

Impact of COVID-19 Pandemic among Nurses in the New Normal: Perceived Stress Scale Measures

Eva Lobelle Sampayan¹, Shadia Hamoud Alshahrani²,
Kalaiselvi Duraisamy Pavuthakursar³, Rasha Elsayed Ahmed⁴,
Selvaranni Panneer Selvam⁵

¹Faculty, Nursing Administration, College of Nursing King Khalid University, Al Mahallah Road, Khamis Mushayt Kingdom of Saudi Arabia

^{2,3,5}Faculty, Medical-Surgical Department, College of Nursing King Khalid University, Al Mahallah Road, Khamis Mushayt Kingdom of Saudi Arabia

⁴Faculty, Medical-Surgical Department, College of Nursing King Khalid University, Al Mahallah Road, Khamis Mushayt, KSA and Tanta University, Egypt

Corresponding Author: Eva Lobelle Sampayan

DOI: <https://doi.org/10.52403/ijshr.20221047>

ABSTRACT

Two years after the COVID-19 pandemic emerged, the nursing workforce in the new normal still embraces the effect of the coronavirus pandemic. Nurses continuously address patients' health needs and provide quality nursing care. This study aimed to examine the impact of the COVID-19 pandemic on the new normal among Filipino nurses. This was a descriptive-correlational survey of 56 nurses recruited through a non-probability chain-referral sampling method. Each participant completed an online google form on sociodemographic characteristics and a validated instrument on perceived stress scale (PSS) measures. The results indicated that most of the respondents were 31-35 years old (41.1%), predominantly female (62.5%), and single (67.9%). BSN degree (94.6%) was the highest education level, had 1-5 years (46.4%) work experience, and the majority (87.5%) experienced handling patients with coronavirus disease. The majority (n=47, 83.9%) of the respondents showed a moderate level of stress while 3.6% (n=2) reported high-stress levels. The association of age (p=.383), gender (p=1.00), marital status (p=.277), and education level (p=.415, and work experience (p=.142) is not statistically significant to their level of stress (p=>0.05). Nurses have a moderate level of stress during the COVID-19 pandemic. The study concluded that nurses have moderate

stress facing the new normal. Therefore, hospital and nursing administrators should continuously provide support for their nurses. Sustainable availability of resources, effective stress management strategies, continuous update, and regular stress screening program are some of the desirable key measures to decrease stress levels. Further research is recommended in larger scope and population to establish the generalizability of findings.

Keywords: New Normal, Stress Scale, COVID-19 Pandemic, Nurses

INTRODUCTION

The World Health Organization (WHO) issued a public health emergency of international concern on coronavirus disease on 30 January 2020 and declared the outbreak of the disease on 11 March 2020. [1] Hence then, news about the severity and fatality of covid-19 has been noted all over the world. The coronavirus disease continues to affect people's lives. Throughout the pandemic, nurses worldwide have expressed themselves on how the disease greatly affected their lives mentally and emotionally. In the year 2020, many research studies focused on levels of stress among front liners in the healthcare team. A cross-sectional study on perceived

stress and its associated factors during covid-19 among healthcare providers in Ethiopia was reported as very high particularly, among nurses.^[2] In Saudi Arabia, a psychological impact study of the covid-19 pandemic among healthcare workers revealed increased stress levels and significantly affects their psychological well-being.^[3] A theme-content analysis on stressful reports among nurses in Michigan US during covid-19 pandemic showed that stress is related to problems in the workplace.^[4]

Nearly two-thirds of healthcare professionals in Ethiopia had perceived stress. Responses for levels of confidence ranges from not at all confident to moderately confident in coping with stress were positively associated with their perceived stress levels^[5] and nearly half of the emergency nurses in Turkey perceived stress as above average during the pandemic, and working conditions affected stress levels.^[6] Another study resulted in that workload of the health department's Indonesian team during the COVID-19 pandemic affected work stress.^[7] Depression, anxiety, and difficulty sleeping were the significant findings in a systematic review of the impact of the covid-19 pandemic on the mental health of society and healthcare workers. Reports of anxiety, fear and depression among them were identified in the review.^[8]

In UAE, research on work-related stress management behaviors of isolation and intensive care nurses during covid-19 pandemic demonstrated that there was a moderate level of stress among the respondents. The study recommended that eliminating stressors, developing resilience, short-term coping, and effective delegation are four elements utilized to manage stress.^[9] Moreover, a 7-month cohort study from Japan on the depressive symptoms and stress among nurses in the covid unit showed that the number of new COVID-19 patients in the region is associated with depressive symptoms among nurses in the hospital COVID unit.^[10] ICU Nurses in

Sweden reported significantly more acute stress than nurses assigned in the emergency room and other units and nurses might have met the criteria of acute stress disorder using the Stanford acute stress reaction questionnaire-II.^[11] Similarly, a critical review across waves on the impact of the prolonged COVID-19 pandemic on stress resilience and mental health explained that vulnerable groups such as adolescents and healthcare personnel that have been severely impacted by the COVID-19 pandemic do exist.^[12] A high level of stress among nurses from different healthcare settings revealed during the Covid-19 pandemic situation. Nurses' level of stress was influenced by their experience and participation in the COVID-19 team.^[13]

Theoretically, any change in the environment that is perceived as challenging, threatening, or damaging to a person's homeostasis is perceived as stress and the nature of the stressor is variable. Research has revealed that people under constant stress have a high incidence of psychosomatic disease.^[14] Constant, repeated exposure stress can lead to real problems. Depression can lead to changes in the hypothalamic pituitary adrenal axis in the long run.^[15] Identifying individual response to stress and engaging with personal stress strategies will be significant.^[16]

During the pandemic period, research published online also focused on strategies to combat the ill effects of stress. Qualitative content analysis on stress management of nurses in caring for covid-19 patients concluded that nurses needed support from their authorities and families to manage stress. Crisis management training, providing adequate equipment and manpower, and motivating nurses to achieve psychological growth during the pandemic can help them manage stress.^[17] Researchers from the Netherlands investigated the feasibility and immediate effect on perceived stress of virtual reality relaxation use by ICU nurses during work shifts. The authors concluded that virtual

reality relaxation is an effective intervention to reduce immediately perceived stress and is of added value in stressful situations as during the COVID-19 pandemic, inducing a positive affective state and lowering perceived stress. [18]

It has been two years since the pandemic was declared. The term new normal has been described by the World Health Organization (WHO) or Europol, as a way of relating people's lives once the pandemic will be resolved. [19] Additionally, the term new normal has been used during the COVID-19 pandemic to determine how the disease influence every aspect of life. [20] There are research that emphasized strategies in response to COVID-19 pandemic as a new normal. [21] The researchers find it vital to examine the impact of the covid-19 pandemic among nurses in the new normal focusing on stress levels.

MATERIALS AND METHODS

This descriptive correlational research was carried out from July 2022 to November 2022 to assess the impact of the covid-19 pandemic on the new normal. Only registered nurses with experience in handling covid-19 patients are included in the study. A total of 56 Filipino nurses, fully vaccinated with 1st and 2nd booster doses against coronavirus participated in the survey recruited through a non-probability chain-referral sampling method.

The perceived stress scale (PSS) was used in the study by Sheldon Cohen. [22] The PSS is a stress assessment instrument and is widely used for measuring the perception of stress. The PSS is a 10 items survey ranging from 0 (never) to 4 (very often) responses for each statement. Scores for item numbers 4, 5, 7, and 8 responses were reversed such as 0=4, 1=3, 2=2, 3=1, and 4=0 as these items were positively stated queries. Total scores were added up for each item. Scores ranging from 0-13 were interpreted as low stress, 14-26 would be considered as moderate stress and scores ranging from 27-40 were described as high perceived stress.

The use of PSS instruments is permitted for students and teachers for non-profit use. [23]

Data were collected using a google form questionnaire consisting of two sections. The first part dealt with sociodemographic characteristics such as age, gender, marital status, education level, and work experience. The second part refers to the perceived stress scale. Results were retrieved from the google form, tallied, analyzed, and interpreted.

The collected data were statistically analyzed using SPSS version 25. Frequency distribution and the simple percentage were used for the tabulation of responses for the profile and perceived stress scale. Due to small sized sample, a non-parametric Fisher exact test (FET) was employed to determine the association of variables. The level of significance was set as $p < .05$.

Ethical approval of the study was sought from the research ethics committee, King Khalid University, Saudi Arabia (REC-KKU) with an approval number of ECM#2022-106. Informed consent was filled up for each respondent before the commencement of the study.

RESULTS

The study involved 56 Filipino nurses.

Table 1: Sociodemographic Characteristics of Participants (n=56)

Variable	N	%	Mean	SD
Age			2.57	1.07
20-25y	10	17.9		
26-30y	15	26.8		
31-35y	23	41.1		
36-40y	6	10.7		
41-45y	1	1.8		
46-50y	1	1.8		
Gender			1.37	.48
Female	35	62.5		
Male	21	37.5		
Marital Status			1.32	.47
Single	38	67.9		
Married	18	32.1		
Education Level			1.07	.32
BSN Degree	53	94.6		
Master's	2	3.6		
Doctorate	1	1.8		
Work Experience			2.42	.59
<1 year	3	5.4		
1-5 years	26	46.4		
>5 years	27	48.2		

As shown in Table 1, out of 56 respondents, nearly half (n=23, 41.1%) were between 31-35 years old, followed by 26.8% (n=15) who were 26-30 years old. One respondent (1.8%) from 41-45 and 46-50 years old. The overall participants' age resulted in a mean value of 2.57±1.07. In terms of gender (M=1.37±.48), there were more female nurses (n=35, 62.5%) during the survey. The marital status (M=1.32±.48) indicates

that a larger percentage (n=38, 67.9%) of nurses who participated in the study were single and 2 (3.6%) had a master's degree and 1 (1.8%) with a doctorate as highest education level. With regards to work experience (M=2.42±.59), most of the respondents have been working for more than 5 years (n=27, 48.2%) and 3 (5.4%) for less than a year while 26 (46.4%) of them worked between 1-5 years.

Table 2 Frequency of Responses to the Perceived Stress Scale Measures (N=56)

Perceived stress scale	Never	Almost Never	Sometimes	Fairly Often	Very Often	M±SD
1. In the last month, how often have you been upset because of something that happened unexpectedly?	0 (0%)	2 (3.6%)	33 (58.9%)	19 (33.9%)	2 (3.6%)	2.37±.61
2. In the last month, how often have you felt that you were unable to control the important things in your life?	2 (3.6%)	5 (8.9%)	23 (41.1%)	18 (32.1%)	8 (14.3%)	2.44±.97
3. In the last month, how often have you felt nervous and stressed?	0 (0%)	1 (1.8%)	22 (39.3%)	22 (39.3%)	11 (19.6%)	2.76±.78
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	12 (21.4%)	24 (42.9%)	16 (28.6%)	4 (7.1%)	0 (0%)	1.21±.86
5. In the last month, how often have you felt that things were going your way?	4 (7.1%)	31 (55.4%)	16 (28.6%)	5 (8.9%)	0 (0%)	1.39±.75
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	5 (8.9%)	20 (35.7%)	24 (42.9%)	5 (8.9%)	2 (3.6%)	1.62±.90
7. In the last month, how often have you been able to control irritations in your life?	9 (16.1%)	15 (26.8%)	23 (41.1%)	8 (14.3%)	1 (1.8%)	1.58±.98
8. In the last month, how often have you felt that you were on top of things?	3 (5.4%)	18 (32.1%)	28 (50%)	7 (12.5%)	0 (0%)	1.69±.76
9. In the last month, how often have you been angered because of things that happened that were outside of your control?	0 (0%)	5 (8.9%)	38 (67.9%)	8 (14.3%)	5 (8.9%)	2.23±.73
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	2 (3.6%)	12 (21.4%)	22 (39.3%)	18 (32.1%)	2 (3.6%)	2.10±.90

Table 2 presents the frequency distribution of responses for each perceived stress scale item as provided by the respondents. The following data with more responses were observed: 58.9% of the respondents sometimes felt upset because of something that happened unexpectedly; 41.1% sometimes felt unable to control important things in life; 39.3% fairly often to sometimes experienced nervous, and stressed; 42.9% of them rarely felt confident about their ability to handle personal problems, and 55.4% seldom felt that things were going their way. Moreover, the data discloses that 42.9% of the respondents sometimes found themselves could not cope with things they had to do; 41.1% sometimes were able to control their irritations; 50% of them sometimes felt they were on top of things; 67.9% sometimes angered with things that were outside their control, and 39.3% sometimes felt that

difficulties were piling up so high that they could not overcome them. The mean value for total PSS scores is 1.944 and a standard deviation of .830.

Table 3 Perceived Stress Scale Total Score (n=56)

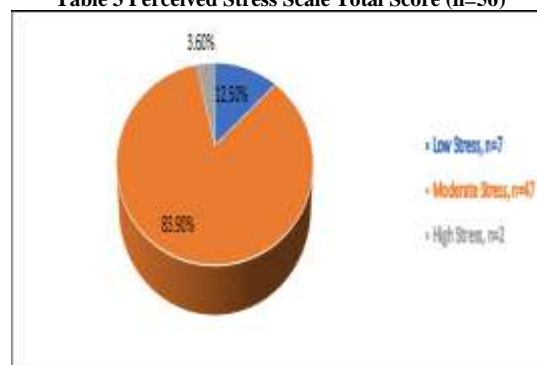


Table 3 describes the total perceived stress scale among 56 nurses during the covid-19 pandemic in the new normal. As shown in the graph, 7 or 12.5% of the respondents experienced low stress; 47 or 83.9%

reported moderate stress; and 2 or 3.6% had high levels of stress.

Table 4 Distribution of Responses according to Sociodemographic Characteristics and their Associations

Variables	Low stress (n =7)	Moderate stress (n=47)	High stress (n=2)	Total (n=56)	FET value (p-value ^a)
Age groups					11.947 (.383)
20-25 y	0 (0%)	9 (90%)	1 (10%)	10 (17.9%)	
26-30 y	2 (13.3%)	13 (86.7%)	0 (0%)	15 (26.8%)	
31-35 y	3 (13%)	19 (82.6%)	1 (4.3%)	23 (41.1%)	
36-40 y	1 (16.7%)	5 (83.3%)	0 (0%)	6 (10.7%)	
41-45 y	0 (0%)	1 (100%)	0 (0%)	1 (1.8%)	
46-50 y	1 (100%)	0 (0%)	0 (0%)	1 (1.8%)	
Gender					.659 (1.00)
Female	5 (14.3%)	29 (82.9%)	1 (2.9%)	35 (62.5%)	
Male	2 (9.5%)	18 (85.7%)	1 (4.8%)	21 (37.5%)	
Marital Status					2.659 (.277)
Single	3 (7.9%)	33 (86.8%)	2 (5.3%)	38 (67.9%)	
Married	4 (22.2%)	14 (77.8%)	0 (0%)	18 (32.1%)	
Education Level					5.954 (.415)
BSN degree	6 (11.3%)	45 (84.9%)	2 (3.8%)	53 (94.6%)	
Master's	1 (50%)	1 (50%)	0 (0%)	2 (3.6%)	
Doctorate	0 (0%)	1 (100%)	0 (0%)	1 (1.8%)	
Work experience					6.513 (.142)
<1 year	0 (0%)	2 (66.7%)	1 (33.3%)	3 (5.4%)	
1-5 years	2 (7.7%)	23 (88.5%)	1 (3.8%)	26 (46.4%)	
>5 years	5 (18.5%)	22 (81.5%)	0 (0%)	27 (48.2%)	

^a By Fisher's exact test.

Table 4 shows the distribution of responses according to variables of the study. It presents the responses of the participants according to the descriptive categories such as low, moderate and high stress. The participant's responses were presented according to their respective groupings of variable. Those with larger responses are presented as follows: 90% from 20-25y (n=9); 86.7% from 26-30y (n=13); 82.6% from 31-35y (n=19); 83.3% from 36-40y (n=5); and 100% from aged 41-45y (n=1) reported moderate stress while 100% from 46-50y (n=1) had low stress level.

With regards to gender, larger responses (82.9%, n=29) from female respondents showed moderate stress. Similarly, 85.7% (n=18) of male participants experienced moderate stress.

As to the marital status, 86.8% (n=33) of single nurses and 77.8% (n=14) for married nurses claimed moderate stress in the new normal.

The education level of the participants demonstrated that 84.9% (n=45) of nurses with BSN degree had moderate stress.

For years of working experience, moderate stress was felt by nurses who have worked for 1-5 years (n=23, 88.5%) and those in more than 5 years (n=22, 81.5%).

Statistically, the results indicated that the respondent's age groups are not statistically significant to their perceived stress scale (11.947, p=.383). In terms of gender, both female and male groups did not show a significant association with the amount of stress they claimed (.659, p=1.00). The marital status did not show any significant correlation to the perceived stress scale of the respondents. Concerning education level, no significant correlations exist between the two variables (5.954, p=.415). Similarly, the work experience of the respondents is not associated with their levels of perceived stress scale (6.513, p=.142).

DISCUSSION

World Health Organization (WHO) declared covid-19 as pandemic. Since then, people are adapting their lives in the new normal. This current study focuses on the impact of covid-19 pandemic among 56 Filipino nurses in the new normal.

In relation to the sociodemographic characteristics of the respondents, the findings showed that nurses who participated in this survey are relatively young to middle adults, predominately females, and single. BSN degree was their

highest education level so far, and had worked for 1-5 years.

With regards to distribution of responses to the perceived stress scale (PSS) survey, items on being upset, not able to control important things, feeling nervous, unable to cope, feeling angry, and having difficulties were sometimes felt by the respondents in the new normal. On the other hand, items that were categorized as positive queries such as being confident in handling personal problems and feeling things were going their way were almost never felt by the participants. Being able to control irritations in life and a feeling that they were on top of things were sometimes felt by nurses during covid-19 pandemic.

The total scores of the perceived stress scale (PSS) conveyed that nurses in the new normal amidst pandemic are moderately stressed. These findings identified that despite of the intensive implementations of the government to assist healthcare workers manage their stress, still nurses reported varying levels of stress. Since the pandemic started, numerous research articles communicated online focuses on nurses' stress while on clinical duties. A number of research authors concluded stress during the pandemic. The highest perceived stress was observed among Ethiopian nurses during covid-19 [2]; healthcare workers from Saudi Arabia revealed increase stress levels and how it significantly affects their psychological well-being. [3] Stressful reports among Michigan nurses during covid-19 pandemic related to problems in workplace responses. [4] Emergency nurses in Turkey perceived stress above average during pandemic, and working conditions affected stress levels. [6] Additionally, Indonesian team during the COVID-19 pandemic handling Covid-19 affected work stress. [7] UAE nurses demonstrated moderate level of stress. [9] Similarly, nurses from Japan assigned in the covid unit showed that the number of new COVID-19 patients in the region is associated with depressive symptoms among nurses in the hospital COVID unit. [10] ICU Nurses in

Sweden reported significantly more acute stress than nurses assigned in the emergency room and other units. [12]

The findings of this study suggest that different levels of stress still prevail in the workplace facing the new normal. In other words, chronic stress prevails during the pandemic. Evidence shows that people under constant stress have a high incidence of psychosomatic disease. [14] Constant, repeated stress leads to real problems. Long-term conditions like depression can lead to changes in the hypothalamic pituitary adrenal axis. [15] However, recognizing own response to stress and identifying personal stress strategies will be significant. [16]

The results of the correlational analysis showed that the sociodemographic characteristics of the participants are not statistically associated to their levels of stress. Thus, stress related to covid-19 was felt by nurses regardless of their profiles and it runs through their nursing duties. Two years had passed, and during this period, nurses and other healthcare professional are the priority recipients for covid-19 vaccinations. Intensive measures such as adhering to safety protocols, and attendance related to covid-19 educational trainings in handling effectively positive patients were implemented, yet nurses demonstrated stress. The findings of this study supported that, nurses in the new normal experienced different levels of stress.

Limitations of the Study

The conduct of this study also had some shortcomings. First, the small number of participants influence the findings of the study. Second, the method used in the data collection possibly contributed to the small number of responses. Additionally, the generalizability of findings is limited. Nevertheless, the authors believe that the main strength of this study was that nurse's level of stress was assessed two years after the emergence of the pandemic.

CONCLUSION

The study concluded that nurses have moderate stress facing the new normal. Therefore, hospital and nursing administrators should continuously provide support for their nurses. Sustainable availability of resources, effective stress management strategies, continuous update, and regular stress screening program are some of the desirable key measures to decrease stress level. Further research is recommended in larger scope and population to establish generalizability of findings.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. World Health Organization. Coronavirus Disease (COVID-19) Pandemic, Overview. [Internet]. 2020 [Updated 2020; cited 2022 Dec. 16]. Available from <https://www.who.int/europe/emergencies/situations/covid-19>
2. Chekole YA, Minaye SY, Abate SM, Mekuriaw B. Perceived Stress and Its Associated Factors during COVID-19 among Healthcare Providers in Ethiopia: A Cross-Sectional Study. *Hindawi Advances in Public Health*. 2020; e5036861: 1-7.
3. Alwaqdani N, Amer H, Alwaqdani R, et al. Psychological Impact of COVID-19 Pandemic on Healthcare Workers in Riyadh, Saudi Arabia: Perceived Stress Scale Measures. *Journal of Epidemiology and Global Health*. 2021; 11:377–388.
4. Arnetz J, Goetz C, Arnetz B, Arble E. Nurse Reports of Stressful Situations during the COVID-19 Pandemic: Qualitative Analysis of Survey Responses. *International Journal of Environmental Research and Public Health*. 2020; 17: 8126.
5. Teshome A, Shegaze M, Glagn M, et al. Perceived stress and associated factors among health care professionals working in the context of COVID-19 pandemic in public health institutions of southern Ethiopia 2020. *PLoS ONE*. 2021; 16(6): e0252809.
6. Çınar DC, Akça NK, Bahçeli PZ, et al. Perceived stress and affecting factors related to COVID-19 pandemic of emergency nurses in Turkey. *J Nurs Manag*. 2021; 00:1–8.
7. Sunarti A, Genisa HJ, Yusuf. Analysis of Factors Influencing Work Stress on the Health Service Rapid Action Team during the Covid-19 Pandemic in Barru Regency. *Galore International Journal of Health Sciences and Research*. 2021; 6 (3): 38-45.
8. Thapa B, Gita S, Chatterjee K, Devrani A. Impact of COVID-19 on the Mental Health of the Society & HCW (Healthcare workers): A Systematic Review. *International Journal of Science and Healthcare Research*. 2020; 5 (2); 234-240.
9. Dabou EAR, Ilesanmi RE, Mathias CA, et al. Work-related Stress Management Behaviors of Nurses During COVID-19 Pandemic in the United Arab Emirates. *SAGE Open Nursing*. 2022; 8: 1-9.
10. Tsubono K, Ikeda C. Depressive symptoms and stress among nurses in the COVID unit: A 7-month cohort study. *Japan Journal of Nursing Science Wiley*. 2022;19: e12477.
11. Palmberg A, Lotvall R, Cardena E. Acute Stress among Nurses in Sweden during the COVID-19 Pandemic. *European Journal of Trauma & Dissociation*. 2022; 6: 2468-7499.
12. Manchia M, Gathier AW, Yapici-Eser H, et al. The impact of the prolonged COVID-19 pandemic on stress resilience and mental health: A critical review across waves. *Eur Neuropsychopharmacol*. 2022; 55: 22-83.
13. Alsolami FJ, Ramaiah P, Tayyib NA, et al. Healthcare Professionals (Nurses') Perceived Stress and Coping: Amid COVID-19. *Journal of Pharmaceutical Research International*. 2021; 33(18):37-45.
14. Smeltzer SC, Bare BG, Hinkle JL, Cheever KH. *Brunner and Suddarth's Textbook of Medical-Surgical Nursing*. 12th Edition. Wolters Kluwer Health India: Lippincott Williams and Wilkins; 2010. p. 80.
15. Torn A, Greasley P. *Psychology for Nursing*. Cambridge UK: Polity Press; 2016. p.142.
16. Ellis JR, Hartley CL. *Nursing in Today's World: Trends, Issues, and Management*. 10th Edition. China: Lippincott Williams and Wilkins; 2012. p.511.

17. Moghaddam MH, Mohebbi Z, Tehranineshat B. Stress management in nurses caring for COVID-19 patients: a qualitative content analysis. *BMC Psychology*. 2022; 10:24.
18. Nijland JWH, Veling W, Lestestuiver BP, et al. Virtual Reality Relaxation for Reducing Perceived Stress of Intensive Care Nurses during the Covid-19 Pandemic. *Frontiers in Psychology*. 2021; 12:706527.
19. Araújo-Vila N, Carles AO, Fraiz-Brea JA. Sustainability in Tourism After COVID-19 A Systematic Review. *Sustainability and Competitiveness in the Hospitality Industry*. [Internet]. [cited 2022 Dec 18]. Available from <https://www.igi-global.com/chapter/sustainability-in-tourism-after-covid-19/305927>
20. Corpuz JC. Adapting to the culture of 'new normal': an emerging response to COVID-19. *Journal of Public Health*. 2021; 43 (2): e344–e345.
21. Shen W. Dynamically adjusted strategy in response to developments in the COVID-19 pandemic as a new normal. *Globalization and Health*. 2021; 17:89.
22. Cohen, S. Perceived Stress Scale. 1994. [Internet]. Available from <https://www.mindgarden.com/documents/PerceivedStressScale.pdf>
23. Cohen S, Doherty RE. Permission for Use of the Perceived Stress Scale. [Internet] Available from https://www.cmu.edu/dietrich/psychology/stress-immunity-disease_lab/scales/revised-pss-request-reply-for-all-requests.pdf

How to cite this article: Eva Lobelle Sampayan, Shadia Hamoud Alshahrani, Kalaiselvi Duraisamy Pavuthakursar et.al. Impact of COVID-19 pandemic among nurses in the new normal: perceived stress scale measures. *International Journal of Science & Healthcare Research*. 2022; 7(4): 334-341. DOI: <https://doi.org/10.52403/ijshr.20221047>
