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# FACILITATING AND COMPLICATING FACTORS IN COPING WITH FEAR OF COVID-19

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## *SUMMARY*

***Background:*** *The Covid-19 pandemic has affected almost all countries' people and affected them in many ways. Turkey has been one of the countries most affected by the Covid-19 pandemic. In this study, it is aimed to examine facilitating and complicating factors in coping with the fear of COVID-19.*

***Subjects and methods****: This study was conducted with 530 people (305 females, 225 males) living in different regions of Turkey and reached online via google e-forms. Sociodemographic information of the participants was collected, and the Fear of Covid-19 Scale (FCV-19S), Short Version of the Intolerance of Uncertainty Scale (IUS-12), The State-Trait Anxiety Inventory (STAI), and The World Health Organization Quality of Life (WHOQOL-BREF) scales were administered. All statistical analyzes were performed using IBM SPSS Statistics. T-test, One Way Anova and Linear Regression analysis were used to analyze the collected data.*

***Results****: In this study, the participants reported that watching movies, reading books, and listening to music were the most important facilitating factors in coping with Fear of COVID-19. Covid-19 fear scores were analyzed in terms of some demographic variables. According to the results, there was no difference between COVID-19 fear scores in terms of gender, having a chronic disease or not, knowing someone diagnosed with Covid-19 in their immediate vicinity, and the region they lived in. we found that Prospective anxiety, inhibitory anxiety, state anxiety, and psychological health were significant predictors of Covid-19 fear. However, trait anxiety, physical health, social relationships and environment were not significant predictors of Covid-19 fear. All these variables together explained 25% of the variance in the model.*

***Conclusion****: Although this study has some limitations, it has an important place in the literature in revealing the facilitating and complicating factors in dealing with the fear of Covid -19. It mediates the provision of recommendations to policy makers and mental health professionals for providing psychological support services to individuals adversely affected by the COVID-19 pandemic process.*

***Key words:*** *COVID-19 – fear - anxiety - intolerance to uncertainty*

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## INTRODUCTION

Coronaviruses are a family of viruses that can spread from animals to humans and cause many diseases (Weiss & Leibowitz 2011). It is estimated that coronaviruses, whose origin is still unknown, have circulated the world for centuries (Woo et al. 2012, Huynh et al. 2012). SARS-CoV and MERS-CoV, which are from this family of viruses, caused epidemics at the beginning of this century and infected more than 10,000 people (Hui & Zumla 2019, WHO 2003). A series of unexplained cases of pneumonia occurred in Wuhan, China's Hubei province on 31 December 2019, and these cases were associated with the seafood and wet animal wholesale market (Bogoch et al. 2020, Lu et al. 2020). To date, the COVID-19 pandemic caused by the SARS-CoV-2 virus has affected more than 165 million (22 May 2021) people worldwide (WHO 2020).

This pandemic has affected both physical health and mental health significantly (Anjum et al. 2020, Brooks et al. 2020, Shigemura et al. 2020, Abuhmaidan & Al-Majali 2020, Ren & Guo 2020). Limitations on leaving home and other issues, having to leave certain routines, reduced social and physical contact with others have caused stress and frustration that cause psychological and physical problems in people (Blendon et al. 2004, Braunack-Mayer et al. 2013, Šljivo et al. 2020, Karasar & Canli 2020). For this reason, with the epidemic, mental health professionals all over the world have started to serve individuals who have mental problems, as well as those who are mentally affected by the pandemic. The COVID-19 outbreak caused both death risk and unbearable psychological pressure in humans worldwide (Xiao 2020, Duan & Zhu 2020). When the threat of epidemic increased, the cancellation of travel plans, social isolation, media news, and people flocking to markets to meet their needs created an atmosphere of anxiety and depression all over the world (Ho et al. 2020). Wang et al. (2020) reported that there was no improvement in individuals' stress, anxiety, and depression levels at the beginning of the COVID-19 epidemic and 4 weeks later. It has been reported that especially isolation and loneliness cause an increase in individuals' depression, anxiety and anger levels and affect physical health negatively (Huremović 2019, Leigh-Hunt et al. 2017). In such crisis times, an increase in mental health problems is expected. It has been reported that previous pandemics and epidemics significantly

affect the mental health of individuals and society. It has been reported that especially individuals who had previously experienced mental problems face higher rates of psychological problems and problems such as fear of disease (Chua et al. 2004, Chong et al. 2004, Mak et al. 2009).

Fear and anxiety are physiologically basic emotions that involve activating the nervous system's "fight or flight" response and enable us to react quickly when faced with imminent threat. In this pandemic period, the most important causes of fear and anxiety in the society could be sorted as contagiousness of the infection, being invisible, uncertainties regarding vaccination and treatment and relatively high mortality rate (Pappas et al. 2009). Individuals' psychological responses to these emerging stressful situations vary in a wide range from extreme fear to emetionlessness, with the effect of personality traits such as trait anxiety, harm avoidance and intolerance to uncertainty (Taylor 2019).

Trait anxiety refers to the individuals' tendency to continue and experience negative emotions such as fear and anxiety. People with high level trait anxiety tend to see the world as dangerous and threatening. Therefore, these people are very scared and extremely anxious, especially in a sense of danger (Spielberger 1979). Studies on the SARS outbreak have reported that trait anxiety was a significant predictor of epidemic anxiety (Cheng & Cheung 2005).

Another dimension that affects this tendency to experience anxiety and fear is intolerance to uncertainty (McEvoy & Mahoney 2013). The pandemic process contains uncertainties on a wide variety of issues. The unpredictability of infection was also a source of great fear in the Spanish flu epidemic (Graves 1969). In times of pandemics, it is important for people to be able to tolerate or accept uncertainty. It has been suggested that intolerance to uncertainty will make a particularly significant contribution to the anxiety and fear associated with the epidemic (Taylor 2019). Individuals with a high level of intolerance to uncertainty tend to be anxious because they feel they have limited control over a threatening situation such as a pandemic (Taha et al. 2014).

The number of people who need psychiatric help since the beginning of the pandemic has been increasing day by day, and this was causing some changes in psychiatric practices because the pandemic now functions as a new trauma or stressor for mental health professionals (Kang et al. 2020). The increased fear and anxiety of individuals due to outbreaks causes them to be more aware of various normal or benign physical symptoms and evaluate them as a precursor of a severe disease.

In this study, it is aimed to examine facilitating and complicating factors in coping with the fear of COVID-19. For this purpose, we tried to reveal the people most affected by the pandemic and the factors that people who are less affected by the pandemic use to cope.

# SUBJECTS AND METHODS

## Subjects

The average age of 530 participants in the study was 30.34, with a standard deviation of 7.13, and it ranged from 21-66. 305 (57.5%) of the participants are female, and 225 (42.5%) are male. Participants were 530 people living in 11 different cities in Turkey. Besides, more than half of the participants are single (64.5%) and undergraduate (58.1%). The demographic information of the participants is given in detail in Table 1.

## Methods

Sociodemographic data form was prepared by the researchers to obtain information of the participants such as age, gender, marital status, employment status, the number of people living with them at home, COVID-19 diagnosis status, chronic disease status, and the feel-good activities they did during the epidemic process.

**Table 1.** Sociodemographic characteristics of the sampl

| Age | 30.34±7.13 | |
|---|---|---|
| | n | % |
| Gender | | |
| Female | 305 | 57.5 |
| Male | 225 | 42.5 |
| Highest educational level | | |
| Primary School | 21 | 4.0 |
| High School | 98 | 18.5 |
| Undergraduate | 308 | 58.1 |
| Graduate | 103 | 19.4 |
| Marital Status | | |
| Single | 342 | 64.5 |
| Married | 166 | 31.3 |
| Divorced | 22 | 4.2 |
| Living place | | |
| Village/County | 175 | 33.0 |
| City | 94 | 17.7 |
| Metropolis | 261 | 49.2 |
| Occupation | | |
| Civil Servant | 216 | 40.8 |
| Private Sector | 129 | 24.3 |
| Unemployee | 74 | 14.0 |
| Student | 88 | 16.6 |
| Housewife | 23 | 4.3 |
| Healthcare worker | | |
| No | 444 | 83.8 |
| Yes | 86 | 16.2 |
| Diagnosed with COVID-19 | | |
| No | 518 | 97.7 |
| Yes | 12 | 2.3 |
| Someone diagnosed with COVID-19 in your immediate vicinity | | |
| No | 429 | 80.9 |
| Yes | 101 | 19.1 |
| Chronic disorder | | |
| No | 465 | 87.7 |
| Yes | 65 | 12.3 |

Fear of Covid-19 Scale (FCV-19S) is a 7-item scale developed to measure individuals' levels of fear of COVID-19 (Ahorsu et al. 2020). The total score obtained from the scale varies between 7 and 35, and the higher the scores obtained from the scale means the increase in the level of fear accordingly. Cronbach's alpha value, which is the internal consistency coefficient of the scale, was reported as $\alpha = 0.82$, and the test-retest reliability value was reported as ICC = 0.72 (Ahorsu et al. 2020). The adaptation of the scale to Turkish was conducted by Satici et al. on a sample of 1304 people. Satisfactory coefficients regarding Cronbach's alpha ($\alpha = 0.85$) and composite reliability (CR = 0.842) of the scale were reported in the study (Satici et al. 2020a).

Short Version of the Intolerance of Uncertainty Scale (IUS-12) was developed by Carleton et al. (2007) to measure intolerance of uncertainty, and it consists of 12 items and two sub-dimensions. The sub-dimensions are named as prospective anxiety (7 items) and inhibitory anxiety (5 items). The scale is a five-point Likert type scale. The scale was adapted to Turkish by Saricam and colleagues (2014). The correlation coefficient between the English and the Turkish form scores was 0.71. As a result of the exploratory factor analysis, the scale was found to explain 78.57% of the total variance with two dimensions and a 12-item structure. In the criterion validity study, the correlation between the intolerance of uncertainty and the flexibility to cope is -0.43, the correlation between the intolerance of uncertainty and education stress is 0.41. Cronbach's alpha reliability coefficient of the scale is 0.88. A higher score from the scale indicates a higher level of intolerance of uncertainty.

The State-Trait Anxiety Inventory (STAI) is a five-point Likert type scale developed by Spielberger et al. (1983) to measure state and trait anxiety levels. It consists of 40 items and two sub-dimensions. The sub-dimensions are state anxiety (20 items) and trait anxiety (20 items). The state anxiety scale determines how the individual feels at a certain moment and under certain conditions. The trait anxiety scale evaluates how the individual feels in general, regardless of the situation and conditions. The scale was adapted to Turkish by Öner and Le Compte (1985). Test-retest reliability of the Turkish form was determined between 0.71 and 0.86 for the state anxiety scale and 0.26 and 0.68 for the trait anxiety scale. The internal consistency coefficient was between 0.83 and 0.87 for the state anxiety scale and between 0.94 and 0.96 for the trait anxiety scale. A higher score from the scale indicates a higher level of anxiety.

The World Health Organization Quality of Life (WHOQOL-BREF) is a short form of the WHOQOL-100 scale. It was created by taking one question for each of the 24 sections of WHOQOL-100 and adding two questions about general health and quality of life. This tool consists of 26 questions and is scored in four dimensions: Physical health, psychological health, social relationships, and environmental health. Cronbach alpha values were found between 0.66 and 0.84 for four subscales. Test-retest reliability for subscales was reported as 0.66 for physical health, 0.72 for psychological, 0.76 for social relationships, and 0.87 for the environment (The WHOQOL Group 1994). Fidaner et al. (1999) has adapted the WHOQOL-BREF scale to Turkish with five subscales, which is named as General Health. Cronbach alpha values were found between 0.82 and 0.92, and in the test-retest study conducted with 45 university students, the correlation values were found between 0.57 and 0.84 (Fidaner et al. 1999).

### Procedure

The data were collected from 11 different cities in Turkey using an online self-report survey delivered in Turkish by Google forms, between June 15 and July 16, 2020. All respondents provided informed consent prior to participation. The study protocol was approved by the Ethics Committee on 12 June 2020 (Session number: 40).

### Statistical Analyses

The normal distribution of the data was evaluated with the skewness and kurtosis values of the scales. Since the skewness and kurtosis values were between -1 and +1, it was accepted that the data showed a normal distribution, and parametric tests were used. Frequency and percentages for sociodemographic variables, the mean and standard deviation for age are given. Pearson Correlation analysis was used to evaluate the relationship between continuous variables, independent samples t-test to compare binary groups from continuous data, and One-Way Analysis of Variance (ANOVA) for comparing three or more groups' mean scores. Furthermore, a multiple hierarchical regression analysis was performed to find the predictors of FCV-19 scores. All statistical analyzes were performed using IBM SPSS Statistics (Statistical Package for the Social Sciences) 24.0 for Windows (SPSS Inc., Chicago, IL, USA). Statistical significance was accepted as $p<0.05$.

## RESULTS

To the question "what made you feel better during lockdown period", 414 (78.1%) of the participants responded as "watching movies ", 373 (70.4%) as " being with my family ", 288 (54.3%) "reading books", 236 (44.5%) "listening to music ", 228 (43.0%) "sleeping late", 188 (35.5%) "cooking", 187 (35.3%) "taking shower", 175 (33.0%) "praying", 165 (31.1%) "watching documentaries " and 168 (29.8%) "video calling with loved ones" (Table 2).

As seen in Table 3, according to the results of analysis, there was no statistically significant difference between the FCV-19S mean scores of male and female

**Table 2.** Frequencies of answers for the question "what made you feel better during lockdown period"

| | n | % |
|---|---|---|
| Watching movies | 414 | 78.1 |
| Being with family | 373 | 70.4 |
| Reading books | 288 | 54.3 |
| Listening music | 236 | 44.5 |
| Sleeping late | 228 | 43.0 |
| Cooking | 188 | 35.5 |
| Take shower | 187 | 35.3 |
| Praying | 175 | 33.0 |
| Watch documentary | 165 | 31.1 |
| Video calling with loved ones | 158 | 29.8 |

participants ($t$ (528) = 0.87, p=0.384). Similarly, in terms of the FCV-19S mean scores, there were no statistically significant differences among participants whether there is someone diagnosed with COVID-19 in their immediate vicinity ($t$(528) = 0.21, p=0.835) and whether they have a chronic disease or not ($t$ (528)= -1.24, p=0.218). In addition, the results of the ANOVA were not significant, $F$(2, 527) = 0.43, p=0.649, indicating there were no statistically significant differences among participants living in village/county, city, or metropolis (Table 4).

The results of the linear regression model were significant, $F$(8, 521)=21.16, $p$<0.001, $R^2$=0.25, indicating that approximately 25% of the variance in FCV-19S is explainable by prospective anxiety, inhibitory anxiety, state anxiety, trait anxiety, physical health, psychological health, social relationships, and environment. Prospective anxiety significantly predicted FCV-19S, $B$ = 0.19, $t$ (521) = 2.97, $p$=0.003. Inhibitory anxiety significantly predicted FCV-19S, $B$ = 0.17, $t$ (521) = 2.41, $p$=0.016. State anxiety significantly predicted FCV-19S, $B$ = 0.21, $t$ (521) = 6.32, $p$<0.001. Psychological health significantly predicted FCV-19S, $B$ = 0.37, $t$ (521) = 3.70, $p$<0.001. Table 5 summarizes the results of the regression model.

## DISCUSSION

Findings about facilitating factors in dealing with the fear of COVID-19 showed that watching movies, being with family, reading books, listening to music, cooking, take shower, praying, watching documentary and video calling with loved ones were the most common activity to cope with the fear of COVID-19 during the COVID-19 pandemic. Prohibitions or some restrictions were in place across most countries to prevent the spread of the virus. With these restrictions, universities, schools and workplaces were closed. These shutdowns were a significant threat to both physical health and mental health (Metin et al. 2021, Sibley et al. 2020, Brooks et al. 2020,

**Table 3.** Independent samples t-test results for the fear of COVID-19 by gender, someone diagnosed with COVID-19 in the immediate vicinity and chronic disorder

| Variable | Group | n | M | SD | t (528) | p | Cohen's d |
|---|---|---|---|---|---|---|---|
| Gender | Female | 305 | 18.53 | 6.24 | 0.87 | 0.384 | 0.08 |
| | Male | 225 | 18.05 | 6.28 | | | |
| Someone diagnosed with COVID-19 | No | 429 | 18.35 | 6.37 | 0.21 | 0.835 | 0.02 |
| in the immediate vicinity | Yes | 101 | 18.21 | 5.79 | | | |
| Chronic Disorder | No | 465 | 18.18 | 6.09 | -1.24 | 0.218 | 0.17 |
| | Yes | 65 | 19.35 | 7.27 | | | |

**Table 4.** Comparison of the fear of COVID-19 mean scores in terms of living region

| Group | n | M | SD | F(2, 527) | p | $\eta_p^2$ |
|---|---|---|---|---|---|---|
| Village/County | 175 | 18.67 | 6.21 | 0.433 | 0.649 | 0.00 |
| City | 94 | 18.28 | 6.10 | | | |
| Metropolis | 261 | 18.11 | 6.35 | | | |

**Table 5.** Predictors of fear of COVID-19

| Variable | B | SE | β | t | p | 95% CI |
|---|---|---|---|---|---|---|
| (Intercept) | -3.66 | 3.95 | 0.00 | -0.93 | 0.353 | [-11.41, 4.09] |
| Prospective Anxiety | 0.19 | 0.06 | 0.15 | 2.97 | 0.003 | [0.06, 0.31] |
| Inhibitory Anxiety | 0.17 | 0.07 | 0.13 | 2.41 | 0.016 | [0.03, 0.30] |
| State anxiety | 0.21 | 0.03 | 0.35 | 6.32 | <0.001 | [0.15, 0.28] |
| Trait anxiety | 0.05 | 0.05 | 0.07 | 1.09 | 0.275 | [-0.04, 0.15] |
| Physical health | -0.15 | 0.08 | -0.10 | -1.82 | 0.069 | [-0.31, 0.01] |
| Psychological health | 0.37 | 0.10 | 0.22 | 3.70 | <0.001 | [0.17, 0.57] |
| Social relationships | -0.21 | 0.13 | -0.07 | -1.67 | 0.095 | [-0.46, 0.04] |
| Environment | 0.09 | 0.07 | 0.06 | 1.29 | 0.196 | [-0.05, 0.22] |

*Note:* Results: F(8, 521) = 21.16; p<0.001; $R^2$=0.25; $\Delta R^2$=0.23

Fischer et al. 2020). Studies conducted during COVID-19 have provided strong evidence that staying at home due to quarantine or prohibitions increases anxiety, nervousness, stress, insomnia, anger, and uncertainty (Williams et al. 2020, Li et al. 2020b, Brooks et al. 2020, Sønderskov et al. 2020). The importance of doing activities that make individuals feel good in order to protect mental health during the pandemic process has been stated in many studies (Krause et al. 2020, Puyat et al. 2020). Based on the results of this study, it can be said that it is important to conduct informative studies by public health officials on how mental health can be protected in order to counter the negative effects of long-term isolation on physical and mental health.

Other findings of this study showed that there was no difference between COVID-19 fear scores in terms of gender, having a chronic disease or not, knowing someone diagnosed with COVID-19 in their immediate vicinity, and the region they lived in. However, many studies reported that women, those with chronic diseases, and those living in cities were more afraid. For example, in most studies using the Fear of COVID-19 scale (Ahorsu et al. 2020), it was found that women experienced more fear than men (Soraci et al. 2020, Reznik et al. 2020, Doshi et al. 2020, Tzur Bitana et al. 2020, Sakib et al. 2020, Broche-Perez et al. 2020, Tsipropoulou et al. 2020). Furthermore, Bakioğlu et al. (2020), Tzur Bitana et al. (2020) and Ping et al. (2020) have reported that individuals with chronic diseases have higher levels of fear. In addition, although some studies (Tsipropoulou et al.2020, Bakioğlu et al., 2020, Doshi et al.2020) indicate that there is no difference between COVID-19 fears in terms of where people live, Hossain et al. (2020) stated in their study in Bangladesh that those living in the Capital Daka had higher levels of COVID-19 fear than those living in rural areas. However, it was an expected situation that the fear of COVID-19 would not differ in terms of demographic characteristics in this study conducted in Turkey. Because there was a complete closure in Turkey at the time of conducting this study. Places such as workplaces, universities, schools, shopping malls, restaurants and cafes, cinema and theater were all closed. In addition, because of the curfew, everyone had to stay at their houses and go out just for their basic need within certain hours. Therefore, this epidemic has adversely affected all segments and every region of the country in Turkey. Also, exaggerated and misinformation of the media, which is one of the most important sources of information in this process, negatively affected all individuals in the society.

In the present study, we found that prospective anxiety and inhibitory anxiety IUS-12 subscales, state anxiety subscale of STAI, and psychological health WHOQOL-BREF subscale were significant predictors of fear of COVID-19. These results may be interpreted as prospective concerns, sense of restraint, being restricted, state anxiety, and problems with psychological health make people feel fear about the COVID-19 outbreak more. In a study conducted by Asmundson et al. (2020) that examined if existing anxiety and mood disorders affect COVID-19 stress responses and coping or not, it is reported that people with current anxiety or mood disorders isolate themselves more and experience more distress than people without any psychological problems. The authors have stated that fear activation is likely to remain elevated in anxiety patients. Moreover, Taylor et al. (2020) reported that people with a preexisting mental health disorder had significantly higher COVID-19 stress. In the same study, it is reported that people experiencing COVID-19 stress are more likely to be those who experience health anxiety, anxiety sensitivity, intolerance of uncertainty, disgust propensity, disgust sensitivity, perceived infectability, germ aversion, and obsessive-compulsive contamination concerns and checking rituals. Similarly, the results of another study conducted by Bakioglu et al. (2020) in Turkey, indicated fear of COVID-19 was positively and significantly correlated with prospective anxiety, inhibitory anxiety, and stress. In the same study, it is also found that there was a mediating role of intolerance of uncertainty, depression, anxiety, and stress in the relationship between the fear of COVID-19 and positivity. Satici et al. (2020b) also have found a positive relationship between fear of COVID-19 and intolerance of uncertainty, and a negative correlation between mental health and fear of COVID-19. The results of another study conducted by Satici et al. (2020a) revealed that fear of COVID-19 was also correlated with anxiety.

Moreover, the first studies on the frequency of mental health problems seen in the population after the outbreak revealed that anxiety is the most common mental health problem (Wang et al. 2020, Li et al. 2020a, Xiao 2020). However, in a recent study by Mertens et al. (2020), it is found the risk for loved ones, information through traditional media, information through social media, and health anxiety were significant predictors for fear of COVID-19. In contrast, intolerance of uncertainty, information through professional sources, online searches, general health, worry, and information through family and friends. When the results of the present study and studies in the literature are considered together, it can be said that the pandemic created a fear against the virus in the society, and this fear has been affected by intolerance to uncertainty, anxiety, and some other problems in the psychological field. Prospective uncertainties in the areas such as work, social, education, and economy that emerged in this process caused people to experience psychological problems such as anxiety and depression, which may increase fear of the virus. Therefore, it is thought that in psychotherapy sessions to be conducted with individuals who are negatively affected by the pandemic, it will be beneficial to work with individuals' symptoms of intolerance to uncertainty and anxiety to reduce the fear of COVID-19.

## Limitations

This study has some limitations. The most important limitation was that the sample consisted of people residing in only 11 provinces of Turkey. It is important to note that this situation limits the generalizability of our results to a wider population. In addition, due to the wide age range of the sample group in our study, it could not be determined what facilitating and difficult factors were in coping with the fear of COVID-19 specific to different developmental stages. In the future, we think that conducting more comprehensive studies with children, adolescents and adults will make a significant contribution to the literature.

## CONCLUSION

Although this study has some limitations, it has an important place in the literature in revealing the facilitating and complicating factors in dealing with the fear of COVID-19. In addition, it shows that almost everyone in Turkey have negatively affected by the pandemic process, regardless of gender, region of residence, having a chronic disease or being diagnosed with COVID-19. Finally, it revealed the negative effects of the COVID-19 pandemic on mental health. At this point, policy makers and mental health workers have important responsibilities in providing psychological support services.

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***Conflict of interest:*** None to declare.

### *Contribution of individual authors:*

Mehmet Yalçın: design of the study, literature searches and analyses, statistical analyses.

Eyüp Sabır Erbiçer: design of the study, interpretation of data, manuscript writing.

Ercan Akın: design of the study, interpretation of data, manuscript writing, analyses.

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