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HEALTH-RELATED QUALITY OF LIFE (HRQoL) OF MEDICAL FRONTLINERS DURING THE COVID-19 PANDEMIC IN A SELECTED PRIVATE HOSPITAL IN THE PHILIPPINES

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Abstract: This descriptive study determined the health-related quality of life (HRQoL) of 62 medical front liners (nurses, therapists, radiologic technologists, and nutritionist-dietitians) in one Philippine tertiary hospital during the COVID-19 pandemic. The researcher-made questionnaire, both expert-validated and pilot-tested, and personally administered to the respondents following health and safety protocols, was divided into two (2) parts. Part I dealt with the respondents' profile in terms of age, gender, occupation, work shift, and length of service while Part II consisting of 23 indicators measured the respondents' HRQoL in terms of physical, social, and psychological functioning, economic status, and dietary pattern. Descriptive statistics like percentage and weighted mean was used for the respondents' profile and HRQoL while t-test and Kruskal-Wallis test were used for the difference in the respondents' HRQoL relative to their profile. Results revealed that majority of the respondents aged 28 and above, were female, working as nurses, had an average work experience of 1-5 years and were assigned to the morning shift. Overall, the respondents' HRQoL is low in all of its dimensions except for social functioning, having the economic dimension receiving the lowest score. Test of difference showed that male respondents who earned more than female respondents had better HRQoL while radiologic technologists had a better HRQoL compared to other occupations. As a whole, results imply that the quality of life of medical front liners has been affected by the pandemic but they still demonstrate strong resilience and adaptability especially for social dimension of their job since their profession requires constant human interactions and engagement. An action plan was proposed to help improve respondents' HRQoL especially for the dimensions which received low scores.

Keywords: health related quality of life, medical frontliners

Introduction

Being healthy is something that everyone prioritizes and covets. According to the World Health Organization (WHO), being healthy does not simply imply the absence of disease and illness in the body. Instead, it refers to the overall stability of one's welfare in terms of physical, psychological, and social well-being. The ability of health to be an influential tool in the attainment of a satisfying life is the central component of Health-Related Quality of Life (HRQoL). HRQL includes both positive and negative facets of physical, psychological, social functioning, and well-being conceptions (John Hopkins, 2020).

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The coronavirus disease continues to terrorize millions and millions of people all around the globe with its implications on the health physical, mental, and social well-being of individuals. It has also devastatingly impacted the economy and livelihood of people from all walks of life. With the substantial number of people contracting the disease, a surge in hospital admissions is no surprise. Mondal *et al* (2020) stated that frontline health workers play an important role in guaranteeing that the public receives the best health care possible. They added that frontline healthcare workers are the anchors that keep our healthcare system stable and secure. Without their assistance and knowledge, the healthcare system loses its ability to provide care, which renders it

ineffective and useless. Medical professionals provide unrivaled services and care to millions upon millions of people all over the world, providing life-saving treatments that cure diseases and illnesses. There is a growing body of evidence indicating that healthcare workers who are properly assisted and encouraged carry out successful disease-mitigation strategies and critical care provision in trying situations like the ongoing COVID-19 crisis. This demonstrates their critical role as the foundations of health.

As a result of the mandatory lockdowns and isolation in an effort to reduce the transmission of the virus, a brand-new health concern looms over the welfare of individuals. Pandemic fatigue is the product of abrupt changes in one's daily routine, resulting in total physical and mental exhaustion. Pandemic fatigue entails several problematic symptoms characterized by physical and mental exhaustion. feelings of helplessness, difficulty concentrating, emotional instability, and elevated fear. (World Health Organization, 2020). According to studies, during the pandemic's peak, a higher proportion of nurses, particularly those directly caring for COVID-19 patients, experienced significant fatigue (Labrague, 2021).

Not only do frontline health workers face difficulties at work, namely by having great chances of contracting the virus and experiencing a shortage of personal protective equipment, but they also face threats and challenges outside of work. These cases may vary from country to country, but there are substantial reports of stigma and discrimination toward healthcare workers, such as being denied access to public transport and stores, being assailed on their way to work, and rental terminations because they are perceived as virus carriers (Wille, 2020). As cited by Tien *et al* (2020), governments, private organizations, and healthcare systems across the globe have faced a considerable amount of financial and institutional burden brought about by the COVID-19 pandemic. This has direct and indirect implications on people's mental health and health-related quality of life (HRQoL) and access to care is hampered. A high prevalence of healthcare professional stigmatization and malpractice has been reported as a result of the epidemic, as has the reassignment of healthcare personnel and student involvement in healthcare delivery during the

pandemic. This situation will not improve unless medical facilities are adequately equipped and workforces are adequately prepared.

Jahrami *et al*., (2021) revealed that roughly half of the physicians who participated in the study disclosed that they experienced poor sleep quality. The main factors that contribute to sleep disruption in healthcare professionals are work-related stress, dealing with the sick, misery, and death of patients and colleagues, and an irregular shift and loaded work schedule. It was also reported that approximately 33% of frontline medical workers in charge of COVID-19 patients in Wuhan City exhibited high levels of anxiety. Furthermore, frontline healthcare workers' mental health was pessimistic, as evidenced by elevated somatization and dread (Wang *et al*, 2020). A study conducted by Zhang *et al* (2020), provided evidence for addressing the issue regarding food supply and nutrition status during the peak of the Covid19 outbreak. This seemed to be the first survey of healthcare workers' diets and nutrition during the pandemic. The findings revealed that even after only 1–2 months, participants' body weight changed, which was an important nutritional indicator. Despite the fact that the results were self-reported, they suggested that a large proportion of healthcare workers had unbalanced diets throughout the response. Furthermore, 13.5 percent of healthcare workers reported mild discomfort after consumption, and 8 people, including 6 females and 2 males, reported severe discomfort and required medication.

Considering the reviewed literature and studies, the following gaps were determined:

there were no local studies that looked into the health-related quality of life in terms of physical, psychological, social, economic, and dietary factors of medical front liners in the context of the current pandemic. There were limited studies conducted globally that looked into the HRQL of medical frontlines. Two of them focused on psychological domains such as stress, anxiety, and depression. In view of these identified gaps, this study determined the health-related quality of life along physical, psychological, social, economic, and dietary patterns of medical front liners during the COVID-19 pandemic.

The goal of this study was to determine the Health-Related Quality of Life of Medical Frontliners during the Covid-19 Pandemic. Particularly, it aimed to find the answers to the following sub-problems: (1). What is the respondent's profile in terms of age, gender, occupation, length of service, and work shift?; (2). What is the health-related quality of life of medical front liners in terms of Physical, Psychological, Social, Economical, and Dietary Patterns?; (3). Is there a significant difference in the health-related quality of life of medical front liners when grouped according to their profile variables? (4). What action plan can be proposed to improve the health-related quality of life of medical front liners of the tertiary hospital in the Philippines?

Methodology

Research Design

The descriptive survey method was used in the study in order to determine the physical, psychological, social, economic, and dietary patterns of medical front liners during COVID-19. Descriptive studies describe individuals, events, or conditions as they exist in nature. The researchers do not modify any of the variables, instead, they describe the sample and/or the variables. Descriptive studies examine the characteristics of the respondents; they address issues within a unit, an organization, or a population (Siedlecki, 2020).

Sources of Data

The researchers used the survey questionnaire tool for this research to gather and collect the information and the data needed. The primary sources of data were the information gathered from the medical front liners in a selected private tertiary hospital in the Philippines and the secondary sources of data were journal articles, internet sources, books, and previous studies.

The population of the Study

The total population of medical front liners is 117 (Nurse Department = 94, Nutritionist-Dietitian Department = 4, Physical Therapists = 6, Occupational Therapists = 1 and Radiologic technologists = 12). The researchers used purposive sampling to qualify the respondents. Using Slovin's formula with a 95% level of confidence and 5% margin of error, the required sample is 90 however only 62 responded, representing a 68.89% retrieval rate. Of these 62, 40 were nurses, 3 were nutritionist-dietitians, 7 were therapists, and 12 were radiologic technologists.

Instrumentation and Validation

A questionnaire was used to determine the health-related quality of life of medical front liners during covid-19 pandemic. It is divided into two (2) parts: The first section deals with the socio-demographic characteristics of the participants, such as age, gender, occupation, length of service, and work shift. The second section covered the factors that dictate and influence the health-related quality of life (HRQoL) of medical health workers in terms of physical functioning, social functioning, economic status, psychological functioning, and dietary patterns. The questionnaire underwent content validation by experts in the field of nutrition and dietetics, statistics, and research.

Evaluation and Scoring

The health-related quality of life of medical front liners was measured using the following:

	Numerical Range	Categorical Response	Interpretation
4	3.28 – 4.00	Strongly Agree	Very Low
3	2.52 – 3.27	Agree	Low
2	1.76 – 2.51	Disagree	High
1	1.00 – 1.75	Strongly Disagree	Very High

Data Gathering Procedure

The researchers requested and sought permission addressed to the Director and Data Privacy Officer of a selected private tertiary hospital in the Philippines before administering the questionnaire to the medical frontlines. The questionnaires were disseminated in different departments of the hospital with the help of the clinical head dietitian in March 2022. There were a total of 117 medical front liners but only 62 workers were able to participate. The participants completed the questionnaire anonymously, voluntarily, and independently. The respondents were assured that their participation would be treated with the utmost confidentiality and that the information they shared would be used for research purposes only.

Statistical Treatment of Data

The statistical tools used for this quantitative analysis in this study were the following:

1. Percentage, used to describe the profile of the respondents.

2. Weighted mean was used to describe the HRQL of the medical frontlines.

3. Analysis of Variance (ANOVA) was used to determine the difference in the respondents' health-related quality of life when grouped according to their age.

4. t-test was used to determine the difference in the respondents' health-related quality of life when grouped according to their gender and work shift.

5. Kruskal-Wallis test was used to determine the difference in the respondents' health-related quality of life when grouped according to their occupation and length of service.

Results and Discussion

This course of the analysis and interpretation was guided by the problem stated in the Introduction.

1. The Demographic Profile of the Respondents

Table 1. Demographic Profile of the Respondents

Profile		Frequency	Percentage
Age	21-27	15	24.20
	28-34	29	46.80
	35 and above	18	29.00
Gender	Male	21	33.90
	Female	41	66.10
Occupation	Nutritionist-Dietitian	3	4.80
	Therapist	7	11.30
	Radiologic Therapist	12	19.40
	Nurse	40	64.50
Length of service	1-5	47	75.80
	6-10	7	11.30
	11 and above	8	12.90
Work shift	Morning	41	66.10
	Night	21	33.90
Total Number of Respondents = 62			

As shown in Table 1, the profile of the respondents in terms of age is 15 or 24.20% are 21-27 years old, 18 or 29.00% are 35 years old and above, and 29 or 46.80% are 28-34 years old. In terms of gender, the majority of the medical front liners are female with a frequency of 41 or 66.10%, and 21

or 33.90% are male. In terms of occupation, 3 or 4.80% are Nutritionist-Dietitians, 7 or 11.30% are Therapists, 12 or 19.40% are Radiologic Technologists, and lastly, 40 or 64.50% are Nurses. In terms of length of service, 7 or 11.30% are front liners who work 6-10 years, 8 or 12.90% are front liners who work 11 years and above, and 47 or 75.80% are front liners who work 1-5 years. In terms of work shifts, 21, or 33.90% are night shifters while 41 or 66.10% are morning shifters.

Hence, almost half of the respondents were 28 to 34 years old, the majority were female and were employed as nurses, had been in the profession for 1-5 years, and were working in morning shift.

2. The Respondent's Health-Related Quality of Life

Table 2. The Respondent's Health-Related Quality of Life: Physical Functioning

Indicators	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1. Having trouble getting sleep.	2.77	Low	3
2. Having trouble maintaining a good quality sleep.	2.81	Low	2
3. Losing weight because of stress at work.	2.40	High	5
4. Not having enough time to rest.	2.87	Low	1
5. Not taking care of my physical appearance because	2.55	Low	4
Average	2.68	Low	

As shown in Table 2, pertaining to the physical functioning of medical front liners, the average weighted mean of 2.68 showed that the respondent's health-related quality of life in terms of physical functioning is low. This study is similar to the previous study by Salari *et al* (2020) where it was indicated that due to increased work responsibilities and stress Health Care Workers (HCWs), especially nurses, subsequently faced sleep disturbances and high levels of stress.

Table 3. The Respondent's Health-Related Quality of Life: Psychological Functioning

Indicators	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1. My work affects my mental health.	2.98	Low	2
2. I find it difficult to perform my duties under stress.	3.34	Very Low	1

3. I find it hard opening up my problems.	2.85	Low	5
4. I'm having trouble focusing and I'm often distracted.	2.90	Low	4
5. I'm having anxiety attack because of work.	2.92	Low	3
Average	3.00	Low	

As shown in Table 3, the average weighted mean of 3.00 showed the respondent's health-related quality of life: psychological functioning is low. This study further intensifies the findings of a similar study by Benfante *et al* (2020), where it was discussed that Acute Stress Disorder (ASD) and Post Traumatic Stress Disorder (PTSD) could be the potential consequences of the horrendous unprecedented products of the Covid-19 pandemic. Another contributing factor to these implications is the reality that Medical Workers (MWs) are at the receiving end of incomparable work demands and expectations to care for patients, control the spread of the virus, and continue to work efficiently without the guarantee of safety. A study by Celmece *et al* (2020) also stated that anxiety, stress, and burnout are the main problems encountered by medical workers due to the laborious and critical nature of their work.

Table 4. The Respondent's Health-Related Quality of Life: Social Functioning

Indicators	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1. My working hours limit my time with my family and friends.	2.65	Low	1
2. It's challenging to communicate wearing my PPEs (to patients and workmates).	2.50	High	3
3. I feel drained after social interaction at work.	2.53	Low	2
4. I find it hard to mingle with my friends and relatives because of work.	2.35	High	4
5. I'm anxious about going out because of the public's perception that healthcare workers might carry the virus.	2.32	High	5
Average	2.47	High	

As shown in Table 4, pertaining to the social functioning of medical front liners, the average weighted mean of 2.47 showed the respondent's health-related quality of life: social functioning is high. This study is consistent with the preceding study by Razu *et al* (2021) which declares that healthcare professionals experienced ostracism and cold-shouldering in and outside of work. Benfante *et al* (2020) also added that medical workers are expected social demands that are beyond compare at work.

Table 5. The Respondent's Health-Related Quality of Life: Economic Status

Indicators	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1. I do not find my salary as sufficient to address my needs.	3.31	Low	1
2. I was not able to receive my hazard pay on time.	3.21	Low	2
3. My benefits and incentives (OT pay) do not compensate with regards to my working hours.	3.11	Low	3
Average	3.21	Low	

As shown in Table 5, pertaining to the economic status of medical front liners, the average weighted mean of 3.21 showed the respondent's health-related quality of life: economic status is low. The results of this study agree with the previous study by Tien *et al* (2020), which reported that there is an optimistic relationship between higher salary and higher HRQoL. Moreover, medical professionals who are able to pay for medical treatments had a lower probability of experiencing anxiety and depression as well as higher HRQoL.

Table 6. The Respondent's Health-Related Quality of Life: Dietary Pattern

Indicators	**Weighted Mean**	**Verbal Interpretation**	**Rank**
1. I Skip Meals (breakfast, lunch, and dinner).	2.66	Low	2
2. I have no appetite due to stress in the workplace.	2.44	High	5
3. My work affects my normal dietary habits.	2.61	Low	4
4. I tend to overeat as my coping mechanism to stress.	2.65	Low	3
5. I resort to unhealthy food choices.	2.79	Low	1
Average	2.63	Low	

As shown in Table 6, pertaining to the dietary patter of medical front liners, the average weighted mean of 2.63 showed the respondent's health-related quality of life: the dietary pattern is low. This is in line with the study by Zhang *et al* (2020) that provided evidence of healthcare workers admitting to having unbalanced diets and body weight changes which is a number one nutrition indicator.

Table 7. The Summary Table of the Respondent's Health-Related Quality of Life

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Physical	2.68	Low	3
2. Psychological	3.00	Low	2
3. Social	2.47	High	5
4. Economical	3.21	Low	1
5. Dietary pattern	2.63	Low	4
Overall Weighted Mean	2.80	Low	

As shown in Table 7, the overall weighted mean of 2.80 showed a summary of the respondent's health-related quality of life is low. This means that they are mainly affected in terms of economical status, psychological functioning, and physical functioning. The findings of this study relate to the previous study by Ungureanu *et al* (2020) which says that COVID-19 infection has spread throughout the world and continues to cause numerous problems at all levels. The medical and economic systems are both impacted by a lack of control in disease early identification and rapid evolution.

3. The difference in the Respondent's Health-Related Quality of Life when grouped According to their Profile Variables

Table 8. The difference in the Respondent's Health-Related Quality of Life when grouped according to Age

Health-Related Quality of Life	F-test	p-value	Interpretation
Physical	0.517	0.599	Not Significant
Psychological	0.244	0.784	Not Significant
Social	1.117	0.334	Not Significant
Economical	0.215	0.807	Not Significant
Dietary pattern	0.057	0.945	Not Significant
***Significant @ 0.05**			

As shown in Table 8, there was no significant difference in the respondents' health-related quality of life when grouped according to age. The probability values of 0.599 (physical), 0.784 (psychological), 0.334 (social), 0.807 (economical), and 0.945 (dietary pattern) were greater than the 0.05 significance level. When respondents are grouped by age, there is no significant difference in their HRQoL. This means that the respondents' health-related quality of life was the same regardless of their age. This opposed the study of Manh *et a*l (2020) who mentioned that medical front liners over the age of 30 showed to have lower HRQoL scores. Also, a study conducted by Suryavanshi *et al* (2020) showcased that there is a high prevalence of depression and anxiety among young Health Care Workers caring for Covid-19 patients.

Table 9. The difference in the Respondent's Health-Related Quality of Life when grouped according.

Health-Related Quality of Life	**t-test**	**p-value**	**Interpretation**
Physical	-0.276	0.783	Not Significant
Psychological	0.509	0.613	Not Significant
Social	-0.640	0.524	Not Significant
Economical x_{male}=3.45 x_{female}=3.09	2.032	0.047*	Significant
Dietary pattern	-0.183	0.855	Not Significant
***Significant @ 0.05**			

As shown in Table 9, there was a significant difference between the health-related quality of life of the respondents when grouped according to an economical variable based on the p-value of 0.047 which is less than a 0.05 level of significance. This means that the male respondents have a greater income and also have a better health-related quality of life compared to the female respondents. However, there was no significant difference in the respondent's health-related quality of life when grouped according to gender in terms of physical, psychological, social, and dietary patterns. The probability values of 0.783 (physical), 0.613 (psychological), 0.524 (social), and 0.855 (dietary pattern) were greater than the 0.05 significance level. This means that the respondent's health-related quality of life was the same regardless of their gender. This study found conflicting results in regards to the previous study conducted by Feng et al (2020), where it was stated that females scored worse than males in terms of emotional and cognitive functioning.

Table 10. The difference in the Respondent's Health-Related Quality of Life when grouped according to Occupation.

Health-Related Quality of Life	**Kruskal-Wallis test**	**p-value**	**Interpretation**
Physical	5.818	0.121	Not Significant
Psychological	3.381	0.337	Not Significant
Social	3.391	0.335	Not Significant
Economical			
x_{ND}=2.78	14.194	0.003*	Significant
x T=3.38			
x_{RT}=3.75			
x N=3.05			
Dietary pattern	7.787	0.051	Not Significant
***Significant @ 0.05**			

As shown in Table 10, there was a significant difference between the health-related quality of life of the respondents when grouped according to the economical variable based on the p-value of 0.003 which is less than a 0.05 level of significance. This means that Radiologic Technologists have a better health-related quality of life compared to other occupations (Nutritionist-Dietitian, Nurse, and Occupational & Physical Therapists). However, there was no significant difference in the respondent's health-related quality of life when grouped according to occupation in terms of physical, psychological, social, and dietary patterns. The probability values of 0.121 (physical), 0.337 (psychological), 0.335 (social), and 0.051 (dietary pattern) were greater than the 0.05 significance level. This means that the respondent's health-related quality of life was the same regardless of their occupation. This study had different results compared to the study by Feng *et al* (2020), which states that respondents whose workplaces did not have pediatric fever clinics or isolated observation areas had lower scores in all domains (physical, cognitive, emotional) except worry. Respondents who had previously treated patients with Covid-19 had lower scores across the board. In addition to this, Jordan *et al* (2016) mentioned that nurses who experience high levels of stress and have poor stress-coping strategies showed to have the poorest health outcomes compared to other groups.

Table 11. The difference in the Respondent's Health-Related Quality of Life when grouped according to Length of Service

Health-Related Quality of Life	**Kruskal-Wallis test**	**p-value**	**Interpretation**
Physical	3.473	0.176	Not Significant
Psychological	5.562	0.062	Not Significant
Social	0.394	0.821	Not Significant
Economical	3.316	0.191	Not Significant
Dietary pattern	0.278	0.870	Not Significant
Significance level @ 0.05			

As shown in Table 11, there was no significant difference in the respondent's health-related quality of life when grouped according to the length of service. The probability values of 0.176 (physical), 0.062 (psychological), 0.821 (social), 0.191 (economical), and 0.870 (dietary pattern) were greater than the 0.05 significance level. This means that the respondent's health-related quality of life was the same regardless of their length of service. This study found an opposing stance to the study conducted by Manh *et al* (2020) which said that healthcare providers with longer working years had the tendency to score a lower HRQoL among others.

Table 12.The difference in the Respondent's Health-Related Quality of Life when grouped according to Work Shift

Health-Related Quality of Life	t-test	p-value	Interpretation
Physical	-1.334	0.187	Not Significant
Psychological	-0.937	0.352	Not Significant
Social	-0.117	0.907	Not Significant
Economical	0.427	0.671	Not Significant
Dietary pattern	-0.804	0.425	Not Significant
Significance level @ 0.05			

As shown in Table 12, there was no significant difference in the respondent's health-related quality of life when grouped according to work shift. The probability values of 0.187 (physical), 0.352 (psychological), 0.907 (social), 0.671 (economical), and 0.425 (dietary pattern) were greater than the 0.05 significance level. This means that the respondents' health-related quality of life was the same regardless of their work shifts. This study's findings do not agree with the previous study by Turchi *et al* (2019), where it was revealed that there is an implication for the Health-Related Quality of Life (HRQoL) of nurses who are working on night shift. A study by Books *et al* (2017) revealed that nurses working on the night shift are sleep-deprived and experience mood swings.

4. Proposed Action Plan to improve the health-related quality of life of medical Front liners in a Selected Private Tertiary Hospital in the Philippines

The proposed action plan was tailored after the results of the study mainly focusing on the domains where the respondents scored the lowest in their health-related quality of life: economic status, physical functioning, and psychological functioning. For the improvement of the Health-related Quality of Life of the respondents, the following plan of action were made:

- The economic status is low: to improve this domain, the organization should prioritize and increase the salary for medical workers working on the frontlines against the battle with COVID-19 in order to compensate for their long and tiring working hours.
- The psychological functioning is low: to improve this domain, the institution should strengthen its take on the importance of the front liners' mental health and its relationship with high quality work performance. The institution should provide and establish mental health support and counseling from experts with an emphasized on stress reduction, stress management, and the development of healthy stress coping strategies.
- The physical functioning is low: to improve this domain, front liners should have enough off days other than the weekends where they can take time to rest and rejuvenate. The administration should also coordinate sufficient work breaks and no extended working hours.
- The dietary pattern is low: to improve this domain, healthcare workers must not be negligent of their lifestyles. The organization should also prioritize nutrition counseling and seminars among its workers for the enhancement and correction of the dietary patterns of the front liners.

Conclusions

From the summary of the findings of the study, the following conclusions were drawn:
(1). Almost half of the respondents were 28 to 34 years old, the majority were female and were employed as nurses, had been in the profession for 1-5 years, and were working in morning shift. (2). Overall, the medical front liners scored low in most domains of Health-Related Quality of Life including (a) physical, meaning they do not have adequate time to rest and that they are experiencing sleep disruptions in addition to having trouble getting sleep. (b) Psychological, meaning they find it hard to carry out their duties under stress, their work has implications on their mental health, and they experience anxiety attacks because of work. (c) Economical, meaning they do not find their salary sufficient to address their needs, that they weren't able to receive their hazard pay on time, and that their benefits and incentives (overtime pay) do not compensate with regard to their working hours. (d) Dietary patterns, meaning they tend to favor unhealthy food choices, that they are skipping meals (breakfast, lunch, and dinner), and that as a way of overcoming stress, they consume more than what

they need. While the social domain received the highest score from the respondents, suggesting that this is the least affected area of their Health-related Quality of Life during the COVID-19 pandemic. (3). The respondents' health-related quality of life was the same regardless of their age, length of service, and work shift. However, in the economic domain of HRQoL, men scored higher than females which indicated that they are more secure with their salary and incentives. The same could be said for Radiologic Technologists who scored higher compared to other participants when grouped according to occupation in terms of economic status. (4). The devised action plan to improve the Health-Related Quality of Life of medical frontlines in Perpetual Help Medical Center Biñan can be used to develop interventions. These interventions must be implemented to ensure that workers in the medical field will have better HRQoL.

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Declaration of Interest Statement

The authors declare that they have no conflict of interests.

References:

Ali, A., Rasheed, A., & Naz, S. (2020). Health-related Quality of Life of Nurses Working in Tertiary Care Hospital of Karachi. Pakistan journal of medical sciences, 36(3), 490–495. https://doi.org/10.12669/pjms.36.3.1267

Alimoradi, Z., Broström, A., Tsang, H.W.H., Griffiths, M.D., Haghayegh, S., Ohayon, M.M., Lin, C.Y., Pakpour, A.H (2021). Sleep problems during COVID-19 pandemic and its' association to psychological distress: A systematic review and meta-analysis. Volume 36, 100916, ISSN 2589-5370, https://doi.org/10.1016/j.eclinm.2021.100916.

Arora, T., & Grey, I. (2020). Health behaviour changes during COVID-19 and the potential consequences: A mini-review. Journal of Health Psychology, 25(9), 1155– 1163. https://doi.org/10.1177/1359105320937053

Benfante, A., Di Tella, M., Romeo, A., Castelli, L. (2020). Traumatic Stress in Healthcare Workers During COVID-19 Pandemic: A Review of the Immediate Impact. Frontiers in Psychology. 11. 2816. 1662-1078. https://www.frontiersin.org/article/10.3389/fpsyg.2020.569935

Cabarkapa, S., Nadjidai, S. E., Murgier, J., & Ng, C. H. (2020). The psychological impact of COVID-19 and other viral epidemics on frontline healthcare workers and ways to address it: A rapid systematic review. Brain, behavior, & immunity - health, 8, 100144. https://doi.org/10.1016/j.bbih.2020.100144

Çelmeçe, N., Menekay, M., (2020). The Effect of Stress, Anxiety and Burnout Levels of Healthcare Professionals Caring for COVID-19 Patients on Their Quality of Life. Frontiers in Psychology. https://www.frontiersin.org/article/10.3389/fpsyg.2020.597624.

Deshpande, P., Rajan, S., Sudeepthi, B., Nazir, C. (2011). Patient-reported outcomes: A new era in clinical research. Perspectives in clinical research. 2. 137-44. 10.4103/2229-3485.86879.

Feng, H., Zhe, Y., Yue, W., Wei, Z., Yan, L., Ling-chao, Z., Xun, J., Lei, S.(2020). Health-Related Quality of Life and Influencing Factors of Pediatric Medical Staff During the COVID-19 Outbreak. Frontiers in Public Health,Volume 8.

Gupta B, Sharma V, Kumar N, Mahajan A. (2020). Anxiety and Sleep Disturbances Among Health Care Workers During the COVID-19 Pandemic in India: Cross- Sectional Online Survey. JMIR Public Health Surveill.

Ingram, J., Maciejewski, G., Hand, C.J. (2020). Changes in Diet, Sleep, and Physical Activity Are Associated With Differences in Negative Mood During COVID-19 Lockdown. Frontiers in Psychology. 11. 2328. 1664-1078.https://www.frontiersin.org/article/10.3389/fpsyg.2020.588604

Iqbal, M. (2021). Health-related quality of life among healthcare providers in Pakistan. Journal of Pharmacy And Bioallied Sciences. volume =13, number =1, pages = 31-38, doi = 10.4103/jpbs.JPBS_265_20.

Jahrami H, BaHammam AS, AlGahtani H, Ebrahim A, Faris M, AlEid K, Saif Z, Haji E, Dhahi A, Marzooq H, Hubail S, Hasan Z. (2021). The examination of sleep quality for frontline healthcare workers during the outbreak of COVID-19. Sleep Breath. Mar;25(1):503-511. doi: 10.1007/s11325-020-02135-9. Epub 2020 Jun 26. PMID: 32592021; PMCID: PMC7319604.

Johnson, S. B, Butcher, F. (2020). Doctors during the COVID-19 pandemic: What are t heir duties and what is owed to them? Journal of Medical ethics.

Jordan, T.R., Khubchandani, J., Wiblishauserm M. (2016).The Impact of Perceived Stress and Coping Adequacy on the Health of Nurses: A Pilot Investigation. Nursing Research and Practice, vol. 2016, Article. ID 5843256, 11 pages. https://doi.org/10.1155/2016/5843256

Konstantinou, M.S., Efstathiou, A., Charalambous, G., Kaitelidou, D., Jelastopulu, E. (2018). Assessing the Health-Related Quality of Life of Nurses in the Public Sector of Cyprus. International Journal of Caring Sciences January-April 2018 Volume 11 | Issue 1| Page 100.

Labrague, J.L. (2021). Pandemic fatigue and clinical nurses' mental health, sleep quality and job contentment during the covid-19 pandemic: The mediating role of resilience. Journal of Nursing Management. 29. 7. 1992-2001. https://doi.org/10.1111/jonm.13383

Manh Than H., Minh Nong V., Trung Nguyen C., Phu Dong K., Ngo HT , Thu Doan T., Thu Do N., Huyen Thi Nguyen T., Van Do T., Xuan Dao C., Quang Nguyen T., Ngoc Pham T., Duy Do, C. (2020). Mental Health and Health-Related Quality-of-Life Outcomes Among Frontline Health Workers During the Peak of COVID-19 Outbreak in Vietnam: A Cross-Sectional Study. Risk Manag Healthc Policy. 2020;13:2927-2936. https://doi.org/10.2147/RMHP.S280749

Mota, I. A., Olivera Sobrinho2, G. D., MORAIS3, L. P. S., Thamires Ferreira DANTAS4, T. F. (2020). Impact of COVID-19 on eating habits, physical activity and sleep in Brazilian

healthcare professionals.https://www.scielo.br/j/anp/a/HZyYRd5634Pp4hhqcGWrhPB/?format=pdf&lang=en

Mufarrih, Syed & Naseer, Aeman & Qureshi, Nada & Anwar, Muhammad & Zahid, Nida & Lakdawala, Riaz & Noordin, Shahryar. (2019). Burnout, Job Dissatisfaction, and Mental Health Outcomes Among Medical Students and Health Care Professionals at a Tertiary Care Hospital in Pakistan: Protocol for a Multi-Center Cross- Sectional Study. Frontiers in Psychology. 10.3389/fpsyg.2019.02552.

Muthuri, R. N. D. K., Senkubuge, F., & Hongoro, C. (2020). Predictors of Health-Related Quality of Life among Healthcare Workers in the Context of Health System Strengthening in Kenya. *Healthcare*, *9*(1), 18. MDPI AG. Retrieved from http://dx.doi.org/10.3390/healthcare9010018

Padilla, P.R., Villavicencio-Barriga, V.D.; Cárdenas-Quintana, H.; Abril-Merizalde, L.;

Solís-Manzano, A.; Carpio-Arias, T.V. (2021). Eating Habits and Sleep Quality during the COVID-19 Pandemic in Adult Population of Ecuador. Int. J. Environ. Res. Public Health. 18.3606. https://doi.org/10.3390/ ijerph18073606

Rivera Jr., M.M., Rivera, R. (2007). Practical Guide to Thesis and Dessertation Writing. Chapter 8: Methodology. Pages: 61.

Rusliyadi, Muhamad (2021). The Role of the Institutional, Assistance, and Source Information Analysis on Food Security and Extension Policy: Case in Indonesia. Chapter 12, pages 277. https://www.igi-global.com/book/precision-agriculture- technologies-food-security/244644

Salari, N., Khazaie, H., Hosseinian-Far, A., Ghasemi, H., Mohammadi, M., Shohaimi, S., Daneshkhah, A., Khaledi-Paveh, B., & Hosseinian-Far, M. (2020). The prevalence of sleep disturbances among physicians and nurses facing the COVID- 19 patients: a systematic review and meta-analysis. Global Health 16, 92. https://doi.org/10.1186/s12992-020-00620-0

Samuelsson, C., Qlindamaria, T. (2018). Nurses experiences on work-related health in the Philippines. Jonkoping University. School of Health and Welfare. https://www.divaportal.org/smash/get/diva2:1210360/FULLTEXT01.pdf

Sharma, S. K., Mudgal, S. K., Thakur, K., Parihar, A., Chundawat, D. S., & Joshi, J. (2021). Anxiety, depression and quality of life (QOL) related to COVID-19 among frontline health care professionals: A multicentric cross-sectional survey. *Journal of family medicine and primary care*, *10*(3), 1383–1389. https://doi.org/10.4103/jfmpc.jfmpc_2129_20

Shreffler, J., Petrey, J., & Huecker, M. (2020). The Impact of COVID-19 on Healthcare Worker Wellness: A Scoping Review. *The western journal of emergency medicine*, *21*(5), 1059–1066. https://doi.org/10.5811/westjem.2020.7.48684

Siedlecki, S. L. PhD, RN, APRN-CNS, FAAN (2020). Understanding Descriptive Research Designs and Methods, Clinical Nurse Specialist: Volume 34 - Issue 1 - p 8-12 doi: 10.1097/NUR.0000000000000493

Stojanov, J., Malobabic, M., Stanojevic, G., Stevic, M., Milosevic, V., & Stojanov, A. (2021). Quality of sleep and health-related quality of life among health care professionals treating patients with coronavirus disease-19. *International Journal of Social Psychiatry*, *67*(2), 175–181. https://doi.org/10.1177/0020764020942800

Suryavanshi, N., & Kadam, A., & G. G. Dhumal. & Nimkar, S., & Mave, V., & Gupta, A., & Cox, S. & Guptel, N. (2020). Mental health and quality of life among healthcare professionals during the COVID-19 pandemic in India. Brain and behavior.10.e01837.10.1002/brb3.1837.

Tien, T. V., Nguyen, H.C., Linh, P.V., Hoang, M.N., Nguyen, H.C., HA, T.H., Phan, D.T., Nguyen, P.B., Trinh, M.V., Do, T.V., Nguyen, H.Q., Thi Phuong, T.N., Nhan P.T. Nguyen, Quoc Cuong, T., Tran, V.K., Pham, H.X., Nguyen, L.V., Vo, T.T., Duong, T.T., Nhu, B.D., Hải Dương, H., Minh, K.P., Pham, T.M., Nguyen, K.T., Yang, S-H., Chao, J. C-J., Van Duong, T., Dao, H.K. (2020). Impacts and interactions of COVID-19 response involvement, health-related behaviours, health literacy on anxiety, depression and health-related quality of life among healthcare workers: A cross-sectional study. BMJ Open. 10. e041394. 10.1136/bmjopen-2020 041394

Tripathi, N., Moakumla, N. (2018). A valuation of Abraham Maslow's theory of self-actualization for the enhancement of quality of life. Indian Journal of Health and Wellbeing. 9. 3. 499-504.

Torrentira, M. (2020). CARING AMIDST THE PANDEMIC: STRUGGLES OF THE MEDICAL FRONTLINERS IN A DESIGNATED COVID-19 HOSPITAL IN THE PHILIPPINES. International Journal of Psychosocial Rehabilitation. 24. 10084-10089.

Ungureanu, B. S., Vladut, C., Bende, F., Sandru, V., Tocia, C., Turcu-Stiolica, R. A., Groza, A., Balan, G. G., & Turcu-Stiolica, A. (2020). Impact of the COVID-19 Pandemic on Health-Related Quality of Life, Anxiety, and Training Among Young Gastroenterologists in Romania. *Frontiers in psychology*, *11*, 579177. https://doi.org/10.3389/fpsyg.2020.579177

Vajdi, M., Farhangi, M.A. (2020). A systematic review of the association between dietary patterns and health-related quality of life. Health Quality Life Outcomes 18, 337

Wang S, Xie L, Xu Y, Yu S, Yao B, Xiang D. (2020) Sleep disturbances among medical workers during the outbreak of COVID-2019.Occup Med (Lond). Jul 17;70(5):364-369. doi: 10.1093/occmed/kqaa074. PMID: 32372077; PMCID: PMC7239094. https://pubmed.ncbi.nlm.nih.gov/32372077/

Wille, C. (2020). Healthworkers at Risk: Added challenges of Covid-19. Relief Web. https://reliefweb.int/report/world/health-workers-risk-added-challenges-covid-19

Woon, L.S.C., Shuhada, M.R., Afifuddin, M.M., Huat, T.S., Farris, L.B.A.M.F. (2021). Quality of Life and Its Predictive Factors Among Healthcare Workers After the End of a Movement Lockdown: The Salient Roles of COVID-19 Stressors, Psychological Experience, and Social Support . Frontiers of Psychology. 12. 1164. 1664-1078.10.3389/fpsyg.2021.652326. www.frontiersin.org/article/10.3389/fpsyg.2021.652326

Zhang, J., Lai, S., Lyu, Q., Zhang, P., Yang, D., Kong, J., Qi, Y., Yuan, W., Zeng, S., Song, P., Yang, T., Li, L., Wang, J., Liu, Y,.Ge, T., Zhang, Q., Feng, G., Liu, A., Ding, G., (2020).Diet and Nutrition of Healthcare Workers in COVID-19 Epidemic—Hubei, China,

2019[J]. China CDC Weekly, 2020, 2(27): 505-506. doi: 10.46234/ccdcw2020.121 http://weekly.chinacdc.cn/en/article/doi/10.46234/ccdcw2020.121