


DEPRESSION, ANXIETY, STRESS AND LIFE SKILLS OF NURSING
PROFESSIONALS WHO WORKED DURING THE COVID-19 PANDEMIC IN A
HIGH-COMPLEXITY HOSPITAL <https://doi.org/10.56238/sevened2024.042-007>Ana Clara Gouveia¹, Eliane Regina Lucânia-Dionísio², Lilian Castiglioni³, Leda Maria Branco⁴, Carla Rodrigues Zanin⁵, Lucas Teixeira Menezes⁶

ABSTRACT

Introduction. The COVID-19 pandemic scenario has intensified the psychological impacts on health professionals, especially those in the nursing area. The development of Life Skills (HV), essential in promoting mental health and well-being, can contribute to a positive impact on reducing these symptoms. **Objective:** to evaluate the Life Skills, symptoms of depression, anxiety, and stress in nursing professionals who worked on the front line of COVID-19 in a high-complexity hospital in the interior of the State of São Paulo, Brazil. **Method:** This is a descriptive, cross-sectional research, with a survey design and correlation of variables based on quantitative analysis, carried out via *Google Forms*. A total of 117 nursing professionals participated. The following instruments were used: sociodemographic questionnaire and health/disease conditions, the Scale to assess Life Skills (EHV) and the Anxiety, Depression and Stress Questionnaire (DASS-21). **Results:** 91% of the participants are female. Most participants had normal or mild levels of stress (57.3%) and depression (51.3%) symptoms. However, extremely severe cases of anxiety (38.5%), depression (18.8%) and stress (12.8%) were observed. A moderate negative correlation was found between the total EHV score and anxiety, weak negative correlations between the total EHV score and depression, the total EHV score and stress. **Conclusion:** correlation analysis indicates lower levels of mental health symptoms in individuals with more developed life skills, i.e., more skilled individuals had less mental health impairments according to the variables investigated. The study was approved by Plataforma Brasil, CAAE 68296523.1.0000.5415.

Keywords: COVID-19. Life Skills. Stress. Depression. Anxiety.

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INTRODUCTION

COVID-19, the disease caused by the coronavirus, had its first case identified in China at the end of 2019. The disease spread to several countries and in March 2020 the World Health Organization (WHO) declared that the outbreak of the new coronavirus constituted a global pandemic, in which sanitary measures, especially isolation, were instituted in all countries (MESSIAS et al., 2022).

Work in the health area involves conditions that trigger anxiety, depression, and stress (DIONÍSIO-LUCÂNIA, 2021). For Dantas (2021), if in the general population the psychological impacts generated by epidemics and pandemics are intense, in health professionals they are amplified, especially for those who worked on the front line of care, as is the case of nursing professionals. Work in the nursing area in the context of the pandemic involved, in some situations or moments, with scarce working conditions, a troubled and uncertain environment, with the risk of physical and mental illness, work pressure, in addition to experiencing and dealing with situations not yet known to science, generating insecurity, which contributed to the exhaustion and illness of these professionals (MIRANDA *et al.*, 2020).

Nursing professionals were essential in the care of patients with the new coronavirus (COVID-19), and structured research corroborated the need to investigate the vulnerability of these professionals, especially regarding their mental health, given the importance of their well-being in the production of patients' health care. During the pandemic, these professionals had to deal even more with physical and mental exhaustion, the pain of losing patients, colleagues, and family members, the difficulty in decision-making, the fear of contamination, and the transmission of the disease to close ones (GUIMARÃES & BRASIL, 2018). In addition, many of them faced long working hours, with a lack of personal protective equipment, wide media coverage, and low stock of medicines (PRADO et al., 2020).

All these factors contributed to greater wear and tear on these professionals and consequently increased the risks of mental illness. And the main problems observed are anxiety, depression and stress among these workers. Stress is associated with seven of the top ten global causes of death and the second most serious occupational health problem among nurse practitioners. In a study conducted by Floriano et al. (2023), nursing professionals had a high prevalence of vulnerability to stress at work, being associated with single workers, with more than 5 years of training and who had the occupation of being nurses. These results show the immediate need to program actions aimed at reducing stress in this professional category.

In a study on depression and anxiety in nursing professionals during the covid-19 pandemic, the authors found that the occurrence of symptoms suggestive of mental disorders, such as anxiety and depression, was related to female nursing professionals, brown color or race, with a monthly income of less than 5 minimum wages who worked in the private sector, have symptoms of Burnout Syndrome and live with their parents. The occurrences were more pronounced when the services did not have adequate working conditions to face the Covid-19 pandemic (SANTOS et al., 2021). In a systematic review of the literature on the prevalence of mental disorders in 8,866 health professionals during the COVID-19 pandemic, the most frequent symptoms found in this population were depression, anxiety, and insomnia, with a predominance of females and a mean age of 34.5 years. Professionals who worked on the front line in the fight against COVID-19 had higher prevalences of common mental disorders compared to other health professionals (OLIVEIRA, et. Al., 2022).

According to Dionísio-Lucânia (2021), the development of life skills can contribute to a positive impact on reducing symptoms of anxiety, depression, and stress, making it possible to reduce suffering and mental illness among health workers. The World Health Organization (World Health Organization [WHO], 1997) defines Life Skills as skills that can contribute to individuals presenting positive and adaptive behaviors, to respond effectively and positively to the daily demands and challenges of life. For this, the WHO suggested a set of ten life skills, namely: self-knowledge, interpersonal relationships, empathy, dealing with feelings and emotions, dealing with stress, effective communication, critical thinking, creative thinking, decision-making, and problem-solving. These psychosocial skills are considered universally relevant and applicable for all individuals, regardless of age, gender, profession, country, social class and socio-cultural context in which they are inserted (United Nations Children's Fund [UNICEF], 2012).

Life skills training has been shown to be an effective strategy in reducing symptoms of anxiety, depression, and stress in health professionals (DIONÍSIO-LUCÂNIA, 2021). These skills are considered essential in promoting mental health and well-being (WHO, 1997). In addition, they are important tools for contexts of specific risks that require resources for the promotion and protection of rights (WHO, 1999). Since the COVID-19 pandemic can be configured as a context of specific risk and requires a lot of resources from health professionals, assessing the life skills of this population, as well as their mental health, is relevant, and therefore more research is needed to expand knowledge in this area and thus subsidize programs for its development aimed at promotion, prevention and intervention for workers' mental health. Therefore, the present study aimed to evaluate Life Skills, symptoms

of depression, anxiety, and stress in nursing professionals who worked on the front line of COVID-19 in a high-complexity hospital in the interior of the State of São Paulo, Brazil.

METHODOLOGY

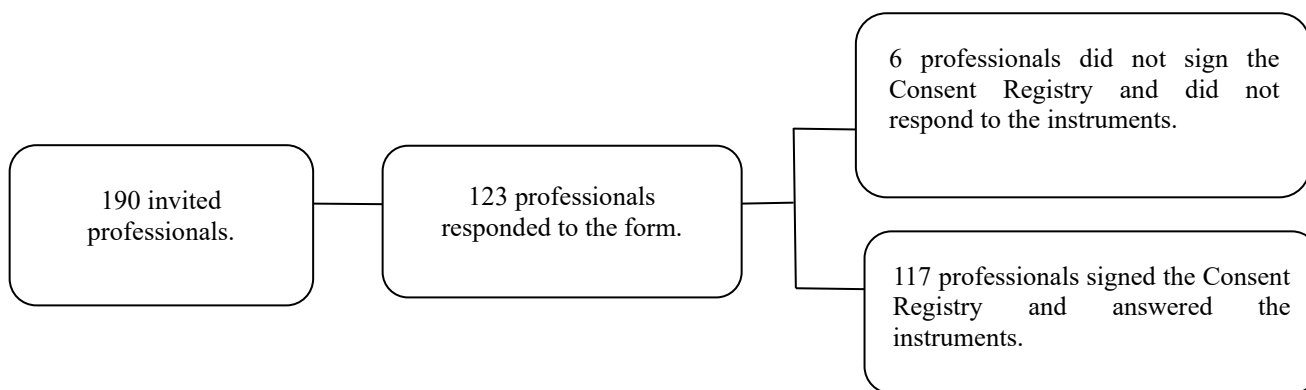
STUDY DESIGN AND SETTING

This is a cross-sectional descriptive study, with a survey design and correlation of variables based on quantitative analysis. Data collection was carried out in a high-complexity hospital in the interior of the state of São Paulo, Brazil.

PARTICIPANTS

Nursing professionals who worked during the COVID-19 pandemic in a high-complexity hospital located in the interior of the state of São Paulo, Brazil, were invited to participate in the research. Participants were selected by simple random sampling without replacement. According to the institution, 190 employees of the institution would meet the inclusion criteria to be respondents to the survey. The sample size calculation generated a number of 128 participants, considering a confidence interval of 95% and 5% sample error. However, the total number of participants was 117, as illustrated in Figure 1. There was no exclusion of response.

Figure 1 - Flowchart of the Research Participants.



INCLUSION AND EXCLUSION CRITERIA

The inclusion criteria for participation in the study were: being a nursing professional who worked in the COVID-19 Pandemic for a minimum period of three months. The exclusion criteria were: having severe mental impairments and/or disorders (e.g., severe depression with psychotic episodes; intense symptoms of acute stress or anxiety disorders with phobic or panic characteristics) that would make it impossible to understand and respond to the assessment instruments.

INSTRUMENTS

Three instruments were used for data collection. A Sociodemographic Questionnaire with Health/Disease Conditions that contains questions regarding the participant's social and demographic context. This questionnaire was prepared by the researchers. In addition, the Life Ability Assessment Scale - EHV (DIONÍSIO-LUCÂNIA, 2015) was used, a scale that contains 10 questions that aim to assess self-knowledge, interpersonal relationships, empathy, ability to deal with feelings, to deal with stress, effective communication, critical thinking, creative thinking, decision-making and problem solving. The responses to the scale are Likert-type, with five points, ranging from 1 (never presents the ability) to 5 (always presents the ability), with scores from 1 to 3 indicating low ability and scores from 4 to 5 indicating good ability. The Anxiety, Depression and Stress Scale (DASS-21) (VIGNOLA & TUCCI, 2014) was also used, which has 21 items divided into three factors, with seven items each, which assess symptoms of depression, anxiety and stress during the last week. The response of the instrument is of the four-point Likert type, ranging from 0 (not applied at all) to 3 (applied a lot or most of the time). The sum of the items defines the levels of depression, anxiety, and stress as normal, mild, moderate, severe, and extremely severe.

ETHICAL ASPECTS

The data were collected after approval of the project by the Ethics Committee for Research on Human Beings, with Opinion No . 6,082,908, and the collaborators who agreed to participate signed the Free and Informed Consent Register, with information about the objectives of the study, risks and benefits, the non-identification of the participants, the freedom to withdraw from the research without prejudice, the confidential nature of the data and intended use of the information collected. Participants identified with a condition that went beyond the study dimension were referred to the hospital's occupational health service for the necessary procedures, as recommended by Resolution 510/2016 of the National Health Council - CNS.

PROCEDURES

The study was conducted in accordance with national and international ethics guidelines, and was approved by the Research Ethics Committee, under opinion number 6,082,908. An invitation to participate in the research was sent via *WhatsApp*. The invitation was sent to the professionals by team leaders, therefore, the researchers did not have direct access to the telephone contact of the guests invited to the research. Those who accepted

to participate answered a form prepared through *Google Forms*. The form included the Informed Consent Registry and other instruments used. Data collection took place from 09/18/2023 to 03/20/2024.

DATA ANALYSIS

After data collection, they were spreadsheeted in Excel. The descriptive statistical analysis was performed based on the calculations of the measures of central tendency and dispersion and frequency counts. For the inferential statistical analysis of the quantitative variables, the Kolmogorov-Smirnov test was used to verify the normality of the data. Then, the Mann-Whitney and Kruskal-Wallis tests were applied. The frequencies were compared with the Classical Chi-square test. Spearman's correlation coefficients (r) were classified according to Dancey and Reidy (2006), as follows: $r = 0.10$ to 0.39 (weak), $r = 0.40$ to 0.69 (moderate) and $r = 0.70$ to 1 (strong). In all analyses, one was considered statistically significant: $P \text{ value} \leq 0.05$. The programs used were SPSS (IBM, version 23, 2014), PRISMA (version 6.10, 2015) and GraphPad Instat (3.10, 2009).

FINDINGS

Regarding sociodemographic and health data, of the total number of participants, 91% are female. Of the respondents, 56.4% are married or in a stable union. The predominant salary range ($n=84$) is between two and five minimum wages. Regarding general health aspects, 59% reported not consuming alcoholic beverages. Of those who consume alcoholic beverages, 6.8% indicated an increase in consumption during the pandemic period. Regarding mental health, 42.3% evaluate it as good, 15.4% as bad and 37.6% as fair. 56.4% of the participants indicated that they did not practice physical activity. Most of them did not have chronic diseases (81.2%) and 20.5% of the professionals stated that they used psychiatric medication.

Regarding the data regarding the presentation of symptoms related to mental health, 29.1% ($n=34$) identified symptoms of stress, 21.4% ($n=25$) identified symptoms of anxiety and stress, and 2.6% ($n=6$) indicated symptoms of depression, among other possible symptoms (Table 2). In addition, the survey allowed participants to describe other symptoms perceived by them, in addition to those that were available in the options. The following were pointed out: anguish, panic, impatience, discouragement, irritability, sleep changes, insomnia, binge eating, shortness of breath, tachycardia, tremors, excessive consumption of alcoholic beverages and body aches.

Table 1 - Frequency (n) and percentage (%) of symptoms perceived by the participants.

Perceived symptoms	n	%
Anxiety	21	17,9
Depression	3	2,6
Stress	34	29,1
Other(s)	11	9,4
Anxiety and Depression	2	1,7
Anxiety, Depression and Stress	15	12,8
Anxiety, Stress and Other(s)	2	1,7
Anxiety, Depression, Stress and Other(s)	2	1,7
Anxiety and Stress	25	21,4
Depression and Stress	1	0,9
Stress and Other(s)	1	0,9
Total	117	100,0

Note. N represents the frequency of the response and % represents the percentage that represents the frequency.

The data obtained through the DASS-21 instrument indicated that, at the time of data collection, 40.2% (n=47) of the participants had normal or mild levels of anxiety, while 57.3% (n=67) had similar levels of stress. Regarding depression, 51.3% (n=60) showed normal or mild levels. On the other hand, extremely severe levels of symptoms were also observed: 38.5% (n=45) of the professionals had extremely severe anxiety, 18.8% (n=22) extremely severe depression, and 12.8% (n=15) extremely severe stress. Other levels of severity for each symptom were also identified and are detailed in Table 2.

Table 2 - Distribution of the level of symptoms assessed by the DASS-21 according to frequency.

Symptom Level	Anxiety		Depression		Stress	
	n	%	n	%	n	%
Normal	40	34,2	47	40,2	54	46,2
Lightweight	7	6,0	13	11,1	13	11,1
Moderate	14	12,0	24	20,5	13	11,1
Severe	11	9,4	11	9,4	22	18,8
Extremely Severe	45	38,5	22	18,8	15	12,8

Note. N represents the frequency of the response and % represents the percentage that represents the frequency.

The results of the EHV (Table 3) show that 75.9% (n=89) judged to have good skills related to self-knowledge, 87% (n=102) indicated to have good empathy skills, 70.1% (n=82) believed they had effective communication, 71.8% (n=84) said they had good interpersonal relationship skills, 81.2% indicated good decision-making skills, 87.2% (n=102) thought they had good problem-solving skills, 76.1% (n=89) stated that they have creative thinking, 73.5% (n=86) believe they have critical thinking, 66.7% (n=78) think they have the ability to deal adequately with feelings and emotions, and 51.3% of the participants (n=60) believe that they have the ability to deal with stress, the skill with the lowest percentage among the participants. In the exhibition, among the skills perceived as less developed, dealing with feelings and emotions and dealing with stress can be highlighted.

Table 3 - Levels of Life Skills According to EHV Results.

Life Skill	Good Skill		Low Skill	
	n	%	n	%
Self	89	75,9	28	24,1
Empathy	102	87,2	12	12,8
Effective Communication	82	70,1	35	29,9
Interpersonal Relationships	84	71,8	33	28,2
Decision Making	95	71,8	22	18,8
Troubleshooting	102	87,2	15	12,8
Creative Thinking	89	76,1	28	23,9
Critical Thinking	86	73,5	31	26,5
Dealing with feelings and emotions	78	66,7	39	33,3
Dealing with Stress	60	51,3	57	48,7

Note. N represents the frequency of the response and % represents the percentage that represents the frequency.

The tests indicated a statistically significant association ($p= 0.025$) between the increase in alcohol use during the pandemic and anxiety. The lowest mean EHV scores ($M=32.88$) is related to the increase in the use of alcoholic beverages during the pandemic. It also indicated a relationship between the use of psychiatric medication and symptoms of depression ($p=0.002$), stress ($p=0.008$) and anxiety ($p=0.002$). A higher mean EHV score ($M=41.06$) was observed in people who did not use psychotropic drugs. Higher means of EVH are related to normal levels of stress symptoms ($M=41.93$), anxiety ($M=43.35$) and depression ($M=42.91$) (Table 4). An association was identified between chronic disease and depression ($p=0.043$). In addition, a higher mean EHV is associated with the practice of physical activity ($M=41.94$).

Table 4. Mean (M) of the EHV score by symptom level.

	Symptom Level				
	Normal	Lightweight	Moderate	Severe	Extremely Severe
Anxiety	43,35	38,57	40,14	39,55	38,00
Depression	42,91	37,77	39,50	40,45	36,82
Stress	41,93	40,08	39,31	38,95	37,20

Note: The mean (M) of the EHV scores was obtained by adding the scores of the ten skills evaluated by the instrument. Participants with a higher sum of EHV scores indicated lower levels of illness in the DASS-21.

Spearman's correlation test indicated a moderate negative correlation between the total EHV score and anxiety ($r=0.4$) and weak correlations between the total EHV score and depression ($r=0.38$) and the total EHV score and stress (0.33).

DISCUSSION

Sociodemographic data showed that 91% of the participants are female. A study on gender inequality in the lives of nursing professionals during the COVID-19 Pandemic points out that the overload of women, nursing professionals, related to home and family care, added to the responsibilities assigned at work, in the pandemic context, exacerbated the

weaknesses of physical and mental overload of this group (TERRA et al., 2022). It is important that this gender perspective is considered, as about 85% of nursing professionals in Brazil are female (REGIONAL NURSING COUNCIL OF RIO DE JANEIRO, 2021).

The study Lai et al. (2020) with a methodology similar to this one, carried out in China, with 1257 respondents, revealed a high prevalence of mental health symptoms among health professionals who worked on the front line of COVID-19 in the country, of which 76.7% were women and 60.8% were nurses. Overall, 50.4%, 44.6%, 34.0% and 71.5% of all participants reported symptoms of depression, anxiety, insomnia and anguish, respectively, symptoms that were also pointed out by the professionals in this study. In the United States, a survey conducted by Singh et al., (2024) revealed a prevalence of 57.4% of depression and 56.7% of anxiety in this group of professionals, especially among those who were at higher risk of contamination and those who felt uncomfortable with the pandemic control policy, in addition to a high prevalence of reports of stress and insomnia.

It was not the objective of the present research to identify the causes of mental illness among professionals, however, other studies have pointed out the factors that contributed to the significant increase in professionals with complaints related to mental health, among them: working under enormous pressure, having to take on extra shifts, working overtime and without breaks, performing activities in an environment of continuous stress (RIEDEL et al., 2021), a significant number of deaths due to COVID-19, patients isolated and dying alone, the constant fear of being infected and then infecting colleagues, family and friends, moral conflicts (HOSSAIN et al., 2021), forced isolation, lack of personal protective equipment, intense and constant responsibility (RODRIGUES et al., 2024).

Although the numbers of participants with extremely severe, severe and moderate levels were important, a correlation was found between good levels of life skills and fewer symptoms of depression, anxiety and stress. A study by Dionísio-Lucânia (2015), carried out with employees of a hospital, also indicated a correlation between better levels of life skills and lower levels of mental illness.

This can be explained by the fact that the term "Life Skill" (HV) refers to the social, cognitive and affective skills useful in coping with the demands of everyday life (MURTA et al., 2010), which make it easier for people to successfully face the demands and challenges of daily life. These skills are considered "generic" because the same skill has application in different contexts and are important in the management of different everyday situations and psychosocial risk that are common during the course of life (SIERRA, 2014), including the work environment.

CONCLUSION

Nurses, like other nursing professionals, perform essential functions in the provision of health care services. It is common for them to face various occupational risks in the hospital environment on a daily basis, especially in the context of the COVID-19 pandemic. The literature has shown that these risks, in addition to having a negative impact on the physical and mental health of nurses, also produce adverse consequences, such as job dissatisfaction, fatigue and exhaustion among these professionals. Ultimately, these adversities can directly impact the quality of care offered to the patient (MEHBOODI et al., 2024).

Thus, developing strategies to ensure well-being and occupational health and prevent mental illness among nursing professionals is important for the proper functioning of the health system. Life Skill Training (THV) has proven to be an important strategy in the prevention and promotion of mental health to benefited individuals.

In view of the damage that mental disorders such as anxiety, depression and stress can cause and the relevance that workers' health has in the production of health care, the results found in this study may contribute to the development of strategies for promotion, prevention and intervention for work in hospitals, as these environments present aspects that can cause significant damage to workers' mental health. as those verified in the sample evaluated. That this study encourages further research on the relationship between mental health and life skills in health workers and thereby contributes to the development of programs for the training of these skills in order to improve mental health, the quality of the work offered by these professionals and can also contribute to the population in general, due to the wide applicability of life skills.

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