Anxiety, Depression and Resilience among Primary Care Nurses Working in the Rural Health Units of Samar Province during the COVID-19 Pandemic

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ABSTRACT

Background and Objective. Primary care nurses serve as the gatekeeper of the health system. They could be psychologically affected in times of health crisis such as the COVID-19 pandemic. This study aimed to assess their perceived anxiety, depression, and resilience while working in the rural health units in Samar Province.

Methods. A cross-sectional design was employed involving 188 primary care nurses who were working in rural health units (RHUs) in Samar province. They were selected through stratified random sampling technique. Anxiety and depression levels were assessed using the 21-item Depression Anxiety Stress Scale (DASS-21). Resilience level was assessed using 18-item Resilience Scale. Pearson's r moment correlation and logistic regression analysis were used to determine associated factors with mental health.

Results. Twenty (20) nurses experienced anxiety and five of them reported depression. Work experience is associated with depression [Exp(B) = 3.753; 95% CI (1.121 – 12.563)]. Overall, nurses reported high resilience level. Anxiety and depression are significantly and negatively associated with resilience.

Conclusions. Primary care nurses experience depression and anxiety during COVID-19 pandemic. Work experience is associated to their levels of depression. Moreover, nurses reported high levels of resilience. The higher the levels of anxiety and depression, the lower is their resilience.

Keywords: primary care nurses, rural health units, anxiety, depression, resilience

INTRODUCTION

In December 2019, an outbreak emerged brought by a novel coronavirus (SARS-CoV-2) in Wuhan City, Hubei Province, China.[1] Since then, its confirmed cases and associated deaths increased exponentially, and this prompted the World Health Organization (WHO) to declare it as a pandemic. In the Philippines, the first confirmed case of COVID-19 was recorded in January 2020.[2] Like the global trend, from then on, its confirmed cases increased rapidly. As of October 10, 2022, there have been 3,967,861 confirmed COVID-19 cases in the country.[3] Healthcare professionals such as the nurses experienced psychological issues related to work overload, high risk of exposure and infection, uncertainty, discrimination, scarcity of medical resources, and caring for COVID-19 patients especially among those in critical condition.[4]

The nature of the nursing profession is an emotionally demanding profession that can often lead to various

psychological issues and challenges. Nurses have the core responsibility of promoting their patients' health and wellbeing and this attributed them to be more prone to mental health problems.[5] Furthermore, nurses have been working with poor nurse practice environment – understaffing, increasing nurse to patient ratios, higher workloads and stressors, and poor organizational support.[6-8] Apparently, the COVID-19 pandemic added psychological distress, and greatly affected the psychological wellbeing among nurses. There is a plethora of literature demonstrating levels of anxiety and depression reported by staff nurses during the COVID-19 pandemic. Anxiety, defined as a "state of uneasiness or apprehension resulting from the anticipation of a real or perceived threatening event or situation,"[9] was the most common psychological problem during the pandemic. Nurses reported various levels of anxiety especially in hospital settings[10,11] with the fear of becoming infected or transmitting the virus, scarcity of medical resources, and uncertainty of institutional support[12,13]. Another common mental health problem experienced by health care workers is depression. More than sadness or despair that lasts for long period, depression, interferes with one's activities of daily living which may further results to inability to concentrate, feelings of worthlessness, thoughts of death or suicide, and certain physical symptoms like pain, altered sleep pattern, weight gain or loss, or lack of energy.[14] Nurses reported to have higher rates of depression than the general population especially during times of crises.[15] Thus, the work demands, and pressure linked to the profession of nursing placed the professionals at high risk of mental health problems like anxiety and depression affecting their wellbeing including their family and professional life.[16,17]

On the contrary, not all individuals who have been exposed to traumatic events and psychological pressures experience mental health problems.[18] Certain social and interpersonal resources may be readily available and serve as protective factors such as optimism, social support, and personal resilience.[19,20] Resilience is the ability of the person to bounce back, respond to stress in a healthy way, or cope efficiently from any difficult situation.[21,22] Resilience among nurses demonstrated its protective role against emotional exhaustion,[23] job burnout,[24] nursing turnover,[25] and nurse workloads during disaster[26]. In the context of the pandemic, the concept on resilience may aid nurses to resist and fight against the psychological consequences brought by the pandemic.

There is an abundance of literature on anxiety, depression, and resilience among nurses during COVID-19 pandemic. However, analyzing this situation in the primary care settings are few.[27,28] In addition, to the authors' knowledge, this is one of the preliminary studies conducted in the Philippines' rural health units (RHUs), particularly in the Samar Province. The primary care setting has a different nature of work compared to the hospital set up. It serves as the gatekeeper of the health system – providing essential health services, performing multiple COVID-19 frontline health activities such as vaccination, screening and isolation management, surveillance and monitoring, disinfection of public environment, and health education and promotion on epidemic prevention, and implementing other priority Department of Health (DOH) programs in the community settings. All these activities may have negative consequences to the nurses' activities of daily life, socialization, and psychological needs. Moreso, Samar Province is one of the poorest provinces in the country where there is dire need of health manpower and services. Public health nurses may have been accustomed to heavy workloads, scarcity of medical resources, and other adverse factors in their practice environment that could aggravate and place them to become more vulnerable to psychological problems. Hence, the researchers intended to conduct this study.

OBJECTIVES

This study aimed to assess primary care nurses' perceived anxiety, depression, and resilience working in the rural health units in Samar Province and investigate the relationship between the variables.

MATERIALS AND METHODS

Research Design
This study employed descriptive cross-sectional design.

Participants and Settings of the Study
This study was conducted in the twenty-six (26) RHUs from twenty-four (24) municipalities and two component cities in Samar Province. The participants were the workforces in the nursing field. There was a total of 324 nurses, 70 were working as public health nurses (PHNs) and 254 were deployed by the DOH through nurse deployment program (NDP). They must be registered nurses (RNs), working in the RHUs and barangay health stations (BHS) during the COVID-19, working at their stations at least eight hours a day, five days per week or 40 hours a week, and consented to participate in the study. Those nurses who were on-leave or sick during data gathering period were excluded in the study.

Sample Size and Sampling Technique Used
Utilizing Cochran's formula, a total of 156 participants out of 324 nurses were targeted to participate in the study. Selection of the participants was made through stratified random sampling technique. To obtain this, a master list of public health nurses and nurses under NDP was retrieved through the provincial DOH office. Each municipality/city was identified as a stratum with its number of nurses. The number of target participants from every municipality/city was drawn in proportion to the total number of nurses. Every nurse in reference to the municipality assignment was chosen by chance wherein nurses had an equal opportunity to be included in the sample. Those nurses who were initially

identified as target participants drawn from the master list but refused to participate or were not available during the data-gathering period were replaced by other participants who were also drawn through the same process of sampling.

Research Instrument

Self-report questionnaire was used in the collection of the data. It is composed of three parts. The first part was a checklist that assessed the socio-demographic profile of the participants in terms of age, sex, civil status, monthly income, work position, employment status, and number of work experience of the nurse.

The second part assessed the perceived anxiety and depression among nurses using the Depression Anxiety Stress Scale (DASS-21).[29] This scale has three components: depression, anxiety, and stress subscales wherein each subscale had seven item questions. Each item in the sub scales was rated in a four-point Likert scale ranging from 0 = "Did not apply to me at all" to 3 = "Applied to me very much or most of the time". Adding all the responses of the participants determined their degree of anxiety or depression. For this study, the researchers adopted only the depression and anxiety subscales. Moreover, for anxiety subscale, participants who scored below 8 were considered as having no anxiety and those with score of 8 and above were determined as having anxiety. For depression, participants who scored below 10 were considered as having no depression and those who scored 10 and above were considered as having depression. The internal consistency reliabilities of each subscale have been demonstrated by Marfoh et al., with Cronbach's alpha ranging from 0.81 to 0.88.[30]

The third part of the questionnaire examined the level of resilience of the participants.[31] It assessed an individual's sense of control and coping ability over a stressful situation in terms of disaster client's health care management. Each statement used a five-point Likert scale ranging from 1 = not resilient to 5 = very high resilient. Scoring is achieved through the overall score: 80 or higher = very resilient; 65-80 = better than most; 50-64 = adequate; 40-49 = struggling; 39 or under = life is tough, consider seeking help.

Data Collection Process

Administrative clearance to conduct the study was secured from the Provincial Department of Health (DOH) Samar Office. Permission letter was also secured from the municipal/city health officers of the various RHUs in Samar Province. Upon approval, coordination was then made in retrieving the master list with PHNs and NDPs to facilitate sampling and selecting the target participants. Survey was administered through online (Google forms) and face-to-face. For online survey, cover letter and informed consent were enclosed in the Google forms. Dissemination of the online survey link was facilitated by the program heads. Proceeding to answer the survey signify their participation in the study. For participants who had questions and clarifi-

cations prior to answering the survey, they were advised to contact the researchers through the email addresses and mobile numbers indicated in the cover letter. For RHUs where the internet connection is poor, personal surveys were made by the researchers. Distribution of the survey forms was facilitated by the provincial DOH head nurses. Written informed consent was also obtained for every participant prior to personal survey. Likewise, they were given an opportunity to ask for questions and clarifications prior to answering the questionnaire. Answering the survey lasted for 15-20 minutes. Recruitment of the participants and the data collection period was from July to August 2022. All collected questionnaires were inspected as to correctness and completeness of the needed data.

Data Analysis

Data collected through Google forms were retrieved in auto-generated MS Excel tally. Data collected through face-to-face were tallied and combined with online date in the MS Excel. Data were then entered in SPSS version 23 statistical software. Descriptive statistics used include frequency counts, percentages, weighted mean, and standard deviation. Mean and standard deviation were also used in the participants' socio-demographic profile with continuous data such as age and years of work experience. Bivariable and multivariable logistic regression analysis was used to identify the relationship of socio-demographic characteristics to anxiety, and depression. For model fit, Hosmer and Lemeshow test was made. Multicollinearity was also determined. An adjusted ratio with a 95% confidence interval (CI) was used to determine the degree of association between variables. Pearson's r moment correlation was used to determine the relationship of resilience to anxiety and depression. Level of significance was set at P = <0.05.

Ethical Considerations

Ethics clearance was secured from the regional registered health ethics research committee (EVHRDC-ERC 2022-005). Permission letters to conduct the study were secured from the Provincial DOH Samar Office and the various RHUs in Samar Province. Cover letters and written informed consent were enclosed in every survey questionnaire. Participants were informed about the study including its purposes, and the possible benefits, risk, and harm in participating in the study prior to data collection. Possible risk includes breach of confidentiality and the consequences from such a breach. To avoid this, confidentiality, privacy, and anonymity of the participants were maintained throughout the study. Likewise, participants were informed that they can withdraw in participating in the study at any point even if they previously agreed. They were not given monetary incentive nor tokens in participating in the study. The researchers declare no conflict of interest over the participants. The study results have not been published elsewhere in whole or in part.

RESULTS

A total of 188 nurses participated in the study. Majority of them were females (n=158 or 84.0%), DOH nurse (n=179 or 95.2%), with monthly income range of PhP 40,001 to PhP 60,000 (n=115 or 61.2%), on contractual employment status (n=183 or 97.3%) and had 6-8 years of work experience (n=67 or 35.6%). More than half of them were within age range 31-40 years old (n=100 or 53.2%), and single (n=96 or 51.1%). Table 1 summarizes the descriptive statistics of the socio-demographic profile of the participants.

Table 1. Socio-demographic Profile of the Participants (n=188)

Variable	Categories	Frequency	%
Age (years)	20 - 25	6	3.2
	26 - 30	73	38.8
	31 - 40	100	53.2
	>40	9	4.8
	Mean = 31.9 years old / *SD = 4.8 years old		
Sex	Male	30	16.0
	Female	158	84.0
Civil status	Single	96	51.1
	Married	91	48.4
	Separated	1	0.5
Work position	DOH Nurse	179	95.2
	LGU Nurse	9	4.8

Variable	Categories	Frequency	%
Monthly income (in PhP)	20,001 - 40,000	73	38.8
	40,001 - 60,000	115	61.2
Status of employment	Contractual	183	97.3
	Permanent	5	2.7
Years of experience as nurse	0 - 2	18	9.6
	3 - 5	49	26.1
	6 - 8	67	35.6
	9 - 11	39	20.7
	12 - 14	9	4.8
	≥15	5	2.7
	No response	1	0.5
	Mean = 6.9 years / *SD = 3.5 years		

*SD = standard deviation

Table 2. Levels of Anxiety and its Predictors among Frontline Nurses Working in the Rural Health Unit in Samar Province

Variables	Categories	Anxiety Level		Coefficient	p-value	Exp(B)	95% CI for Exp(B)	
		No Anxiety	With Anxiety				Lower	Upper
Age (in years)	20 - 25 (ref.)	5	1	.217	.592	1.242	.561	2.749
	26 - 30	64	9					
	31 - 40	90	10					
	>40	9	0					
Total		168	20					
Sex	Female (ref.)	140	18	.573	.458	1.774	.391	8.058
	Male	28	2					
Total		168	20					
Civil status	Single (ref.)	85	11	.086	.866	1.090	.402	2.957
	Married	82	9					
	Separated	1	0					
Total		168	20					
Monthly income (in PhP)	20,001 - 40,000 (ref.)	67	6	-.434	.404	.648	.234	1.796
	40,001 - 60,000	101	14					
Total		168	20					
Position	DOH Nurse (ref.)	160	19	.268	.743	1.308	.264	6.491
	LGU Nurse	8	1					
Total		168	20					
Employment status	Contractual (ref.)	163	20	19.105	0.999	1.98E+08	0.000	
	Regular	5	0					
Total		168	20					
Years of experience as nurse	0 – 2 (ref.)	16	2	.263	.277	1.300	.810	2.088
	3 - 5	42	7					
	6 - 8	59	8					
	9 - 11	36	3					
	12 - 14	9	0					
	≥15	5	0					
Total		168	20					

Hosmer & Lemeshow: Chi-square =5.84, df = 8; p>0.05; Significant at p<0.05

Table 3. Levels of Depression and its Predictors among Frontline Nurses Working in the Rural Health Unit in Samar Province

Variables	Categories	Depression		Coefficient	p-value	Exp(B)	95% CI for Exp(B)	
		No Depression	With Depression				Lower	Upper
Age (in years)	20 – 25 (*ref.*)	6	0	-.933	.289	.393	.070	2.204
	26 – 30	71	2					
	31 - 40	97	3					
	>40	9	0					
Total		183	5					
Sex	Female (*ref.*)	153	5	19.266	.997	232908787.1	0.000	
	Male	30	0					
Total		183	5					
Civil Status	Single (*ref.*)	93	3	.922	.474	2.514	.201	31.420
	Married	89	2					
	Separated	1	0					
Total		183	5					
Monthly income (in PhP)	20,001 - 40,000 (*ref.*)	71	2	.611	.574	1.843	.218	15.550
	40,001 - 60,000	112	3					
Total		183	5					
Position	DOH Nurse (*ref.*)	175	4	-2.991	.082	.050	.002	1.468
	LGU Nurse	8	1					
Total		183	5					
Employment Status	Contractual (*ref.*)	178	5	23.836	.999	22475192084.7	0.000	
	Regular	5	0					
Total		183	5					
Years of experience as nurse	0 – 2 (*ref.*)	16	2	**1.323**	**.032***	**3.753**	**1.121**	**12.563**
	3 - 5	47	2					
	6 - 8	66	1					
	9 - 11	39	0					
	12 - 14	9	0					
	≥15	5	0					
Total		183	5					

*Hosmer & Lemeshow: Chi-square =4.535, df = 8; p>0.05; Significant at p<0.05; *Correlation is significant at the level 0.05*

Table 2 presents the level of anxiety among frontline nurses and its relationship to their socio-demographic profile. There were 20 nurses who reported to have experienced anxiety. Furthermore, binary and multiple logistic regression analysis showed no significant relationship between the demographic profile of the participants and their level of anxiety.

Table 3 shows the level of depression and its relationship to the socio-demographic profile among the frontline nurses working in various RHUs in Samar province. Five of them reported to have experienced depression during the COVID-19 pandemic. Participants with longer work experience have the higher odds of depression [Exp(B) = 3.753; 95% CI (1.121 – 12.563)].

Table 4 depicts the level of resilience as reported by the nurses in various RHUs in Samar Province. It can be gleaned in all indicators on resiliency that majority of the participants reported "highly resilient" and "very highly resilient". More than half of the participants reported "highly resilient" on indicator, "I'm good at solving problems. I can use analytical logic, be creative, or use tactical common sense." (n=105 or 55.9%). This is followed by "In a crisis or disaster situation, I calm myself and focus on taking useful actions." and "I'm very durable. I hold up well during tough times. I have an independent spirit underneath my cooperative way of working with others." (n=98 or 52.1%). The overall score of the participants is 69.8 indicating "better than most" level of resiliency.

Table 5 presents the correlation between anxiety and resilience, and between depression and resilience. The results showed a significant negative relationship between anxiety and resilience (r = -0.149; P=0.042) as well as between depression and resilience (r = -0.232; P=0.001). This indicates that those participants who reported high levels of anxiety and depression were less likely to have high resilience levels.

DISCUSSION

The purpose of this study was to determine anxiety, depression, and resilience levels among nurses who were working in the public health, particularly in the rural health units (RHUs) during the COVID-19 pandemic. A plethora of studies have been conducted among hospital nurses on their anxiety, depression, and resilience levels

Table 4. Indicators of Resilience as Experienced by Frontline Nurses in various RHUs in Samar Province

Indicators	Not resilient	Slightly resilient	Moderately Resilient	Highly Resilient	Very Highly Resilient
			n (%)		
1. In a crisis or disaster situation, I calm myself and focus on taking useful actions.	0.0 / 0.0	4.0 / 2.1	30.0 / 16.0	98.0 / 52.1	56.0 / 29.8
2. I'm usually optimistic. I see difficulties as temporary and expect to overcome them.	1.0 / 0.5	5.0 / 2.7	22.0 / 11.7	90.0 / 47.9	70.0 / 37.2
3. I cannot tolerate high levels of ambiguity and uncertainty about situations.	6.0 / 3.2	36.0 / 19.1	60.0 / 31.9	62.0 / 33.0	24.0 / 12.8
4. I adapt quickly to new developments. I'm good at bouncing back from difficulties.	1.0 / 0.5	3.0 / 1.6	47.0 / 25.0	83.0 / 44.1	54.0 / 28.8
5. I'm playful. I find the humor in rough situations, and can laugh at myself.	2.0 / 1.1	12.0 / 6.4	44.0 / 23.4	85.0 / 45.2	45.0 / 23.9
6. I'm able to recover emotionally from losses and setbacks. I have friends I can talk with. I can express my feelings to others and ask for help. Feelings of anger, loss, and discouragement don't last long.	0.0 / 0.0	5.0 / 2.7	41.0 / 21.8	83.0 / 44.1	59.0 / 31.4
7. I feel self-confident, appreciate myself, and have a healthy concept of who I am.	1.0 / 0.5	5.0 / 2.7	40.0 / 21.3	88.0 / 46.8	54.0 / 28.7
8. I'm curious. I ask questions. I want to know how things work. I like to try new ways of doing things.	1.0 / 0.5	6.0 / 3.2	28.0 / 14.9	85.0 / 45.2	68.0 / 36.2
9. I do not learn valuable lessons from my experiences and from the experiences of others.	51.0 / 26.9	43.0 / 22.9	31.0 / 16.5	46.0 / 24.5	17.0 / 9.0
10. I'm good at solving problems. I can use analytical logic, be creative, or use practical common sense.	1.0 / 0.5	4.0 / 2.1	47.0 / 25.0	105.0 / 55.9	31.0 / 16.5
11. I'm good at making things work well. I'm often asked to lead groups and projects.	4.0 / 2.1	8.0 / 4.3	62.0 / 33.0	85.0 / 45.2	29.0 / 15.4
12. I'm very flexible. I feel comfortable with my paradoxical complexity. I'm optimistic and pessimistic, trusting and cautious, unselfish and selfish, and so forth.	2.0 / 1.1	4.0 / 2.1	43.0 / 22.8	90.0 / 47.9	49.0 / 26.1
13. I prefer to work without a written job description. I'm more effective when I'm free to do what I think is best in each situation.	6.0 / 3.2	9.0 / 4.8	59.0 / 31.4	82.0 / 43.6	32.0 / 17.0
14. I'm a good listener. I have good empathy skills.	9.0 / 4.8	27.0 / 14.4	50.0 / 26.6	60.0 / 31.9	42.0 / 22.3
15. I'm non-judgmental about others and adapt to people's different personality styles.	1.0 / 0.5	6.0 / 3.2	49.0 / 26.1	81.0 / 43.1	51.0 / 26.9
16. I'm very durable. I hold up well during tough times. I have an independent spirit underneath my cooperative way of working with others.	0.0 / 0.0	6.0 / 3.2	29.0 / 15.4	98.0 / 52.1	55.0 / 29.3
17. I've been made stronger and better by difficult experiences.	0.0 / 0.0	3.0 / 1.6	21.0 / 11.2	86.0 / 45.7	78.0 / 41.5
18. I've converted misfortune into good luck and found benefits in bad experiences.	1.0 / 0.5	6.0 / 3.2	37.0 / 19.7	88.0 / 46.8	56.0 / 29.8
Total Score			69.8		

Table 5. Relationship between Anxiety and Depression and Resilience

Variables	N	r	P-value
Anxiety and Resilience	188	-0.149	**0.042***
Depression and Resilience	188	-0.232	**0.001****

* Correlation is significant at the level 0.05
** Correlation is significant at the level 0.01

during the pandemic.[32-35] However, few studies have been conducted in the primary care settings,[27,28] especially in the Philippines. Nurses working in the primary care settings have significant roles in implementing various health programs in the community. Nevertheless, as nurses are also frontliners, they also suffer certain psychological consequences in the delivery of health care services in the community during the pandemic.[36]

The results showed that there are public health nurses who experienced some degree of anxiety and depression. Literature has cited that nurses are prone to anxiety and depression during the COVID-19 pandemic as there were a large number of healthcare workers who contracted the disease, owing to self-perceived infection vulnerability.[3,33,37] It may also be related to the scarcity of personal protective equipment (PPE) and other essential equipment and medical supplies in the height of the pandemic. The shortage of nurses may have also contributed to the level of anxiety reported in this study. Even before the pandemic, this shortage of healthcare workers, especially nurses, has been a prevailing problem in the health care system of the country.[38] The prevalence of anxiety and depression during COVID-19 pandemic were also reported from previous foreign studies in the primary care settings.[37,39] However, those nurses who reported to have anxiety and depression in the current study are generally low compared to previous foreign studies. In addition, only work experience has the significant relationship to the level of depression among nurses. Previous studies showed no significant relationship between work experience and level of depression.[40-42] A study in Pakistan showed significant relationship between depression and those nurses with less work experience indicating that nurses with shorter work experience may still have personal self-doubt, less skilled or are less prepared mentally.[32] Apparently, the current study showed that more than two thirds of the nurses have work experience of 6-8 years and less and majority of them were relatively young. Moreover, those who reported to have depression have shorter work experience. In this sense, the data point out that less experienced nurses predispose to depression.

Resilience is a counteracting measure in dealing with any adverse event or traumatic circumstances. It helps an individual to maintain a stable balance.[33] In our study, nurses reported high scores in resilience. Furthermore, findings showed that a high level of anxiety and depression were associated with a low level of resilience. It is possible that nurses in the public health with high levels of resilience can cope and adjust successfully with psychological distress such as anxiety and depression because they are able to be optimistic despite of any health crisis.[43] As such, a high resilience shows a protective effect on anxiety and depression and therefore associated with better mental health.[33,44] Nurses with low resilience should be more proactive in receiving certain mental health interventions.

Several studies have been conducted in investigating the prevalence and levels of anxiety, depression, and resilience among hospital nurses during the COVID-19 pandemic. This study is one of the preliminary studies conducted in the primary care settings. The current study showed that many demographic variables showed no significant relationship with anxiety and depression. However, anxiety and depression could not be influenced only by these factors. It could be influenced by other personal characteristics and environmental factors in which these were not investigated in the current study.[45] Nevertheless, the researchers recognize some limitations of the current study. First, the study employed a cross-sectional design. It fails to demonstrate the causal relationships between the variables of interest. Secondly, self-report questionnaire was used in gathering the data that may have information bias as influenced possibly by social desirability bias. Thirdly, the study was conducted in just one province. As such, results cannot be generalized to the whole Philippines or to the world. However, the findings of this study can be used in designing certain psychological interventions and strategies that may help nurses in promoting resilience and reducing anxiety and depression thereby achieving better mental health not only in the Samar areas but to the public health nurses who are frontliners in fighting against health crises like COVID-19 pandemic.

CONCLUSIONS

Primary care nurses experience depression and anxiety during COVID-19 pandemic. Work experience is associated to their levels of depression. Moreover, nurses reported high levels of resilience. There was a significant relationship between depression and anxiety and resilience. The higher the levels of anxiety and depression, the lower is their resilience. Psychological programs that will enhance resilience, thereby reducing levels of anxiety and depression are recommended.

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All authors certified fulfillment of ICMJE authorship criteria.

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