

# The Relationship between Pandemic Fatigue and COVID-19 Protective Behavior

Naura Fairuz Selma Wibaw<sup>1</sup>, Eka Roina Megawati<sup>2\*</sup>

<sup>1</sup>Medical Doctor Study Program, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

<sup>2</sup>Department of Physiology, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

## ABSTRACT

**Background:** Pandemic fatigue is a fatigue that can occur during a pandemic that can lead to reduced motivation to follow recommended infection prevention and decreased efforts to seek information related to COVID-19. COVID-19 protective behavior plays an important role in breaking the chain of spreading the COVID-19 virus. This study aimed to find the relationship between pandemic fatigue and COVID-19 protective behavior.

**Methods:** This study used an analytical method with a cross-sectional design, using primary data obtained from questionnaires. The respondents of this study were medical students at Universitas Sumatera Utara and were selected using a stratified random sampling method. The obtained data was analyzed using the chi-square test.

**Result:** Most of the subjects are 20 years old and female. The majority of the pandemic fatigue level was moderate (33%) and the COVID-19 protective behavior level was good (34%). This study found there was a relationship between pandemic fatigue and the protective behavior of COVID-19 infection (p-value = 0.022).

**Keywords:** COVID-19, Pandemic fatigue, Protective behavior.

## ABSTRAK

**Latar Belakang:** Kelelahan pandemi adalah kelelahan yang dapat terjadi selama pandemi yang dapat menyebabkan berkurangnya motivasi untuk mengikuti pencegahan infeksi yang direkomendasikan dan penurunan upaya mencari informasi terkait COVID-19. Perilaku protektif COVID-19 berperan penting dalam memutus rantai penyebaran virus COVID-19. Penelitian ini bertujuan untuk menilai hubungan antara kelelahan pandemi dan perilaku protektif COVID-19.

**Metode:** Penelitian ini menggunakan metode analisis dengan desain cross sectional, menggunakan data primer yang diperoleh dari angket. Responden penelitian ini adalah mahasiswa kedokteran Universitas Sumatera Utara dan dipilih menggunakan metode stratified random sampling. Data yang diperoleh dianalisis menggunakan uji chi-square.

**Hasil:** Sebagian besar subjek berusia 20 tahun dan perempuan. Mayoritas tingkat kelelahan pandemi adalah sedang (33%) dan tingkat perilaku protektif COVID-19 baik

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\*Corresponding author at: Department of Physiology, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

E-mail address: eka3@usu.ac.id

(34%). Penelitian ini menemukan adanya hubungan antara kelelahan pandemi dengan perilaku protektif infeksi COVID-19 ( $p$ -value = 0,022).

**Kata kunci:** COVID-19, Kelelahan Pandemi, Perilaku Protektif.

Received 22 September 2023 | Revised 05 December 2023 | Accepted 10 December 2023

## 1 Introduction

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). SARS-CoV-2 is a new type of coronavirus that has not been previously identified in humans. WHO officially declared COVID-19 as a pandemic on March 11, 2020, which means the infection had spread throughout the world. The very fast transmission of COVID-19 has caused the increasing cases drastically. On March 13, 2022, the Indonesian government reported that there were more than 5 million confirmed cases of COVID-19 with over 152,166 deaths [1].

One way to overcome the COVID-19 pandemic is to prevent the transmission and the community has an important role in stopping the transmission of COVID-19 by implementing health protocols. However, the COVID-19 pandemic, which has lasted for more than two years, has led to pandemic fatigue [2]. The World Health Organization (WHO) describes pandemic fatigue as a feeling of lack of motivation to follow recommended behaviors to protect ourselves and others from COVID-19. Pandemic fatigue also affects a person's emotions, experiences, and perceptions [3]. The concept of pandemic fatigue has been studied through various populations with different terminology. In a cross-sectional study, Morgul et al [4] examined psychological fatigue related to COVID-19 in Turkey with a population of around 16 million people, 2.353 respondents reported experiencing physical and mental fatigue from a total sample of 3.672 respondents. Meanwhile, Labrague conducted research on nurses in the Central Region of the Philippines with a sample size of 255 respondents and found that pandemic fatigue has a direct impact on mental health, sleep quality, and job satisfaction[5]. This trend has also been observed in Western countries where significant increases in loneliness, fatigue, boredom, worry, and extreme sadness were seen in the general population from the first few weeks to the fourth month of lockdown [6]. Some of the impacts of pandemic fatigue include physical and mental fatigue, reduced focus, emotional volatility, reduced motivation, increased fear, disturbed sleep quality, increased worry, irritability, and difficulty concentrating [3],[5],[7]. There is indirect effect of pandemic fatigue on subjective well-being through emotional distress was identified and self-compassion moderated the association between pandemic fatigue and emotional distress. The indirect effect of pandemic fatigue was weaker among participants with high levels of self-compassion than among those with low levels of self-compassion [8].

This study aimed to find the relationship between pandemic fatigue and COVID-19 protective behavior.

## **2 Method**

This is an analytical study with a cross-sectional design. This study was conducted in the Faculty of Medicine, Universitas Sumatera Utara from July 2022 to December 2022. The subjects of this study were 100 students by stratified random sampling method. The data was obtained from a questionnaire that was filled out online. The questionnaire contains several questions related to pandemic fatigue and COVID-19 protective behavior.

The pandemic fatigue questionnaire used in this study is adapted from the Pandemic Fatigue Questionnaire by Labrague and Ballad. The questionnaire consists of 10 items, each scored on a 5-point Likert scale from one as never to five as always. Total scores were categorized into: 1-12 indicated as low, 13-25 indicated as mild, 26-37 indicated as moderate, and 38-50 indicated as severe pandemic fatigue level.[9] The questionnaire that was developed by Lüdeckevon and von dem Knesebeck was used to assess the level of COVID-19 protective behavior. The questionnaire contains several items of COVID-19 prevention health protocol. The questionnaire consists of 10 items, each scored on a 5-point Likert scale from one as never to five as always. Total scores were categorized into: 1-12 indicated as very poor, 13-25 indicated as poor, 26-37 indicated as good, and 38-50 indicated very good COVID-19 protective behavior level. [10]

The data was analyzed using the chi-square test with Statistical Package for Social Sciences (SPSS) as a tool. This study was approved by the Health Research Ethical Committee of the Faculty of Medicine, Universitas Sumatera Utara. All subjects had signed the informed consent to join this study after having an explanation about the procedures.

## **3 Results**

Most of the subjects are 20 years old and female. The majority of the pandemic fatigue level was moderate (33%) and the COVID-19 protective behavior level was good (34%) (Table 1).

**Table 1** The characteristics of the subjects

Characteristics	Frequency (n=100)	Percentage (%)
Gender		
Male	31	31
Female	69	69
Age (years)		
17	1	1
18	7	7
19	30	30
20	35	35
21	24	24
22	3	3
Level of pandemic fatigue		
Low	17	17
Mild	32	32
Moderate	33	33
Severe	18	18
Level of COVID-19 protective behavior		
Very poor	11	11
Poor	24	24
Good	34	34
Very good	31	31

Based on Table 2, this study found that there was a significant relationship between pandemic fatigue and COVID-19 protective behavior (p-value = 0.022).

**Table 2** The relationship between pandemic fatigue and COVID-19 protective behavior

Pandemic Fatigue	COVID-19 Protective Behavior				p-value
	Very Poor	Poor	Good	Very Good	
Low+Mild	1	11	17	20	0.022
Moderate	5	7	11	10	
Severe	5	6	6	1	

#### 4 Discussion

This study is in line with research conducted by Gao, et al. that found there was reduced motivation to follow the recommended physical distancing behaviors due to pandemic fatigue in Hongkong population.[11] Stress due to COVID-19 can be associated with a decreased ability to get through difficult times during a pandemic, this is caused by changes in habits, challenges, failures, or disappointments that may occur [12]. According to Mutaqin, the ability to adapt to difficult conditions (resilience) has a negative and significant effect on pandemic fatigue. This means that higher resilience would lead to a lower level of pandemic fatigue.[13] Pandemic fatigue is more common in young people. The preventive measures might have had a heavier burden on young people typically involved in work. In Hong Kong, older people had experienced the 2003 SARS outbreak with higher case fatality rates and their past coping experience could also explain their lower pandemic fatigue. Those with tertiary education should be more knowledgeable and thus was consistent with another unexpected result in the present study that more people who reported having more knowledge of COVID-19 also

reported high pandemic fatigue [14,15]. We previously reported that frequent use of the Internet as a source of COVID-19-related information was associated with psychological distress symptoms [16], and that health information seeking was more prevalent among younger adults and those with higher education attainment [17]. The study also found that both personal and family fear of COVID-19 were most strongly associated with high pandemic fatigue, and seemed to be more so than depression and anxiety [18,19], further studies on whether high pandemic fatigue show similar associations like fear of COVID-19 are warranted.

Previous COVID-19 studies have suggested that family resilience can decrease psychological distress among its members [20]. Qualitative evidence has demonstrated the emerging roles of Filipino families in response to the presence of the pandemic, which includes reminding members to follow COVID-19 protocols and monitoring each other's health status [21]. The family was identified as a primary source of COVID-19 information in a study of Filipino college students [22]. However, evidence also demonstrates that being with the family for long, uninterrupted periods can cause a strain on the relationship. Lack of personal space at home, the presence of conflicts with the family, and financial distress have been noted as barriers to optimal functioning among university learners [23]. Current evidence on the links between family relations and COVID-19-related behaviors in the Philippines represents an earlier snapshot of the pandemic and did not specifically consider the aspects of cohesion, expressiveness, and conflict. We assert the importance of examining how the nature of family relationships influences engagement in COVID-19 preventive behaviors among Filipino college students after a long period of attending classes at home. *Family Relationships as a Predictor of COVID-19 Preventive Behavioral Intention and Pandemic Fatigue Among Young Filipino Undergraduates* [24]. This study found that there was a significant relationship between pandemic fatigue and COVID-19 protective behavior (p-value = 0.022).

## 5 Conclusion

In this study, the majority of the pandemic fatigue level among subjects was moderate and the COVID-19 protective behavior level among subjects was good. There is a relationship between pandemic fatigue and COVID-19 protective behavior.

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