

The death anxiety in the shadow of perceived stress: a danger facing hospitalized patients with COVID-19

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Submitted to: JMIR Mental Health
on: October 18, 2021

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The death anxiety in the shadow of perceived stress: a danger facing hospitalized patients with COVID-19

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Abstract

COVID-19 has become a public crisis in the world. This study aimed to determine the relationship between perceived stress and death anxiety in COVID-19 hospitalized patients. Participants consist of 200 COVID-19 patients admitted to a hospital in eastern Iran selected by convenience sample and an online survey. The results showed a significant direct relationship between perceived stress and death anxiety in patients ($p < 0.05$). In addition, perceived stress predicted death anxiety.

(JMIR Preprints 18/10/2021:34329)

DOI: <https://doi.org/10.2196/preprints.34329>

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Original Manuscript

The death anxiety in the shadow of perceived stress: a danger facing hospitalized patients with COVID-19

Abstract

COVID-19 has become a public crisis in the world. This study aimed to determine the relationship between perceived stress and death anxiety in COVID-19 hospitalized patients. Participants consist of 200 COVID-19 patients admitted to a hospital in eastern Iran selected by convenience sample and an online survey. The results showed a significant direct relationship between perceived stress and death anxiety in patients ($p < 0.05$). In addition, perceived stress predicted death anxiety.

Keywords: COVID-19; Hospitalization; patient; stress; anxiety

Introduction

Coronavirus disease 2019 (COVID-19) has affected millions of people worldwide and posed severe challenges to global health systems(1) . The World Health Organization (WHO) announced its outbreak in March 2020 and stated that the world is facing a global health crisis (2). News and statistics of Covid -related daily deaths had a significant impact on the mental state of patients with Covid19 and caused great stress and physical complications, and mortality(3, 4). As a result, they may feel lonely, denied, anxious, insomnia, and frustrated, reducing their adherence to medical treatment(5, 6). To date, most studies on mental health problems have focused on the medical staff and the general population(7-9), and many studies on hospitalized COVID-19 patients centered more on the treatment of the disease (9). However, psychological stress on COVID-19 patients due to quarantine treatment and the unknown course and prognosis of the disease in different people may be more than the general public(10).

Inadequate scientific information, the emergence of new clinical signs, and the constant contradiction of previous information about the disease, the exacerbation of general anxiety, fear of the unknown are stressors COVID-19 patients face (6) Like other high-risk diseases that reduce life expectancy, it may have significant psychological effects such as fear of death on patients and affect the course of recovery(11, 12). Fear of death or death anxiety is present in all living people(13). However, this anxiety becomes more prominent in the current and pandemic conditions of COVID-19 infection(14). Continuous change in the virus, its severity, multiple mortality, and insufficient treatment facilities for all can affect the severity of death anxiety in these patients (3, 15). Previous studies have shown a positive relationship between death anxiety and stress(16, 17), but no studies have found a link between death anxiety and stress. Assess perceived in hospitalized patients with Covid 19 . Only the study of Pradhan et al. (2020) showed a positive relationship between neuroticism and death anxiety in non-sick young adults during the pandemic through the mediator of perceived stress(15). Extreme fear and stress from the consequences of this deadly disease, which can be accompanied by insomnia and the physical effects of the disease, can create unfavorable conditions for patients(18, 19) which should be considered. Further, the present study aimed to determine the association between death anxiety and perceived stress in hospitalized patients with COVID-19.

Methods

The research units in the present study included all male and female patients with Covid-19 and the hospitalized ones in one of the hospitals of Sistan and Baluchestan provinces. Using an online survey

and convenience sample, 200 patients with Covid-19 participated in the study. The mean age of the research units was 39.8 ± 10.9 years, ranging from 18 to 65 years (55.5%), married and female (74%). In addition, 45% of research units had a university degree in terms of education level, 89.5 % lived in the city, and 43.% had full-time jobs. Most of the research units (44%) belonged to the average socioeconomic status; 85% had no history of chronic disease. The average duration of hospitalization was ten days, and 15% of them had at least one chronic disease; 20% of the studied patients were admitted to the intensive care unit (ICU), but none were intubated (Table 1).

Measures

Demographic Information Questionnaire

The information of demographic characteristics and disease of research units were assessed with ten questions. These questions include age, gender, place of residence, marital status and socioeconomic status, chronic disease such as diabetes mellitus, hypertension, hyperlipidemia, cardiovascular disease, lung disease such as tuberculosis due to the presence of cases in the province, history of drug usage and type of consumed drugs, length of stay in the hospital, hospitalization in the intensive care unit, etc.

Perceived stress scale

The Perceived Stress Scale is a 14-item self-report tool. This tool was designed by Cohen et al. (1983) to understand how people evaluate difficult and exhausting experiences(20). The scale has a five-point Likert scale ranging from never (0) to always (4) and indicates how often people have felt over the past two months. Questions 4, 5, 6, 7, 9, 10, and 13 had conflicting scores. On this scale, the minimum and maximum perceived stress scores are -0-56. Therefore, the cut-off point of this tool is 21.8. The higher the score obtained from this questionnaire, the more stress it indicates. The validity of the Persian version of this scale has been confirmed by Salehi (1994). To determine the validity of the instrument, construct validity was used. All correlation coefficients were more than 0.35, varying from 0.40 to 0.72(21). The validity of this instrument was confirmed by Mazlom et al. (2012)(22). The reliability of the Persian version of the Perceived Stress Scale was calculated by Salehi (1994) using the internal consistency method, whose Cronbach's alpha coefficient was 0.81(21) . Mazlom et al. (2012) obtained Cronbach's alpha coefficient of this tool 0.76 (22). In the present study, the reliability of this scale was measured by internal consistency, and its Cronbach's alpha coefficient was 0.86.

Death Anxiety Questionnaire

Templer designed the Death Anxiety Questionnaire in 1970. This questionnaire contains 15 items and measures people's anxiety about death. On this scale, individuals rated their response on a five-point scale from strongly disagree (1) to strongly agree (5). A high score indicates a high level of death anxiety(23). This questionnaire was standardized in Iran by Rajabi and Bohrani (2002), and item 14 of this questionnaire was deleted due to a cultural mismatch. Rajab and Bohrani measured its reliability coefficient through two internal consistency and halving; its Cronbach's alpha coefficient was 0.73 and 0.62, respectively (24). In the present study, the reliability of the questionnaire was measured by the internal consistency method with a Cronbach's alpha coefficient of 0.83.

Procedure

This cross-sectional correlation study was performed from September 2020 to January 2021. Inclusion criteria were hospitalization due to COVID 19 virus, ability to read and write in Persian, being at least 18 years old, not taking psychotropic drugs, and accessing the Internet to complete the

questionnaires via WhatsApp. Its exclusion criteria were incomplete-completed questionnaires. Given that data collection via the Internet is a valid and reliable method (25), questionnaires were filled out through Google Built forms and using WhatsApp to prevent epidemics and control measures.

The corresponding author, who is a nurse in the corona ward, talked to the participants about the study objectives when being discharged and recorded their phone numbers for participation if they verbally agreed. One week after discharge, the researcher sent the online questionnaire to WhatsApp for the research units. Participants were asked to complete an informed consent form before beginning the review. They were not allowed access to the questionnaires until they were consciously approved. The questionnaire method was straightforward; participants clicked on the link, answered all the questions, and then on the submit button. If participants had any questions or problems completing the questionnaire, they would be guided by the researchers. Patients were informed that psychological counseling services were available online and in-person if needed after the examination. None of the participants needed psychological services. They were trained about the voluntary nature of research and could withdraw from the study at any time. The ethics committee approved the present study of Iranshahr University of Medical Sciences (IR.IRSHUMS.1399.003) and all the ethical standards of the 1964 Helsinki declaration have been observed.

Data Analysis

Data were analyzed using SPSS25. The Kolmogorov-Smirnov test was used to show the normal distribution of data. For quantitative variables, mean and standard deviation were calculated. Pearson correlation and linear regression tests were used to examine the relationship between perceived stress and death anxiety. The Chi-square test was used to determine the relationship between qualitative variables. Independent t-test and one-way ANOVA were used to evaluate the differences in patients' demographic information with different death anxiety scores and perceived stress. The confidence level was 95% in the tests performed, and the significance level was $\alpha = 0.05$.

Results

According to the present study's findings, 98% of the research units ($n=196$) had high levels of perceived stress, which is worth considering. As Table 2 shows, the mean score of perceived stress in COVID 19 patients was 29.1 ± 3.7 in the range of 17 to 38 points. Further, the mean score of death anxiety in these patients was 45.4 ± 6.6 in the range of 24 to 58 points; 186 patients (93%) had high levels of death anxiety.

The results of the Pearson correlation test showed a significant direct relationship between perceived stress score and death anxiety score of the research units ($p < 0.011$). As the perceived stress score in patients increased, their death anxiety score increased (Table 2).

As shown in Table 3, the results of the linear regression test showed that the total perceived stress score was able to predict the death anxiety of patients with 19 cases. In other words, the death anxiety score increases by 30% for each increase in the total perceived stress score.

Discussion

The present study aimed to determine the relationship between perceived stress and death anxiety in patients with COVID-19. The results of the present study showed that patients with higher perceived stress experienced more death anxiety. It also suggested that perceived stress was able to predict the degree of death anxiety in COVID-19 patients. Despite the importance of this issue, no study examined the relationship between these two variables in COVID-19 patients. However, COVID-19 patients may experience increased stress and death anxiety due to isolation treatment and their situations during hospitalization(19, 26, 27).

Pradhan et al.'s study (2020) showed a positive correlation between neuroticism and death anxiety in young adults during the COVID-19 pandemic due to perceived stress (15). The findings of Abdollahi et al.'s study (2020) showed a significant positive relationship between perceived stress and death anxiety in patients with multiple sclerosis(16) . COVID-19 patients experience many stressors that increase death anxiety during hospitalization (3); Patients with coronavirus entered the hospital when there were new clinical symptoms and persistent conflicting information about the disease or survival. In addition, patients cannot see family members, friends, and relatives during their entire stay in the hospital, raising concerns about death. On the other hand, a Covid 19 infected patient may witness the death of other patients hospitalized(28).

In addition, they had obtained incomplete information about how funerals are performed (29). Further, they were in poor physical condition, and the symptoms of shortness of breath are a predictor of imminent death leading to anxiety, stress, and restlessness(30). There is no sense of readiness for death because the disease symptoms begin within a few days, experiencing great anxiety about the future of family members and loved ones(31) . All of these stressors increase the rate of death anxiety in patients with Covid 19 compared to healthy individuals or other patients. Lee et al.'s study (2020) found that corona phobia was higher in depression, general anxiety, and death anxiety(5) . Findings from Safren et al. (2003) also showed a direct relationship between posttraumatic stress and death anxiety (32). However, these studies did not examine the perceived stress variable.

Although the present study results showed that perceived stress predicts death anxiety in hospitalized COVID-19 patients, it has some limitations. First, since the research units were selected from a region by convenience sample method and an online survey, the generalizability of results was limited.

It is recommended to do further studies with various methods and in different populations. Second, data collection was performed during the COVID-19 pandemic period; Therefore, it is suggested that more post-epidemic research be conducted to determine whether the present study results are field-specific or general.

Conclusions

The results of the present study showed that perceived stress and death anxiety had a high prevalence in hospitalized COVID-19 patients, and there was a significant direct relationship between perceived stress and death anxiety. The present study is novel because it showed that death anxiety in hospitalized COVID-19 patients could be predicted by perceived stress. According to this finding, death anxiety can be reduced by reducing the perceived stress in these patients. Therefore, it seems that health managers and policymakers should have appropriate programs for screening cases and managing related conditions.

Table 1: Demographic Variables of Participants

Variable	N (%)	
Age	≤ 20	13(6.5)
	21-40	99(49.5)
	41-60	79(39.5)
	≥ 61	9(4.5)
Gender	Women	111 (55.5)
	Men	89(44.5)
Marital status	Single	52(26.0)

Living place	Married	148(74.0)
	City	179(89.5)
	Rural	21(10.5)
Education level	Primary or lower	10(5.0)
	Middle school	40(20.0)
	High school	60(30.0)
	University	90(45.0)
Occupational status	Unemployed	64(32.0)
	Paid employment	50(25.0)
	Full time employment	86(43.0)
Chronic disease	Yes	30(15.0)
	No	170(85.0)

Table 2: Correlation between the predict death anxiety and Perceived Stress

Variable	Mean \pm SD	Minimum	Maximum	N
Perceived Stress	29.1 \pm 3.7	17.0	38.0	200
Death anxiety	45.4 \pm 6.3	24.0	58.0	200
Pearson correlation			0.179	
P value			0.011	

Table 3. Results of Linear Regression to predict death anxiety By Perceived Stress

Dependent variable	Predictor Variable	B	SE	Beta	t	P	Model summary
Death anxiety	Perceived Stress	36.702	3.450	-	10.638	0.000	R=0.179
		0.300	0.118	0.179	2.553	0.011	R2=0.032
							ADJ.R2=0.027

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Supplementary Files