. https://doi.org/https://doi.org/10.1002/1520-6807(200011)37:6<535::AID-PITS6>3.0.CO;2-O
- 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. https://doi.org/10.30473/hpj.2020.52023.4756
- Allen, A. B., & Leary, M. R. (2010). Self-Compassion, Stress, and Coping. Social and Personality Psychology Compass, 4(2), 107–118. https://doi.org/10.1111/j.1751-9004.2009.00246.x
- Amin, S. (2020). The psychology of coronavirus fear: Are healthcare professionals suffering from corona-phobia? *International Journal of Healthcare Management*, 1–8.
- Angus Reid Institution. (2020). Half in Canada now worried about risk of infection among friends, family and community. http://angusreid.org/coronavirus-march-2020/
- Arch, J. J., & Craske, M. G. (2006). Mechanisms of mindfulness: Emotion regulation following a focused breathing induction. *Behaviour Research and Therapy*, 44(12), 1849–1858.
- Arslan, G., Y\ild\ir\im, M., Tanhan, A., Bulu\cs, M., & Allen, K.-A. (2020). Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the Coronavirus Stress Measure. *International Journal of Mental Health and Addiction*, 1.
- Bagheri Sheykhangafshe, F., Tajbakhsh, K., & Abolghasemi, A. (2020). Comparison of Covid-19 Anxiety, Coping Styles and Health Anxiety in Athletic and Non-Athletic Students. *Sport Psychology Studies*, *9*(32), 283–306. https://doi.org/10.22089/spsyj.2020.9377.2027
- Barnett, M. D., & Sharp, K. J. (2016). Maladaptive perfectionism, body image satisfaction, and disordered eating behaviors among U.S. college women: The mediating role of self-compassion. *Personality and Individual Differences*, 99, 225–234. https://doi.org/

- https://doi.org/10.1016/j.paid.2016.05.004
- Besharat, M. A. (2005). Exploratory Analysis of the Relationship Between Perfectionism and Personality. *Educational And Psychology Studies*, *21*(3).
- Chang, E. C., & Rand, K. L. (2000). Perfectionism as a predictor of subsequent adjustment: Evidence for a specific diathesis–stress mechanism among college students. In *Journal of Counseling Psychology* (Vol. 47, Issue 1, pp. 129–137). American Psychological Association. https://doi.org/10.1037/0022-0167.47.1.129
- Coffey, K. A., & Hartman, M. (2008). Mechanisms of action in the inverse relationship between mindfulness and psychological distress. *Complementary Health Practice Review*, *13*(2), 79–91.
- Conversano, C., Di Giuseppe, M., Miccoli, M., Ciacchini, R., Gemignani, A., & Orrù, G. (2020). Mindfulness, Age and Gender as Protective Factors Against Psychological Distress During COVID-19 Pandemic. Frontiers in Psychology, 11, 1900. https://doi.org/10.3389/ fpsyg.2020.01900
- Cox, R. C., & Olatunji, B. O. (2020). Linking insomnia and OCD symptoms during the coronavirus pandemic: Examination of prospective associations. *Journal of Anxiety Disorders*, 77, 102341. https://doi.org/10.1016/j. janxdis.2020.102341
- Damirchi, E. S., Mojarrad, A., Pireinaladin, S., & Grjibovski, A. M. M. (2020). The Role of Self-Talk in Predicting Death Anxiety, Obsessive-Compulsive Disorder, and Coping Strategies in the Face of Coronavirus Disease (COVID-19). *Iranian Journal of Psychiatry*.
- DeLongis, A., & Holtzman, S. (2005). Coping in Context: The Role of Stress, Social Support, and Personality in Coping. *Journal of Personality*, 73(6), 1633–1656. https://doi.org/10.1111/j.1467-6494.2005.00361.x
- Desrosiers, A., Vine, V., Klemanski, D. H., & Nolen-Hoeksema, S. (2013). Mindfulness and emotion regulation in depression and anxiety: common and distinct mechanisms of action. *Depression and Anxiety*, 30(7), 654–661. https://doi.org/10.1002/da.22124
- Duan, L., Shao, X., Wang, Y., Huang, Y., Miao, J., Yang, X., & Zhu, G. (2020). An investigation of mental health status of children and adolescents in china during the outbreak of COVID-19. *Journal of Affective Disorders*, 275, 112–118. https://doi.org/https://doi.org/10.1016/j. jad.2020.06.029
- Fard, S. A., & Saffarinia, M. (n.d.). The prediction of mental health based on the anxiety and the social cohesion that caused by Coronavirus.
- Ferrari, M., Yap, K., Scott, N., Einstein, D. A., & Ciarrochi, J. (2018). Self-compassion moderates the perfectionism

- and depression link in both adolescence and adulthood. *PloS One*, *13*(2), e0192022.
- Fisher, P. L., Salmon, P., Heffer-Rahn, P., Huntley, C., Reilly, J., & Cherry, M. G. (2020). Predictors of emotional distress in people with multiple sclerosis: A systematic review of prospective studies. *Journal of Affective Disorders*, 276, 752–764. https://doi.org/https://doi.org/10.1016/j. jad.2020.07.073
- Flett, G. L., & Hewitt, P. L. (2020). The perfectionism pandemic meets COVID-19: Understanding the stress, distress and problems in living for perfectionists during the global health crisis. *J. Concurr. Disord*, 2, 80–105.
- Flett, G. L., Nepon, T., Hewitt, P. L., & Fitzgerald, K. (2016).
  Perfectionism, Components of Stress Reactivity, and Depressive Symptoms. *Journal of Psychopathology and Behavioral Assessment*, 38(4), 645–654. https://doi.org/10.1007/s10862-016-9554-x
- Flett, G. L., Panico, T., & Hewitt, P. L. (2011). Perfectionism, Type A Behavior, and Self-Efficacy in Depression and Health Symptoms among Adolescents. *Current Psychology*, 30(2), 105–116. https://doi.org/10.1007/s12144-011-9103-4
- Flett, G. L., & Zangeneh, M. (2020). Mattering as a vital support for people during the COVID-19 pandemic: the benefits of feeling and knowing that someone cares during times of crisis. *Journal of Concurrent Disorders*, 2(1), 106–123.
- Fusar-Poli, P., Brambilla, P., & Solmi, M. (2020). Learning from COVID-19 pandemic in northen italy: Impact on mental health and clinical care. *Journal of Affective Disorders*, 275, 78–79. https://doi.org/https://doi.org/10.1016/j.jad.2020.06.028
- González-Sanguino, C., Ausín, B., Castellanos, M. Á., Saiz, J., López-Gómez, A., Ugidos, C., & Muñoz, M. (2020). Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain, Behavior, and Immunity*, 87, 172–176. https://doi.org/https://doi.org/10.1016/j.bbi.2020.05.040
- Gorbalenya, A. E., Baker, S. C., Baric, R. S., de Groot, R. J.,
  Drosten, C., Gulyaeva, A. A., Haagmans, B. L., Lauber,
  C., Leontovich, A. M., Neuman, B. W., Penzar, D.,
  Perlman, S., Poon, L. L. M., Samborskiy, D. V, Sidorov,
  I. A., Sola, I., Ziebuhr, J., & Viruses, C. S. G. of the I.
  C. on T. of. (2020). The species Severe acute respiratory
  syndrome-related coronavirus: classifying 2019-nCoV
  and naming it SARS-CoV-2. *Nature Microbiology*, *5*(4),
  536–544. https://doi.org/10.1038/s41564-020-0695-z
- Greeson, J. M. (2009). Mindfulness Research Update: 2008. Complementary Health Practice Review, 14(1), 10–18. https://doi.org/10.1177/1533210108329862

- Griffith, A. K. (2020). Parental Burnout and Child Maltreatment During the COVID-19 Pandemic. *Journal* of Family Violence. https://doi.org/10.1007/s10896-020-00172-2
- Gupta, V. K., Singh, M. A., & Others. (2020). Can Self-compassion Be A Resilient Factor For Psychological Distress? Relationship Of Self-compassion With Psychological Distress During Lockdown Due To Novel Coronavirus Disease (Covid-19) Outbreak In India. Journal Of Critical Reviews, 7(13), 2551–2561.
- Hayes, S. C., Wilson, K. G., Gifford, E. V, Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64(6), 1152.
- Hewitt, P. L., Flett, G. L., & Mikail, S. F. (2017). Perfectionism: A relational approach to assessment, treatment, and conceptualization. *New York: Guilford*.
- Homami, R., Matlabi, M., Khademi, Z., Sheykhloo, R., & Seif, A. (2017). The Relationship Between Perfectionism And Disease Anxiety In Gastrointestinal Patients With Gastroesophageal Reflux Disease In Miandoab. *The Journal of New Advances in Behavioral Sciences*, 2(6), 53–65.
- Iancheva, T., Rogaleva, L., Garc'\'ia-Mas, A., & Olmedilla, A. (2020). PERFECTIONISM, MOOD STATES, AND COPING STRATEGIES OF SPORTS STUDENTS FROM BULGARIA AND RUSSIA DURING THE PANDEMIC COVID-19. *Journal of Applied Sports Sciences*, *1*, 22–38.
- Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L., & Gelfand, L. (2010). Examining the protective effects of mindfulness training on working memory capacity and affective experience. *Emotion (Washington, D.C.)*, 10(1), 54–64. https://doi.org/10.1037/a0018438
- Khanjani, S., Foroughi, A. A., Sadghi, K., & Bahrainian, S. A. (2016). Psychometric properties of Iranian version of self-compassionscale (short form). *Pajoohande*, *21*(5). http://pajoohande.sbmu.ac.ir/article-1-2292-en.html
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
- Larijani, R., & Besharat, M. A. (2010). Perfectionism and coping styles with stress. *Procedia - Social and Behavioral Sciences*, 5, 623–627. https://doi.org/10.1016/j.sbspro.2010.07.154
- Lee, S. A., Jobe, M. C., & Mathis, A. A. (2020). Mental health characteristics associated with dysfunctional coronavirus anxiety. *Psychological Medicine*, 1–2.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion

- and psychopathology. *Clinical Psychology Review*, 32(6), 545–552. https://doi.org/https://doi.org/10.1016/j.cpr.2012.06.003
- Mayers, A. (2013). *Introduction to statistics and SPSS in psychology*. Pearson Higher Ed.
- Mehr, K. E., & Adams, A. C. (2016). Self-Compassion as a Mediator of Maladaptive Perfectionism and Depressive Symptoms in College Students. *Journal of College Student Psychotherapy*, 30(2), 132–145. https://doi.org/1 0.1080/87568225.2016.1140991
- Moghanibashi-Mansourieh, A. (2020). Assessing the anxiety level of Iranian general population during COVID-19 outbreak. *Asian Journal of Psychiatry*, *51*, 102076. https://doi.org/https://doi.org/10.1016/j.ajp.2020.102076
- Mohammadpour, M., Ghorbani, V., Khoramnia, S., Ahmadi,
  S. M., Ghvami, M., & Maleki, M. (2020). Anxiety,
  Self-Compassion, Gender Differences and COVID-19:
  Predicting Self-Care Behaviors and Fear of COVID-19
  Based on Anxiety and Self-Compassion with an Emphasis on Gender Differences. *Iranian Journal of Psychiatry*,
  15(3 SE-Original Article(s)). https://doi.org/10.18502/ijps.v15i3.3813
- Molnar, D. S., Reker, D. L., Culp, N. A., Sadava, S. W., & DeCourville, N. H. (2006). A mediated model of perfectionism, affect, and physical health. *Journal of Research in Personality*, 40(5), 482–500. https://doi.org/ https://doi.org/10.1016/j.jrp.2005.04.002
- National Public Radio. (2020). Most Americans Say U.S. "Doing Enough" To Prevent Coronavirus Spread. https://www.npr.org/sections/health-shots/2020/02/04/802387025/poll-most-americans-say-u-s-doing-enough-to-prevent-coronavirus-spread?t=1596955846774
- Neff, K. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2(2), 85–101.
- Neff, K. D. (2011). Self-Compassion, Self-Esteem, and Well-Being. *Social and Personality Psychology Compass*, *5*(1), 1–12. https://doi.org/10.1111/j.1751-9004.2010.00330.x
- Neff, K. D., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, Achievement Goals, and Coping with Academic Failure. *Self and Identity*, *4*(3), 263–287. https://doi.org/10.1080/13576500444000317
- Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, 41(4), 908–916. https://doi.org/https://doi.org/10.1016/j.jrp.2006.08.002
- Raque-Bogdan, T. L., Ericson, S. K., Jackson, J., Martin, H. M., & Bryan, N. A. (2011). Attachment and mental

- and physical health: Self-compassion and mattering as mediators. In *Journal of Counseling Psychology* (Vol. 58, Issue 2, pp. 272–278). American Psychological Association. https://doi.org/10.1037/a0023041
- Roberts, K. C., & Danoff-Burg, S. (2010). Mindfulness and health behaviors: is paying attention good for you? *Journal of American College Health*, *59*(3), 165–173.
- Rodgers, R. F., Lombardo, C., Cerolini, S., Franko, D. L., Omori, M., Fuller-Tyszkiewicz, M., Linardon, J., Courtet, P., & Guillaume, S. (2020). The impact of the COVID-19 pandemic on eating disorder risk and symptoms. *The International Journal of Eating Disorders*, 53(7), 1166– 1170. https://doi.org/10.1002/eat.23318
- Saricali, M., Satici, S. A., Satici, B., Gocet-Tekin, E., & Griffiths, M. D. (2020). Fear of COVID-19, Mindfulness, Humor, and Hopelessness: A Multiple Mediation Analysis. *International Journal of Mental Health and Addiction*. https://doi.org/10.1007/s11469-020-00419-5
- Shapira, L. B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology*, 5(5), 377–389. https://doi.org/10.1080/1743 9760.2010.516763
- Sirois, F. M., Molnar, D. S., & Hirsch, J. K. (2015). Self-Compassion, Stress, and Coping in the Context of Chronic Illness. *Self and Identity*, 14(3), 334–347. https://doi.org/10.1080/15298868.2014.996249
- Smith, M. M., Vidovic, V., Sherry, S. B., Stewart, S. H., & Saklofske, D. H. (2018). Are perfectionism dimensions risk factors for anxiety symptoms? A meta-analysis of 11 longitudinal studies. *Anxiety, Stress, & Coping*, 31(1), 4–20. https://doi.org/10.1080/10615806.2017.1384466
- Sorkkila, M., & Aunola, K. (2020). Risk Factors for Parental Burnout among Finnish Parents: The Role of Socially Prescribed Perfectionism. *Journal of Child and Family Studies*, 29(3), 648–659. https://doi.org/10.1007/s10826-019-01607-1
- Ştefan, C. A. (2019). Self-compassion as mediator between coping and social anxiety in late adolescence: A longitudinal analysis. *Journal of Adolescence*, 76, 120– 128.
- Stoeber, J. (2018a). *The psychology of perfectionism: Critical issues, open questions, and future directions.*
- Stoeber, J. (2018b). *The psychology of perfectionism: Theory, research, applications*.
- Stoeber, J., & Childs, J. H. (2010). The assessment of selforiented and socially prescribed perfectionism: Subscales make a difference. *Journal of Personality Assessment*, 92(6), 577–585.
- Stoeber, J., & Rennert, D. (2008). Perfectionism in school

- teachers: Relations with stress appraisals, coping styles, and burnout. *Anxiety, Stress, & Coping*, *21*(1), 37–53. https://doi.org/10.1080/10615800701742461
- Taylor, S. (2019). *The psychology of pandemics: Preparing for the next global outbreak of infectious disease*. Cambridge Scholars Publishing.
- Teng, Z., Wei, Z., Qiu, Y., Tan, Y., Chen, J., Tang, H., Wu, H., Wu, R., & Huang, J. (2020). Psychological status and fatigue of frontline staff two months after the COVID-19 pandemic outbreak in China: A cross-sectional study. *Journal of Affective Disorders*, 275, 247–252. https://doi.org/https://doi.org/10.1016/j.jad.2020.06.032
- Trompetter, H. R., de Kleine, E., & Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy and Research*, 41(3), 459–468.
- Wielgus, B., Urban, W., Patriak, A., & Cichocki, Ł. (2020).
  Examining the Associations between Psychological Flexibility, Mindfulness, Psychosomatic Functioning, and Anxiety during the COVID-19 Pandemic: A Path Analysis. *International Journal of Environmental Research and Public Health*, 17(23), 8764.
- World Health Organization. (2020). Coronavirus disease (COVID-19) Weekly Epidemiological Update and Weekly Operational Update. World Health Organization. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports
- Xiaoming, X., Ming, A., Su, H., Wo, W., Jianmei, C., Qi, Z., Hua, H., Xuemei, L., Lixia, W., Jun, C., Lei, S., Zhen, L., Lian, D., Jing, L., Handan, Y., Haitang, Q., Xiaoting, H., Xiaorong, C., Ran, C., . . . Li, K. (2020). The psychological status of 8817 hospital workers during COVID-19 Epidemic: A cross-sectional study in Chongqing. *Journal of Affective Disorders*, 276, 555–561. https://doi.org/https://doi.org/10.1016/j.jad.2020.07.092