

The Perception, Stress and Psychological Distress of the Corona Virus Disease (Covid-19) after the Outbreak in Malaysia

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Abstract

The Severe Acute Respiratory Syndrome Coronavirus 2 or COVID-19, is a new Coronavirus which currently causing outbreaks in many countries including Malaysia. The outbreak in Malaysia has shown so much harm a newly emerging respiratory virus can cause. The COVID-19 pandemic has caused serious threats to people's physical and mental health and lives. It has also triggered a wide variety of psychological problems, such as panic disorder, anxiety and depression. Therefore, this study was conducted on 692 Malaysian participants with aim to investigate the worry perception, stress and psychological distress of this virus after the outbreak. In total 370 (53.5%) of the participants who reported a high level of worry perceptions and 361 (52.2%) reported a high level of stress due to the COVID-19 after the outbreak in Malaysia. Moreover, 385 (55.6%) participants show normal depression due to the COVID-19 after the outbreak in Malaysia. The results show worry perception of coronavirus disease was significant positive correlated with stress ($r = .432$, $p < 0.01$), anxiety ($r = .311$, $p < 0.01$) and depression ($r = .278$, $p < 0.01$) after the coronavirus disease (COVID-19) in Malaysia. Individuals' worry perception, stress, and psychological distress towards COVID-19 shown higher than moderate and higher worry perceptions were associated with more stress and psychological distress.

Keywords: COVID-19; Worry Perception; Stress; Psychological Distress

1 Introduction

The start of 2020 is less than exciting for many countries, including Malaysia. This is due to the spread of a new type of infectious disease, coronavirus disease. The disease became the focus of the World Health Organization (WHO) when China, reported high rates of death due to the disease. Not only that, WHO also declared the confirmed cases approach 200,000 patients with estimated will exceed 8,000 deaths across over 160 countries (WHO, 2020). The disease is spreading to other countries around the world and at the same time raising the death toll. The main reason was due to hundreds of millions of people were travelling during the Spring season.

The severity of COVID-19 had been underestimated until the alarm came out from the National Health Commission that classified this as a B type infectious disease officially and therefore the actions took place to fight against this disease in January 2020. Ever since then, this epidemic prevention was comprehensively marked as a universal concern and all countries began to take precautionary measures and Malaysia has no exemption. Government had also take a step to impose two weeks' movement control order (MCO) started from 18

March 2020 and continuing extended the movement control order (The Star, 2020) in order to reduce the spreading of coronavirus disease in Malaysia.

2 Literature Review

The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2, SARS2, 2019-nCoV or COVID-19 virus), is a new Coronavirus, with first infections detected in humans late in 2019 which has led to a large outbreak in China and is currently causing outbreaks in many countries including Malaysia (Salzberger, Glück, & Ehrenstein, 2020). The disease spectrum ranges from uncomplicated upper respiratory tract infections to severe viral pneumonia with multiorgan failure and death. It can be transmitted by droplets from asymptomatic or oligosymptomatic patients and possibly through aerosols in health care environments (Salzberger, Glück, & Ehrenstein, 2020).

Before this, other Betacoronaviruses have caused epidemics over the last two decades in Asia. For example, the case of SARS-CoV in 2002-2003 in China (Ksiazek, Erdman, Goldsmith, Zaki, Peret, Emery, et al., 2003; Drosten, Gunther, Preiser, van der Werf, Brodt, Becker, et al., 2003; Kuiken, Fouchier, Schutten, Rimmelzwaan, van Amerongen, van Riel, et al., 2003), and later with the Middle East Respiratory Syndrome (MERS-CoV) in 2012-2013 in Saudi Arabia (de Wit, van Doremalen, Falzarano, & Munster, 2016; Al-Tawfiq & Gautret, 2019; Baharoon & Memish, 2019; Bonilla-Aldana, Quintero-Rada, Montoya-Posada, Ramirez, Paniz-Mondolfi, Rabaan, et al., 2020). Several similarities and differences in the epidemiology, clinical features, and management of SARS, MERS, and COVID have been identified (Chan, Yuan, Kok, To, Chu, Yang, et al., 2020; Chen, Zhou, Dong, Qu, Gong, Han, et al., 2020; Huang, Wang, Li, Ren, Zhao, Hu, et al., 2020; Bonilla-Aldana, Quintero-Rada, Montoya-Posada, Ramirez, Paniz-Mondolfi, Rabaan, et al., 2020; Al-Tawfiq, Zumla, & Memish, 2014; World Health Organization, 2020). Although the clinical reports explain that SARS, MERS, and COVID have similarities, since early reports, differences were noted (Chen, Zhou, Dong, Qu, Gong, Han, et al., 2020; Huang, Wang, Li, Ren, Zhao, Hu, et al., 2020; Al-Tawfiq, Zumla, & Memish, 2014; Yin, & Wunderink, 2018).

The outbreak that started in China turned into pandemic as it infected more than 118,000 people in over 114 countries by March 11, 2020 (World Health Organization, 2020). On March 17, 2020, the COVID-19 outbreak was declared a national emergency in the United States as the number of cases grew over 4,226 with a death toll of about 75 (Centers for Disease Control and Prevention, 2020). Globally, there are 105,586 infection cases recorded as of March 8, 2020 with 3,656 new infections while cases reported in China alone of COVID-2019 pneumonia are 80, 859 (WHO, 2020). The current death toll is at 3,584 globally of which 3,100 are in China as of March 8, 2020 (WHO, 2020).

To date, Malaysia recorded 2,161 cases of which 26 people succumbed to the deadly virus that originated from Wuhan, China (Kementerian Kesihatan Malaysia, 2020). Despite of recorded the highest confirmed cases in Association of Southeast Asian Nations (ASEAN), Malaysia is said to be handling the COVID-19 pandemic well due to its high testing rate

(second highest in ASEAN after Vietnam), sufficient critical care beds, and Movement Control Order (MCO). This is because Malaysia practises an "aggressive" testing strategy, which is far superior to all its ASEAN peers and even some European countries. Other strong efforts include restricted entry for foreigners or restrictions on Malaysians traveling abroad, closure of schools and colleges, bans on social gatherings, and shut down of shops except those dealing with daily essentials (Bernama, 2020).

There is a relationship between neuropsychiatric and the outbreak of acute respiratory infections and mental disorders which date back to the prevalence of influenza and severe acute respiratory syndrome (SARS) that took place years ago. In some previous epidemiological studies, depression, anxiety, negative psychological effect, panic attack, psychomotor excitement, psychotic symptoms, delirium, and even suicidal tendency have found among the survivors of the SARS epidemic (Maunder et al., 2003; Lee et al., 2007). The people who are in quarantine areas also may experience boredom, anger, and loneliness; the symptoms of the viral infection such as cough and fever may also cause worsening cognitive distress and anxiety among people due to the fear of contracting the COVID-19 (Xiang, Yang, Li, Zhang, Zhang, Cheung, & Ng, 2019). During the early phase of the manifestation of SARS, several psychiatric comorbidities such as depression, panic attack, anxiety, psychomotor excitement, suicidality, delirium, and psychotic symptoms were reported (Chen, Zhou, Dong, Qu, Gong, Han, et al., 2020).

The outbreak in Malaysia has shown so much harm a newly emerging respiratory virus can cause. Infections in crowded areas, confined spaces, such as prisons or cruise ships, can rapidly spread, complications can be severe and health care associated transmission poses a risk for other patients. The COVID-19 pandemic has caused serious threats to people's physical and mental health and lives. It has also triggered a wide variety of psychological problems, such as panic disorder, anxiety and depression. Therefore, mental health is one of the biggest problems which needs to be addressed now, and post-COVID-19 pandemic as this crisis has generated tremendous stress in public. Lockdowns, the spread of fake news, and poor understanding of the seriousness have contributed to it. Lack of knowledge and misinformation has created havoc in the society (Shaikh & Shaikh, 2020).

Due to increasing number of cases on COVID-19 and movement control order in Malaysia, counsellors and psychologists spent evaluating psychological distress while it is an important component in an individual's mental care. The reaction of COVID-19 depends on a person's personality, psychological structure, family, and social environment which can affect their quality of life, survival, and function. Thus, high rates of psychological stress, undue anxiety and depression creeping in can result in poor quality of life and high rates of psychological morbidity (Pal, Prashant, & Rohilla, 2019) and it is related to psychological distress. Psychological distress refers to the emotional and psychological difficulties that affect an individual's mental health and functioning; it is not specific to any particular DSM-5 (Diagnostic and Statistical Manual of Mental Disorders) or ICD-10 (International Statistical

Classification of Diseases and Related Health Problems) diagnosis (Kessler, Andrews, Colpe, Hiripi, Mroczek, Normand, et al., 2002).

The present study thus aimed to investigate the worry perception, stress and psychological distress of this coronavirus disease (COVID-19) after the outbreak in Malaysia.

3 Methodology

3.1 Participants

A total of 692 Malaysian (N = 640, 92.5%) and non-Malaysian (N = 52, 7.5%) were completed the online survey. Of the participants, 66.6% (N = 461) of them were females and 32.4% (N = 231) were males. These participants were from variety of ethnicities, Malay (N = 186, 26.7%), Chinese (N = 334, 48.3%), Indian (N = 119, 17.2%), and others (N = 53, 7.8%). Also, these participants were from different regions in Malaysia, Johor (N=57, 8.2%), Kedah (N=39, 5.6%), Kelantan (N=9, 1.3%), Malacca (N=10, 1.4%), Negeri Sembilan (N=15, 2.2%), Pahang (N=15, 2.2%), Penang (N=108, 15.6%), Perak (N=35, 5.1%), Perlis (N=1, 0.1%), Sabah (N=15, 2.2%), Sarawak (N=12, 1.7%), Selangor (N=197, 28.5%), Kuala Lumpur (N=172, 24.9%), Putrajaya (N=1, 0.1%) and Terengganu (N=6, 0.9%).

3.2 Procedure

The participants were recruited using online Google form distribution through variety of platforms, such as email, WhatsApp's, and Facebook in Malaysia which was conducted from 23 March 2020 to 31 March 2020 (The first phrase of MCO). Participants were asked to read the inform consent carefully before agreed to take part in this study. Upon consent was given, the participants then continued to answer the questions. Once the participants completed all the questions, they were asked to click "submit" and the survey was considered completed.

3.3 Measures

The study instrument consisted of four sections, which were demographic, worry perception, stress, and psychological distress. A total of three instruments were used in this study which were Worry Perception, Perceive Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983), and The Depression, Anxiety and Stress Scale – 21 Items (DASS-21) (Lovibond & Lovibond, 1995).

For worry perception, a total of nine questions were asked the participants, such as how worried they were about getting coronavirus disease, family member getting coronavirus disease and so on. The participants' stress level was assessed with ten questions from PSS, example, in the past one month of coronavirus disease (COVID-19) happening, how often have you been upset because of that happened unexpectedly and how often have you felt that you were unable to control the important things in your life? Moreover, the questions like whether they had experienced breathing difficulty and experienced trembling were assessed through DASS-21.

3.4 Data Analysis

Data analysis was conducted using the Statistical Package for Social Science (SPSS) software programme. The descriptive statistics were used to explain the frequency and percentage of the levels of worry perception, stress, and psychological distress. Moreover, data was computed and a Pearson's Correlation Co-efficient Statistical Test analysis was used to

analyse the associations between all the variables (worry perception, stress, and psychological distress).

4 Results and Findings

Among 692 participants, referring to Table 1, there were 46.5% (N=322) participants in the study reported low level of worry perceptions and 53.5% (N=370) of the participants who reported a high level of worry perceptions of the coronavirus disease (COVID-19). Next, there were 47.8% (N=331) participants reported a low level of stress and 52.2% (N=361) reported a high level of stress due to the coronavirus disease (COVID-19) after the outbreak in Malaysia. Moreover, there were 47.8% (N=331) participants result in normal anxiety, 16.6% (N=115) participants results in mild anxiety, 11.4% (N=79) participants result in moderate anxiety, 7.5% (N=52) participants results in severe anxiety and 16.6% (N=115) result in extremely severe anxiety. Also, 55.6% (N=385) participants show normal depression, 13.6% (N=94) participants show mild depression, 15.2% (N=105) shows moderate depression, 7.8% (N=54) participants show severe depression and 7.8% (N=54) participants show extremely severe depression due to the coronavirus disease (COVID- 19) after the outbreak in Malaysia.

Table 1: Worry Perception, Stress, Anxiety and Depression Level of Participations (N=692)

Variable & Level	Frequency	Percentage (%)
Worry Perception		
Low	322	46.5
High	370	53.5
Stress		
Low	331	47.8
High	361	52.2
Anxiety		
Normal	331	47.8
Mild	115	16.6
Moderate	79	11.4
Severe	52	7.5
Extremely Severe	115	16.6
Depression		
Normal	385	55.6
Mild	94	13.6
Moderate	105	15.2
Severe	54	7.8
Extremely Severe	54	7.8

The Pearson's Correlation Co-efficient statistical test was used to analyse the correlation between worry perception, stress, anxiety and depression of the coronavirus disease (COVID-19) after the outbreak in Malaysia. Referring to Table 2, the results showed worry perception of coronavirus disease were significant positive correlated with stress ($r = .432$, $p < 0.01$), anxiety ($r = .311$, $p < 0.01$) and depression ($r = .278$, $p < 0.01$) after the coronavirus disease (COVID-19) in Malaysia.

Table 2: Pearson Correlations between The Perception, Stress, Anxiety and Depression.

Variable	Worry Perception	
	r	p
Stress	.432	.000**
Anxiety	.311	.000**
Depression	.278	.000**

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

To support the findings, The Star online (2020) reported the case of COVID-19 spread rapidly in China have lead many patients and medical staffs experience psychological distress such as stress, anxiety, and depression. Moreover, 1257 health care workers across multiple regions of China have reported that 50.4% and 44.6% of health care worker were experienced depression and anxiety. Also, health care worker specifically frontline nurses, women health care worker who serves in the high-risk situations have resulted in more severe psychological distress in term of distress, anxiety and depression (Lai, Ma, Wang, Cai, Hu, Wei, Wu, Du, Chen, Li, Tan, Kang, Yao, Huang, Wang, Wang, Liu, & Hu, 2020). Moreover, similar research in China also founds among 1210 participants there are 8.1%, 28.8% and 16.5% participants reported severe stress level, severe anxiety symptoms and severe depressive symptoms (Wang, Pan, Wan, Tan, Xu, Ho, & Ho, 2020).

Carolyn S. Dewa in 2007, found that chronic work stress may increase people's mental stress (Dewa et al., 2007). At this stage, MCO is still in progress in Malaysia, which can help those who come from work and study to reduce their stress and provide them with a healthier spirit. According to news report data, even though the number of people infected with the virus has begun to decline, the daily lives of people in Malaysia are still limited. The government is concerned about the control of the epidemic and people's concerns about the future development of the epidemic. The results of the survey show that the worsening of the national epidemic will cause the people in Malaysia to worry the most. When SARS broke out in 2003, researchers found that the most prominent emotions of SARS patients were mainly anger, fear, loneliness and boredom. They will worry that their infectious diseases will affect their families. The main emotions are fear, depression, anxiety, anger, etc. (Maunder, et al., 2003). In 2006, researchers in Hong Kong had investigated the SARS survivors' level of psychological distress after 1 year after the outbreak, the results indicated the majority of the SARS survivors reported the level of stress, anxiety and depression was remaining and elevating even 1 year after the SARS outbreak. Also, many health care worker SARS survivors are potentially affected by the long-term psychological problem due to the

SARS outbreak (Lee, Wong, McAlonan, Cheung, Cheung, Sham, Chu, Wong, Tsang, & Chua, 2007). In addition, according to the survey data, the concerns of Malaysian people are reflected in the development of the country, such as economic aspects and the government's control of the epidemic; secondly, it is also reflected in the risk of being infected with viruses by family members, neighbours and strangers. The reasons for these concerns are also factors that affect the mental health of Malaysians.

4.1 Worry Perception and Stress

As we reported in the results in table 2, there was a significant positive correlation between the perception of coronavirus disease with worry perception and stress ($r = .432$, $p < 0.01$) after the coronavirus disease (COVID-19) in Malaysia. From the concept of positive psychology, worry and stress are two forms of negative emotions that can affect various daily activities and social relationships including an individual's mental health. As reported by Shaikh and Shaikh (2020), it is common for individuals to feel stressed, worried and anxious. However, the worry and stress about COVID-19 can be overwhelming and cause strong emotions in an individual. For example, the availability and usage of the mask, hand sanitizer and hand gloves created a lot of stress and worry among individuals. In the previous research, psychiatric morbidities have been found to vary from anxiety, depression, panic attacks, somatic symptoms, posttraumatic stress disorder, delirium, psychosis and even suicidality (Hall et al., 2008; Müller, 2015; Tucci et al., 2017), which have been associated with an increased self-blame (Sim et al., 2010). Besides the self-care, those who are quarantined may feel worry, stress, shame, guilt, or might face stigma (Shaikh & Shaikh, 2020). The prevalence of psychological distress is reported to be high among those who had a longer duration of the quarantine. This prolonged duration is also associated with an increased prevalence of posttraumatic stress disorder symptoms (Hawryluck et al., 2004). The inability to get closer to loved ones results in anger and displeasure, and those with a sudden loss of their loved ones due to the outbreak leads to grief and trauma (Shear, 2012).

The current study found that the spread of the disease is a major concern of the individual. In addition, spreading to loved ones also causes one to think too much and cause them worry and stress. This clearly shows that it affects their daily emotions and can lead to other mental disorders. Even those who are not affected may suffer discomfort and be suspicious and worry of others who are sick. An individual may also develop worry, stress and anxiety over illness or death, possibly causing a nervous breakdown. This is due to the high level of concern that they will also be exposed to the COVID-19. Not only that, the COVID-19 pandemic could endanger the mental well-being of health workers, causing depression, anxiety, insomnia, or distress. Most health workers were found to be psychologically depressed in a survey of 34 health workers exposed to COVID-19 hospitals in China. This obviously gives many parties worry perception and stress although they are not on the front liners. Like previous outbreaks and pandemics, due to unpredictable uncertainties around public safety, and misinformation about COVID-19 (especially on social media) often affects an individual's mental health. These mental health disorders include depression, anxiety, and traumatic stress (Cheung et al., 2008; Zandifar & Badrfam, 2020).

4.2 Worry Perception and Anxiety

The results in table 2 showed that there was a positive and significant relationship between worry perception and anxiety ($r = .311$, $p < 0.01$) among Malaysian. This result shown that Malaysian who are worried about covid-19 had led them to experience of anxiousness. Anxiety is a debilitating reason with high possibility of comorbidity and prevalence for the general population. Normally, classical models of anxiety conceptualize worry and converse. Based on the recent research, both worry and anxiety have been found that correlated to each other. In general, individuals with worry experience showed significant positive correlations to anxiety (Chalmers et al., 2016; ZambranoVasquez & Allen, 2014; Bauer et al., 2020; Iani et al., 2019).

This finding can be related to a previous study which also showed a significant positive relationship between worry and anxiety ($r = .35$) among patients (Ruscio et al., 2011). Additionally, the worry perception and anxiety were found significantly among the nursing staff before and after the SARS prevention programme because they did not know the correct ways of taking care for the patients, as well as worried about themselves and their family members might be affected (Chen et al., 2006). The more they worry about themselves or family getting diseases, the more they felt anxious. Similar results were found from the research by Leppin & Aro (2009) who claimed that the assessment of worry about contracting SARS was used as often as anxiety to describe their negative feelings.

Among emerging adults, research showed that worry in response to stressors and it leads to anxiety. Several important research results were highlighted in the past researches; higher levels of worry were associated with more anxiety and specific stressors had indirect effects on anxiety through worry (Elizabeth, Abby, Matt, & Konstantin, 2020). Malaysian who worried about covid-19 has showed that they were encountered the stressors and therefore they were worried in getting the virus, worried about their family getting the virus, and other significant worries that led them to feel anxious. According to the first attempt of research about the psychological consequences of this pandemic covid-19, it showed that the worry of covid-19 increases the level of anxiety. The findings of the study showed the cognitive and feeling changes that people were going through (Rosario, Enrique, Juan, & Carlos, 2020).

In addition, based on the study of H1N1 back to year 2014, similar study was conducted and the participants somehow experienced worry and it was found to have negative consequences on their psychological distress such as voiding crowded places and hand washing constantly. These behaviours showed their anxiousness towards the diseases (Rosario, Enrique, Juan, & Carlos, 2020). However, recent research did not support worry as the main predictor of anxiety, but irrational beliefs appears to be the mediator between worry and anxiety. According to Buschmann et al. (2018), the mediator role of irrational beliefs in worry and anxiety showed to have the pathway to depression as well. Not only worry, but irrational beliefs which is the new finding showed significantly predict anxiety also (McEvoy & Brans, 2013 Belloch et al., 2007) which is in line with the recent findings.

4.3 Worry perception and Depression

Table 2 also showed a significant positive correlation between worry perception and depression ($r = .278$, $p < 0.01$) among Malaysian. As compare to anxiety participants shows

less severe depressive symptoms. According to the data in the study results, it can be seen that most of the participants showed normal depression, accounting for 55.6%; 13.6% of the participants showed mild depression, and 15.2% of the participants had moderate depression, and there was a small Some participants showed severe depression due to coronavirus disease (COVID-19) after the outbreak in Malaysia, and they total 7.8%. This study used some professional measurement tables and some related test questions to collect participants' mental states during the Malaysian epidemic and divide people's mental states into anxiety, worry, and depression. Among them, for the sense of worry, it mainly includes the degree of people's worry about the virus, and the use of DASS-21 to assess whether they have experienced professional problems such as breathing difficulties and tremors.

According to a study conducted by Wang et al., on 1,210 Chinese citizens in the first two weeks after the outbreak, women were reported to have higher psychological impacts of outbreaks, stress, anxiety and depression. Studies have shown that the high incidence of anxiety and depression among people under 35 is not obvious. Pandemic is logically related to the risk of death. Unadjusted estimates of models that predict traumatic stress are different because men are an important risk factor and have a significant impact on life in urban areas (Shevlin, et al., 2020). Therefore, people will worry about whether they and their family members will be infected with the virus, and this ratio is as high as 53.5%, which is not good for people in a country, because this will affect the development of the national economy after the end of the epidemic. People's income is affected by the epidemic. Therefore, it is also necessary to evaluate the psychological state of people after the epidemic and formulate corresponding policies and intervention measures to help people (Shevlin, et al., 2020). According to the data in the table, on the whole, people have the most stress and the highest proportion, and the depression is relatively low, which is also related to people living with their families because people can spend time with their families after the epidemic, there was support from family members mentally and spiritually.

5 Conclusion

In Conclusion, our findings showed that worry perception are significant positively correlated with stress, anxiety and depression of the coronavirus disease (COVID-19) after the outbreak in Malaysia. As the COVID-19 epidemic continues to spread, our findings will provide important guidance for developing psychological support strategies and identifying priority areas in Malaysia and other areas affected by the epidemic. As the epidemic continues to develop, it is important to be prepared for the health care system and the public so that it can be medically and psychologically prepared for widespread transmission. Therefore, our findings have clinical and policy implications.

First, the health department needs to identify high-risk groups based on social demographic information in order to carry out early psychological intervention. The appearance of COVID-19 is similar to the outbreak of SARS, although the clinical manifestations of the two diseases are not the same; the causes of infection, epidemiological characteristics, and rapid method of transmission are similar. Moreover, the propagation rate of COVID-19 is faster than SARS, but somehow the mortality rate is lower than SARS. Governments and health departments need to provide accurate health information to people during the epidemic to

reduce the psychological impact of rumours. According to this, it can indicate people's stress, anxiety and depression levels are related to people's higher satisfaction and lower health information received. Therefore, the content of the health information provided during the epidemic needs to be based on evidence to avoid adverse psychological reactions. In general, this study explores the psychological state of Malaysian people after the COVID-19 outbreak, and analyses people's psychological problems such as anxiety and depression due to those factors. Most people are anxious because they worry about whether they and their family members will be infected with the virus. This idea is irrational, and it is also a medium for anxiety and depression.

The present study relied on self-report which the responses might be affected by the feeling and situation at that moment they answer the questionnaire as well as self-serving bias. In addition, the cross-sectional design limits the ability to draw conclusions about the relations of all the related variables. For future research, the irrational beliefs can be included in the study of worry and anxiety as it showed significant correlated with these two variables. Also, future research can be using the longitudinal design to study the long-term psychological effects that affected by the coronavirus disease (COVID-19).

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