

Psychological stressors Facing Employees Working at El Fayoum University Hospital during COVID-19 pandemic

Manar Omar Ali⁽¹⁾, Ghada Mohamed Mourad⁽²⁾, Rania Abdel Hamid Zaki⁽³⁾

⁽¹⁾Demonstrator of Psychiatric /Mental Health Nursing, Faculty of Nursing, El Fayoum University.

^(2&3)Professor and Head of Psychiatric /Mental Health Nursing, Faculty of Nursing, Ain Shams University.

Abstract

Background: The COVID-19 pandemic has caused not only the risk of death from the viral infection but also unbearable psychological stress to people throughout the world. **Aim** To assess psychological stressors facing employees working at El Fayoum University hospital during COVID-19 pandemic. **Design:** descriptive explanatory design was utilized. **Setting:** The study was conducted at El Fayoum University hospital. **Sample:** convenient sample of 300 employees working at El Fayoum university hospital. **Tool:** Two tools were used to collect study data; **1)** Interview questionnaire to assess Socio-demographic data of employees working at El Fayoum university hospital, **2)** The employees psychological Stress questionnaire to assess psychological stressors facing employees working at El Fayoum university hospital. **Result:** This study showed that more than one third of the employees working at El Fayoum university hospital were between the ages of 30 to less than 40 years. Meanwhile, more than two thirds of them are females and revealed that more than half of employees working at El Fayoum university hospital have high psychological stresses related to the covid-19 pandemic, on the other hand almost half of them have high social stresses related to the covid-19 pandemic and nearly half of them have moderate physical stresses related to the covid-19 pandemic. **Conclusion:** More than half of employees facing high level of psychological stressors during covid-19 pandemic, nearly half of them have high level of social stressors during covid-19 pandemic and less than half of them facing moderate level of physical stressors during covid-19 pandemic. **Recommendation:** Psycho-educational programs for employees about how to face their psychological stresses during covid-19 pandemic, that could curtail the negative impacts of this crisis and eliminates psychological stress of health care employees.

Key Words: COVID-19, Employees, Psychological stressors.

Introduction:

Coronavirus disease 2019 (COVID-19), is induced by severe acute respiratory syndrome covid-19virus 2 (SARS-CoV-2), is a severe respiratory infectious disease that broke out in China in December 2019, and rapidly spread around the world (*Mignogna et al., 2022*).

The COVID-19 pandemic is a significant health threat with global implications for public health. It is a pneumonia-like disease that is caused by a novel coronavirus that first appeared in China's Wuhan Province. The World Health Organization declared the outbreak of covid-19 to be a public health emergency of worldwide in January 2020, Also COVID-19 is a highly contagious and fatal virus that is transmitted primarily through contact with aerosolized respiratory secretions and caused serious damage to the people physical, psychological and social health in a short period of

time depending on the individual' strengths and weaknesses (*Labrague, De los Santos, 2020*).

COVID-19 pandemic has had a strong physical impact on healthcare workers (HCWs), negatively affecting their health including fever, shortness of breath, cough, anorexia, sore throat, nasal congestion, loss of taste and smell, acute respiratory failure, fatigue, headache, sore throat, nausea, vomiting and body or muscle pain (*Widiani and Djula, 2022*).

COVID-19 can lead to many psychological problems including stress, anxiety, depression, fear and possibly burnout. The effect of the pandemic is linked to fear of being infected infection of loved ones, death of loved ones, and with containment measures that restrict individuals' freedoms (*Yildirim and Solmaz 2020*).

Psychological stress can be described when an individual perceives that the environment or a situation is beyond his or her coping resource, Studies have indicated that exposure to chronic psychological stress is harmful, as it has been identified as a significant determinant of various chronic diseases, including heart disease, cancer, and depression, Meanwhile, Stress is defined as a special relationship between the individual and the environment that the individual values as a hard and stressful or that it exceeds his resources to deal with and endangers his health (*Rahman et al., 2022*).

In terms of the psychological effect and the social distancing. The following symptoms can appear, to varying degrees, for each person including Anxiety towards the self, family and isolated vulnerable parents, Feeling guilty about colleagues for not being in the office or in services, Boredom and frustration with lack of communication and activity, physical disturbances with sleeping patterns and pain, Feeling of isolation and increased loneliness, Irritability, Drug abuse (alcohol, tobacco, etc.), Marital or family tensions, Difficulty returning to work from home, and focus. Triggering previous traumas, Fatigue associated with overloading demands (*Banat et al., 2022*).

The psychiatric mental health nurse play important role in maintaining a safe and efficient work environment, provide adequate personal protective equipment, sufficient breaks, and practical support can reduce the stress in hospital workers as the employees found to be fearful and require consistent support and reassurance, Besides fear, the COVID-19 infected employees developed psychological stressors especially when they are isolated or separated from those who they love, In additional, the nurse help employees by providing them training opportunities related to the current pandemic, help in sharing accurate and valid information about managing stress during pandemic (*Labrague and de Los Santos., 2021*).

Significance of the Study:

As COVID-19 spreads rapidly, this global pandemic has not only brought the risk of death but

also spread unbearable psychological Stressors to people around the world, the rapid spread of the disease created challenges for employees to deal with different psychological stressors, including mortality and morbidity associated with COVID-19, fear of bringing the virus home to family members and losing colleagues to the disease (*Yang et al., 2021*).

In Egypt about 57.4% of the studied medical participants had moderate COVID-19 psychological stress levels, while about 49.1% of the studied paramedical participants had moderate COVID-19 psychological stress levels. But less than one quarter had severe COVID-19 psychological stress levels. There is a significant correlation between COVID-19 psychological stressor levels among employees (*Elbqry et al., 2021*).

The workplace covid-19 related stressors produce lots of psychological and physical health problems amongst health care employees including the onset or exacerbation of depression and anxiety, guilt, anger, frustration, detachment, and hopelessness, Also covid-19 has caused immense psychological stress in health care workers due to its unpredictable course, high infectivity, and mortality, even involving their peers, without any definite cure, stress may be aggravated by home confinement and loss of interpersonal communications may instill a feeling of isolation, frustration, boredom, anger, and even impending death, leading to substantial and long-lasting psychosocial impact (*Shah, et al., 2022*).

So, this study aims to assess psychological stressors facing employees working at El Fayoum University hospital during COVID-19 pandemic.

Aim of the study:

The study aims to:

The aim of this study is to assess psychological stressors facing employees working at El Fayoum University hospital during covid-19 pandemic.

Research Question:

What are levels of psychological stress facing employees working at El Fayoum University hospital during covid-19 pandemic?

Subjects and Methods

I. Technical design:

The technical design for this study includes the research design, setting, subjects of the study and the tools of data collection.

Research Design:

The descriptive explanatory design was utilized to achieve the aim of this study.

Research Setting:

This study had been conducted at El Fayoum University hospital.

Subjects of the Study:

Type of sample:

A convenience sample of the employees working at El Fayoum University hospital

Sample size:

The sample size was 300 employees. They were selected according to the following criteria:

Inclusion criteria:

- From different ages and educational levels
- Both sex men and women.
- Agree to participate in the study

Data Collection Tool:

Data were collected by using the following tools:

Tool (1): Interview questionnaire tool including the following:

A-Socio-demographic tool was developed by the researcher to collect data pertained by the socio demographic characteristics of the employees which include age, sex, social status, level of education, work experience, monthly income, residence, medical history.

Tool (2): The employees psychological Stress questionnaire tool

This tool was developed by the researcher consists of 32 sentences which assess psychological stressors facing employees working at El Fayoum University hospital during COVID-19 pandemic which include three parts:

The first part psychological stressors to assess psychological stressors of employees:

It includes 18 items such as feeling worried about him or his family members or his colleagues being infected with the virus, feeling annoyed by the non-compliance of those around them with the precautionary measures, fear of losing life as a result of being infected with the covid-19 virus, sleeping problems as a result of thinking about the complications and spread of the virus, work problems and pressures they face as a result of fear of injury.... etc.

The second part social stressors to assess social stressors of employees:

It includes 9 items such as difficult engaging in any social activity because due to fear about the possibility of getting infection, difficult dealing with others due to the pressures of daily work during covid-19 pandemic, the negative effects of covid-19 in employees' performance and relationships between employees themselves and their family, feeling despair due to not sufficient of the financial support.... etc.

The third part physical stressors to assess physical stressors of employees:

It includes 5 items such as feeling of desire or not desire to eat, sufferings from physical symptoms with regard to thinking about getting infection, feeling tired as a result of doing any work.... etc.

❖ Scoring system:

The employees' psychological stressors questionnaire tool. It consists of 32 items, each items have a set of three levels, with rating from 1 to 3, as the following 1 represent (not agree), 2 represent (sometime) and 3 represent (agree).

The total score was from 32-96 grades:

- Low stress <50% (Score ≤48)
- Moderate stress 50-75% (Score 49-72)
- High stress >75% (Score >72)

Content Validity:

The tool was tested for its content validity which was done by a jury group consisting of five experts from the Faculty of Nursing, Ain Shams University; they checked the relevancy, clarity, comprehensiveness, and applicability of the questions. According to their opinions, modifications were done and the final form was developed. The modifications were (modify some words to give the right meaning of the phrase, added some phrases, questions and added some variables as physical and social stressors regarding covid-19 pandemic disease among employees working at El Fayoum University Hospital.

Reliability of the tool:

Cronbach's alpha coefficient was calculated to assess the reliability of the modified tool (Psychological stressors facing employees working at El Fayoum University hospital during COVID-19 pandemic), through their internal consistency (Average reliability of questions) for psychological, social and physical stressors respectively, the alpha Cronbach was 0.878.

II-Operational design

The operational design included preparatory phase, pilot study, and field work.

A) The preparatory phase:

It included a review of past, current, national and international related literature and theoretical knowledge of various aspect of the study using books, articles, internet, magazines and periodicals to get a clear picture of all aspects related to the research problem to develop tools for data collection.

B) A pilot study:

Before beginning field work, a pilot study was conducted to ensure that the tools were clear and feasible, as well as to estimate the time

required to fulfill the tool items. It was conducted on a sample of 10% of El Fayoum University hospital employees who were included in the main study sample.

C) Field work:

Once permission obtained from the director of El Fayoum University Hospital, the researcher visited the study setting and met with employees working at the hospital who fulfilled the inclusion criteria. the researcher introduced herself to employees and their consents were obtained orally after explaining the purpose of the study and trying to establish a trustful relationship.

The data was gathered by interviewing employees in the hospital, the researcher collected data during a period of 3 months starting at the beginning of (April 2022 till the end of June 2022).

Data were collected 3 days / 3 months on (Sunday, Monday and Tuesday each weak) from 9:00 am to 2:00 pm, 8 employees interviewed/day, The time needed by each participant to complete the questionnaire ranged between 10-15 min, the total number 300 from employees working at El Fayoum university hospital.

III- Administrative design

El-Fayoum University Hospital received an official letter from the Dean of the Faculty of Nursing, asking for authorization to perform the study to obtain permission and assistance for data collection, this letter included the aim of the study and a copy of the data collection tool.

Ethical considerations:

All employees were informed that participation in the study was entirely voluntary before it began. They were told that the information gathered from the questionnaires would be kept private and that no personal identification would be required in any way. Employees were informed that the tool's content would only be used for research purposes and that they could refuse or withdraw from the study at any time.

IV- Statistical design

Recorded data were analyzed using the statistical package for social sciences, version 22.0 (SPSS Inc., Chicago, Illinois, USA). Quantitative data were expressed as mean± standard deviation (SD). Qualitative data were expressed as frequency and percentage. The following tests were done: Chi-square (X^2) test of significance was used in order to compare proportions between qualitative parameters. One-sample t-test was used to determine the significance of the difference between the average responses.

Multiple linear regressions: It is used to test and estimate the dependence of a quantitative variable based on its relationship to one or more independent variables. The confidence interval was set to 95% and the margin of error accepted was set to 5%. So, the p-value was considered significant as the following: Probability (P-value): P-value <0.05 was considered significant, P-value <0.001 was considered as highly significant and P-value >0.05 was considered insignificant.

Results:

Table (1): shows that (37.7%) of the employees working at El Fayoum university hospital were with mean ages of 30 to less than 40 years and (67%) of them are females and (78%) of them are married, regarding the level of education it was found that (47.3%) of studied employees are at university level and (22.3%) of them have 6 to less than 11 years of work experience and (79.3%) haven't enough monthly income and (65.3%) of them lived in urban area.

Table (2): illustrated that there are highly statistically significant relations between each variable of psychological stressors and covid-19 pandemic (<0.001**), as it's clear from the above,

more than half of employees (59.7%) working at El Fayoum university hospital have high psychological stressors related to the covid-19 pandemic, and nearly half of them (49.3%) have high social stressors related to the covid-19 pandemic, Meanwhile, (45%) of them have moderate physical stressors related to the covid-19 pandemic.

Figure (1): Shows that more than half of studied employees (59.7%) have high level of psychological stresses related to covid-19 pandemic, meanwhile, less than one third of them (30.3%) have moderate level of psychological stresses related to covid-19 pandemic, and only (10%) of them have low level of psychological stresses related to covid-19 pandemic.

Figure (2): reveals that almost half of employees (49.3%) working at El Fayoum University hospital have high level of social stresses related to covid-19 pandemic, on other hand, more than one third of them (38.7%) have moderate level of social stresses related to covid-19 pandemic, and about (12%) of them have low level of social stresses related to covid-19 pandemic.

Figure (3): shows that more than one third of studied employees (36%) have high level of physical stresses related to covid-19 pandemic, in addition to nearly half of them (45%) have moderate level of physical stresses related to covid-19 pandemic, and only (18%) of them have low level of physical stresses related to covid-19 pandemic.

Table (3): displays the displays regression model for the total score of stressors and found that there was a statistical significance relation between total score of stressors and Socio-demographic study as level of education, monthly income and work experience as evidenced by $P < 0.001$.

Table (1): Number and percentage distribution of studied employees working at El Fayoum University Hospital according to their socio-demographic data (N=300).

Socio-demographic data	No.	%
Age (years)		
20< 25 years	48	16.0
25< 30 years	84	28.0
30< 40 years	113	37.7
40< 50 years	43	14.3
□50 years	12	4.0
±SD		49.37±4.83
Sex:		
Male	99	33.0
Female	201	67.0
Marital Status:		
Married	234	78.0
Single	48	16.0
Divorced	6	2.0
Widowed	12	4.0
Level of Education:		
Technical diploma/ high school	116	38.7
University degree	142	47.3
Post-Graduate studies	42	14.0
Work Experience:		
<1 year	37	12.3
1-<6 years	67	22.3
6-<11 years	67	22.3
11-<15 years	30	10.0
15-<20 years	49	16.3
□20 years	50	16.7
±SD		16.14±3.71
Monthly income:		
Enough	62	20.7
Not enough	238	79.3
Residence:		
Urban	196	65.3
Rural	104	34.7

Table (2): Total levels of stressors among studied employees working at El Fayoum University Hospital (N=300).

Total stressors	Low Stress		Moderate Stress		High stress		One sample t-test	
	No.	%	No.	%	No.	%	t-test	p-value
Psychological stressors related to the Covid-19 pandemic	30	10.0	91	30.3	179	59.7	86.835	<0.001**
Social stressors related to the covid-19 pandemic	36	12.0	116	38.7	148	49.3	86.636	<0.001**
Physical stressors related to the Covid-19 pandemic	55	18.3	135	45.0	110	36.7	69.550	<0.001**
Total level	30	10.0	129	43.0	141	47.0	92.703	<0.001**

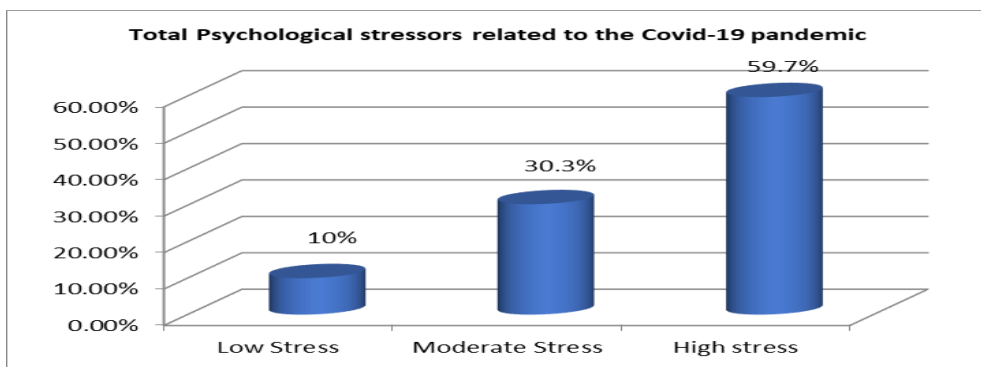


Figure (1) :Total level of psychological stressors related to the Covid-19 pandemic among studied employees working at El Fayoum University Hospital (N=300).

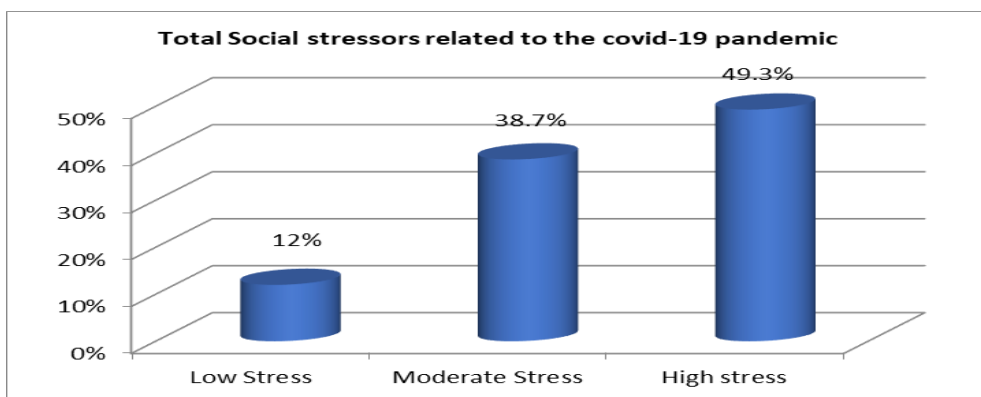


Figure (2): Total level of social stressors related to the covid-19 pandemic among studied employees working at El Fayoum University Hospital (N=300).

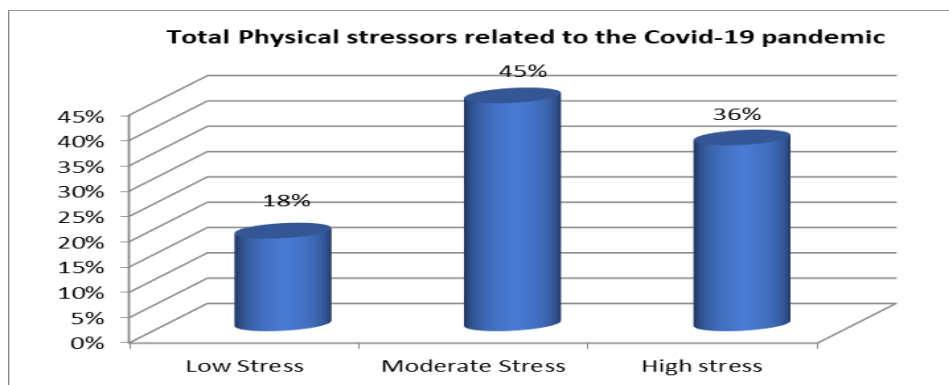


Figure (3): Total level of Physical stressors related to the covid-19 pandemic among studied employees working at El Fayoum University Hospital (N=300).

Table (3): Correlation between total score of stressors and Socio-demographic study among employees working at El Fayoum University Hospital. (N=300).

Socio-demographic study	Total score of stressors	P- value
(Constant)	8.770	<0.001**
Age (years)	0.983	0.326
Sex	-1.292	0.376
Marital Status	0.956	0.340
Level of Education	3.859	<0.001**
Work Experience	2.234	<0.001**
Monthly income	8.163	<0.001**
Residence	1.401	0.162

R=0.568; R²=0.323, Model ANOVA: F=19.895, p-value <0.001

a Predictors: (Constant), Age (years), Gender, Social Status, Level of Education, Work Experience, Monthly income, Residence.

b Dependent Variable: Total score of psychological stress.

Discussion:

The current study aimed to assess psychological stressors facing employees working at El Fayoum University hospital during covid-19 pandemic, the findings showed that more than half of them facing high psychological stresses during covid-19 pandemic and less than half of them facing moderate physical stresses during covid-19 pandemic.

Regarding socio-demographic characteristics of the employees studied, the findings showed that more than one third of employees working at El Fayoum University hospital were with mean ages of 30 to less than 40 years.

Concerning the marital status of studied employees, more than two thirds of employees working at El Fayoum University hospital were females.

The findings of the study demonstrated that, nearly half of employees working at El Fayoum University hospital had a university education.

The present study revealed that, less than quarter of employees working at El Fayoum University hospital had 6 to less than 11 years of work experience.

The current study illustrated that, more than three-quarters of employees working at El Fayoum University hospital hadn't enough monthly income.

Concerning the residence, more than two thirds of employees working at El Fayoum University hospital lived in urban areas.

As regards total levels of stressors, the study revealed that more than half of employees have high psychological stresses related to the covid-19 pandemic, that might be due to fear of being infected or transmission of infection to family or friends, feeling generally helpless, anxiety and depressed due to daily bad news in television and social media about virus and increased number of death cases. This finding was confirmed by *El-Monshed et al. (2022)* who showed that employees experienced high psychological stressors during covid-19 pandemic. This result disagreed with *Gómez- Salgado et al. (2021)* who reported that the majority of employees suffered from psychological stresses during covid-19 pandemic.

According to the findings of the current study, nearly half of employees have high social stresses related to the covid-19, that might be related to social isolation, feeling lonely due to the pandemic, the restrictions of communication with colleagues at work or relatives in any social or family events and fear of lack of income in the future as the pandemic continues. This result was supported by *Rawat et al. (2021)* who revealed that employees felt high socially stresses due to the restrictions of the pandemic. This result was contradicted with *Abolfotouh et al. (2020)* who demonstrated that the majority of employees suffered from high social stresses during covid-19 pandemic.

Furthermore, nearly half of employees have moderate physical stresses related to the

covid-19 pandemic, that might be a result of fear of infected with respiratory or digestive infection and related complications that may lead to losing their lives. This result was agreed with **Bane et al (2021)** who reported that employees experienced moderate physical stress during covid-19 pandemic. This finding disagreed with **Impellizzeri et al., (2021)** who showed that more than three quarters of employees suffered from high physical stresses during covid-19 pandemic.

Concerning the relation between variables of stressors, the current study showed that there are highly statistically significant relations between each variable of psychological stresses and covid-19 pandemic, that might be due to fear of disease and death, fear of losing a job, fear of social isolation, fear of being in quarantine places and feels powerless to protect himself and his loved ones from infection. This result was supported by **Wu et al. (2022)** who reported that there is an association between psychological stresses and covid-19 pandemic stressors and showed that the more covid-19 stressors, the higher of psychological stresses employees suffered.

This result was agreed with **Mrklas et al. (2020)**, who showed that the overall self-reports from employees revealed that prevalence of moderate or high psychological stress were higher than baseline during the early covid-19 outbreak phase and were statistically significantly higher among health care workers.

This result disagreed with **Jardon et al. (2022)** who illustrated that there was no significant association between any stressful covid-19 experiences and having clinical-range depression risk attributed to covid-19, having clinical-range anxiety risk attributed to covid-19, or having high levels of covid-19-related traumatic stress.

The current study's findings showed that there are highly significant relations between socio-demographic study and total score of stressors as level of education and, work experience and monthly income as evidenced by $p < 0.001$.

Conclusion:

More than half of them facing high level of psychological stressors during COVID-19 pandemic, nearly half of them have high social stressors related to the covid-19 pandemic, and less than half of them facing moderate physical stressors during COVID-19 pandemic.

Recommendations:

- ✓ Counseling intervention for employees on their psychological stressors and how to decrease it.
- ✓ Stress management programs designed for prevention and treatment of psychological distress of frontline workers during covid 19 pandemic. Providing training programs in the development of self-efficacy on effective coping skills that may enhance health care workers better in managing the increased work pressures and their psychological stressors that accompanied to covid-19 pandemic.
- ✓ Psycho-educational programs for employees about how to face psychological stresses during covid-19 pandemic, that could curtail the negative impacts of this crisis and eliminates psychological stress of health care employees.
- ✓ Providing adequate support through providing a safe work environment, provision of complete and quality personal protective equipment and supplies to prevent infection and provision of accurate and timely information regarding the disease for hospital employees that may reduce their stress.
- ✓ Hospital administration should work to maintain employees' morale boosted up which will help in employee more cooperation and making efforts with each other in facing of pandemic.

Further studies:

- ✓ Crisis management programs with updated strategies that help in teaching employees how to manage their psychological stressors during crisis such as covid-19 pandemic.
- ✓ Providing training programs in the development of self-efficacy on effective coping skills that may enhance health care workers better in

managing the increased work pressures and their psychological stresses that accompanied to covid-19 pandemic.

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