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WORKING CONDITIONS AND DEPRESSIVE SYMPTOMATOLOGY IN INTENSIVE CARE NURSES DURING THE COVID-19 PANDEMIC

Condições de trabalho e sintomatologia depressiva em enfermeiros intensivistas durante a pandemia Covid-19

Condiciones de trabajo y sintomatologia depressiva en enfermeiras de cuidados intensivos durante la pandemia Covid-19

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ABSTRACT

Objective: to analyze working conditions associated with depressive symptoms in intensive care nurses during the COVID-19 pandemic. **Method:** qualitative research, content analysis; with nurses from ICUs at a hospital in São Paulo/SP; semi-structured questionnaire interview. **Results:** 68 participants from 9 ICUs, mostly female, 28-45 years old; time since graduation, institution working, insitution ICU experience and ICU nursing experience between 1-8 years; without other job; weekly workload 38 - 60 h -more; 10 with previous depression diagnosis, 16 with mild, moderate depression. **Working conditions related to depressive symptoms:** overload due to workload intensity and emergency admission of untrained professionals to the ICU; absent boss; uninterested colleagues; impotence/suffering by patients, deaths; material shortfall; infecting family members fear; family discrimination for being on the front lines; afraid to get infected. Negative influence on the assistance provided. **Final considerations:** depressive symptoms associated with inadequate working conditions in ICUs, aggravated by the COVID-19 pandemic.

DESCRIPTORS: Depression; Occupational health; Intensive care units; Work conditions; COVID-19.

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RESUMO

Objetivo: analisar condições de trabalho associadas sintomatologia depressiva em enfermeiras intensivistas na pandemia COVID-19. **Método:** pesquisa qualitativa, análise de conteúdo; com enfermeiras de UTIs de hospital de São Paulo/SP; entrevista por questionário semiestruturado. **Resultados:** 68 participantes de 9 UTIs, maioria feminino, 28-45 anos, tempo de formação, atuação na instituição, experiência na UTI na instituição, experiência na enfermagem UTI entre 1-8 anos; não possuía outro emprego; carga horária semanal 38 - 60 h -mais; 10 com diagnóstico prévio para depressão, 16 com depressão leve, moderada. Condições de trabalho relacionadas sintomatologia depressiva: sobrecarga por intensidade da carga laboral e admissão emergencial de profissionais não capacitados em UTI; chefia ausente; colegas sem interesse; impotência/sofrimento pelos pacientes, óbitos; falta de material; medo infectar familiares; discriminação familiar por ser linha de frente; medo infectar-se. Influência negativa na assistência prestada. **Considerações finais:** sintomatologia depressiva associada às condições inadequadas de trabalho nas UTIs, agravadas pela pandemia COVID-19.

DESCRITORES: Depressão; Saúde ocupacional; Unidades de terapia intensiva; Condições de trabalho; COVID-19.

RESUMEN

Objetivos: analizar condiciones de trabajo asociadas a síntomas depresivos en enfermeras de cuidados intensivos durante la pandemia COVID-19. **Método:** investigación cualitativa, análisis de contenido; enfermeras de UTI de hospital de São Paulo/SP; entrevista con cuestionario semiestructurado. **Resultados:** 68 participantes de 9 UTI, mayoría del sexo femenino, 28-45 años; tiempo de egreso, trabajando en la institución, experiencia en la UTI de la institución e experiencia en enfermería UTI entre 1-8 años; sin otro trabajo; carga de trabajo semanal 38 - 60 h -más; 10 con diagnóstico previo de depresión, 16 con depresión leve, moderada. Condiciones de trabajo relacionadas a síntomas depresivos: sobrecarga por la intensidad de la carga de trabajo e ingreso de emergencia de profesionales no capacitados en la UTI; jefia ausente; colegas desinteresados; impotencia/sufrimiento de los pacientes, muertes; falta de material; miedo infectar familiares; discriminación familiar por estar en primera línea; miedo contagiarse. Influencia negativa en la asistencia prestada. **Consideraciones finales:** síntomas depresivos asociados a condiciones de trabajo inadecuadas en las UCI, agravadas por la pandemia COVID-19.

DESCRIPTORS: Depresión; Salud ocupacional; Unidades de cuidados intensivos; Condiciones de trabajo; COVID-19.

INTRODUCTION

The "COVID-19 Health Care Workers Study (HEROES)" conducted with 14,502 health care workers from Latin countries, including Brazil, shows the attrition of these workers and the impact on mental health during the COVID-19 pandemic, with 14.7% to 22% presenting symptoms suggesting episodes of depression and between 5% to 15% having suicide ideation.[1]

A study on mental health indicators in 916 Brazilian health care workers showed that nurses had higher indicators of mental problems such as insomnia (64.4%), anxiety (50.3%), and depression (45.2%) compared to other professionals. The variable most frequently associated with the risk of mental health problems in nursing professionals was the concern of being infected by Sars-CoV-2.[2]

A review and meta-analysis study on mental health decline in nurses in pandemic COVID-19 highlighted higher proportion of poor outcomes regarding mental health among nurses from different parts of the world, specifically for anxiety, stress, depression, post-traumatic stress disorder, and insomnia. Significant risk factors for anxiety, depression and stress in different studies were providing direct care to COVID-19 patients, being female, low self-efficacy and resilience, poor social support, presence of physical symptoms.[3]

Research with Swedish nurses about working in an Intensive Care Unit (ICU) in the COVID-19 pandemic reports increased workload and worsening work environment as a cause of physical and psychological stress. Working during the COVID-19 pandemic affected their health and well-being such as constantly thinking about work, stress symptoms, and were so exhausted and tired, with no energy to do anything.[4]

We were prompted to study the working conditions associated with depressive symptomatology in intensive care nurses during the COVID-19 pandemic by the fact of the worldwide increase in depression in nursing professionals due to acting on the front line of care for contaminated patients.

This study aimed to analyze work conditions associated with depressive symptomatology in intensive care nurses during the COVID-19 pandemic.

METHOD

Qualitative, exploratory-descriptive study, conducted from August to November 2020, with nurses from all nine adult ICUs, from all shifts, belonging to a federal university hospital in São Paulo/SP. The Equator platform guidelines were obeyed, and the COREQ instrument was used accordingly.

Inclusion criteria: both genders, at least one year experience as ICU nurse, working at least six months in an ICU in the study institution. Non-inclusion criterion was absence during the data collection period. Exclusion criterion was when, after the interview, a request was made to withdraw

participation or when an error was found that made the objective unfeasible, which occurred with three participants.

Sixty eight nurses participated in this study and were identified in the text by codes: E for interview followed by the number of the interview and acronym of the specific ICU (general from 1 to 4, cardio=cardiac surgery, CM=medical clinic, PNM= pneumology, Cor=coronary, nephro=nephrology).

The professionals in adult ICUs were mapped, work shifts were contemplated, initial contact was made with the nurse in a randomized manner, invitation to participate in the research with previous explanation. The participant set date, time and place; prior to the interviews, explanations were given about the research and agreement to participate signed in the Informed Consent Form.

The interview was based on a specific instrument developed by the researchers, in a private room, lasting about 75 minutes, recorded on audio equipment, and transcribed in full.

For the qualitative part, we used a questionnaire with a sociodemographic profile and open-ended questions, in order to analyze the working conditions associated with depressive symptoms.

Qualitative data analysis was performed according to the theoretical framework of content analysis and obeyed the phases of pre-analysis, exploration of the material and treatment of the results, inference, and interpretation.5

There were 26 participants who presented psychological distress or suicidal behavior and received orientations and referrals for specialized help.

The research is in accordance with the principles of the National Health Council Resolution (CNS) No. 510/2016 and was approved by the Research Ethics Committee (CEP) Federal University of São Paulo, filed under CAAE No. 31230920.4.0000.5505, Opinion Number: 4.162.976, on July 20, 2020.

RESULTS

Of the 68 participants from nine adult ICUs, the majority were female, aged 28/45 years, single, no children, Catholic/Christian, monthly income R$ 4,000.00 to R$ 7,999.00, predominance between one and eight years for time of education, work in the institution, experience in the ICU in the current institution and in ICU nursing; had only one contract; weekly workload between 38 and 60 hours and more. There were 10 participants with a previous diagnosis for depression and 16 with mild and moderate depression.

For this article, part of the qualitative data was allocated to the thematic unit named "Mental suffering, working conditions and the COVID-19 pandemic" about the perception of mental suffering, inadequate working conditions related to the onset and worsening of mental suffering, and the worsening of these conditions due to the COVID-19 pandemic.

There were perceptions of different factors during the COVID-19 pandemic that triggered mental distress, anxiety, and depression:

> [...]*beginning of COVID was worse, the stress! There was no employee! Very serious patients and this triggered stress not only for me,* [...] *for everyone! Anxiety for everybody!* (E22 PNM ICU)

> *[I was always very anxious. It seems that it got worse now after COVID! With the risk because of exposure! And the exposure of my family members* [...] (I31 General ICU 04)

> *[I worked for nine days without rest, I had no desire to do anything, I just wanted to go home, sleep and then I would only sleep, wake up, come and stay 12 hours [. ...] you feel guilty because* [...] *as much as you want to be in both jobs, to earn salaries to supply other needs with my family, you start to feel guilty because you can't* [...]. (E21 Cardio ICU)

> [...] *see many people die alone, without family, deal with this feeling of injustice* [...] *feel powerless, unable to face the situation, capacity, fear really, a lot of fear* [...]. (E4 General ICU 02)

> [...] *there were six months in the ICU that were worth two years in normal life, there were many complications! A very large number of deaths!* [...] *From intubation one, three die; he has no reference to normal, he thinks that this will last for his entire career!* (E16 PNM ICU)

> [...] *stayed six, seven hours without swallowing a glass of water, without going to the toilet, because if I drank water, I would have to pant all over, go to the toilet, I couldn't, it made me very angry, it made me very ill* [...] *it was stressful to be hungry* [...] (I2 General ICU 04)

> [...] *there were moments during the pandemic including* [...] *that drugs were missing,* [...] *lacked sedation,* [...] *lacked glucose; for us it is very difficult because it is rework, besides suffering for not having,* [...], *you have to leave the sector and seek coverage in another sector,* [...] *this generates wear, generates more anxiety...* (E7 ICU CM)

> [...] *COVID is a specific type of patient that was severe and we did not know exactly what to do with him, because it was all experimental and you did it, he did not come out of it!* [...] *He got into a snowball there that started to degenerate and just went downhill!* [...] *There was no answer; frustrated, feeling impotent!* (E42 General ICU 04)

> *What is in a pandemic, you don't have soap, alcohol gel, paper towel, doesn't it cause you anxiety? It causes anxiety because you can catch the COVID! You can die! You can pass it on to someone who is going to die!* [...] *There are little frustrations there, every day! This generates anxiety! It generates anger* [...]. (E66 ICU CM)

Os participantes enfatizaram a sobrecarga de trabalho devido a pandemia COVID-19, com destaque a admissão emergencial de profissionais de saúde não capacitados para atuar em UTI:

> [...] *vi que fiquei realmente em sofrimento ... excesso de trabalho, responsabilidade, de obrigações, falta de tempo para fazer tudo, ser solicitado a todo momento por todos, ter que cuidar praticamente sozinha de todas as situações, eles dividiram um, dois funcionários antigos com 15 novos, você tinha que se virar com tudo, porque o novo não sabia nada,* [...] *não fez treinamento com ninguém, jogou todo mundo de qualquer jeito, isso foi bem estressante* [...]. (E2 UTI Geral 04)

> *Já vinha trabalhar angustiada! Sabendo que ia pegar pessoas sem experiência que não tinha às vezes nem boa vontade em aprender,* [...], *teve erros! Só causou danos ao paciente, isso me afetou drasticamente!* [...] *E as pessoas não tinham tanta responsabilidade com a vida do outro, porque o que você não sabe, pergunta! você não sabe, você não faz!* (E31 UTI Geral 04)

> [...] *Não sabia ler! Não sabia fazer conta! [os técnicos de enfermagem], para mim muito [estresse]!* [...] *Você via o povo morrendo por assistência errada! Pôr os médicos fazendo prescrição com droga vasoativa sem diluição! Quero ver o dia que o técnico pegar vasopressina e fazer pura! Noradrenalina e fazer pura! Porque você* (médico) colocou lá: nora quatro ampolas a critério médico, cadê a diluição? cadê o soro glicosado? O cara [...] sem experiência, cata as quatro ampolas e faz! [...] Os pacientes vão morrer na mão desse povo! Não dava. Para você ter noção, pegava prescrição médica, separava o que elas [técnicos novos] iam fazer, de medo de que elas pegassem coisas erradas, pegava etiqueta e embrulhava a medicação de diluente [...] e mesmo assim fazia ainda errado [...]. (E41 UTI Geral 03)

> [...]*excesso de carga de trabalho!* [...] *excesso de pacientes graves com uma equipe, incapacitada incorretamente* [...] *E muita merda aconteceu mesmo* [...] *Hiper atento com a merda que tem o risco de acontecer!* [...] *O principal prejudicado é o paciente! Não pode acontecer! Tem que ficar no pé o tempo inteiro e você tem que ensinar o beabá para a gente que não deveria estar ali dentro!* [...] *Não tem formação necessária.* (E48 UTI Geral 01 COVID)

Houve participantes que referiram prejuízo na assistência prestada aos pacientes:

> [...] *de maneira bem importante, negativa, a de esquecimento, de erro mesmo, de procedimentos, você vai fazer o procedimento e quando você ver, você corre é risco ao paciente,* [...]. (E2 UTI Geral 04)

> [...]*cai absurdamente o rendimento, a qualidade da assistência é outra! A vontade que tenho de fazer as coisas que é quase zero, influencia na minha assistência!* [...] *faço mais por peso na consciência,* [...]. (E24 UTI Geral 03)

DISCUSSION

Data regarding gender, age, salary income, weekly workload over 36 hours and having a single job are aligned with those of the national survey on Nursing Profiles.[6]

Regarding work experience in ICU, data corroborate similar research results.[7-8]

The increased workload is linked to receiving wages for better living conditions, although with the reflex of worsening the quality of life, even more so in a peripheral capitalist country with a large reserve labor force.

It has been shown that a prolonged period of exposure to epidemic and pandemic outbreaks causes exhaustion and negative psychological impact on health professionals, which may be long-lasting.[9]

A study in Japan with 56 nurses caring for patients with COVID-19 found mental distress with a prevalence of anxiety disorders (46.4%), post-traumatic stress disorder (25%), and major depressive disorder (19.7%).[10]

The pandemic brought weariness to health professionals associated with the amount of work and information with great demands on cognitive abilities; the rapid, repeated and difficult decision making when facing severe patients with an increase in deaths, causing psychic tension and cognitive exhaustion by provoking a feeling of inefficiency of the professional; by increasing the emotional load there was a feeling of guilt due to the impossibility of family members visiting during hospitalization or death; imbalance due to isolation/confinement; concern about family members and reduced time for leisure and rest.[11]

There was a high prevalence of secondary traumatic stress symptoms in nurses during the pandemic of COVID-19, with higher rates in ICU/Coronary Care Units nurses followed by Emergency Units compared to other units, because critically ill patients with COVID-19 were in these units. Nurses presented higher scores for depression, anxiety and suicidal ideation when compared to nurses without secondary stress symptoms.[12]

The pandemic has exposed and aggravated several historical problems in nursing, especially regarding inadequate working conditions that promote physical and psychological suffering.

The impact of the COVID-19 pandemic on the mental health of nursing teams in Brazil was the subject of an integrative review and related being on the front line with higher risk of infection and anxiety, fear and stress, panic caused by the high number of infected and deaths, lack of PPE, increased and exhaustive work hours due to a deficit of

professionals who were infected to promote increased stress and mental suffering.

A study of 20 nurses caring for patients with COVID-19 in Henan (China) reports that all experienced significant amounts of negative emotions in the first week of practice. There was continued increase in workload and workday; forced to keep protective clothing, which resulted in fatigue and discomfort; inability to meet physical and psychological needs brought feelings of helplessness. Most expressed concerns about the many isolated patients with few professionals, especially with unknown conditions and psychological state of patients and severe emergencies. Most felt different levels of anxiety, all reported concerns about family members who were worried about them.[14]

A survey of 5,677 Australian health care workers about mental health related to the pandemic COVID-19 found impairment of frontline workers' emotional state, ability to participate in daily life as they wished, and self-care. There was mental distress related to anxiety, fear, loneliness, fatigue, increased demands at work and at home, uncertainty about immediate and long-term futures, social isolation, and loss of wages. Thoughts of guilt associated with the inability to think and act positively or for the benefit of their health occurred.[15]

A study with 17 ICU nurses in Spain when facing the pandemic COVID-19 found fear as the most reported to influence care, also contributed the isolation of the patient, too much information and inability to disconnect from the work environment.[16]

Healthcare professionals' feelings of unpreparedness for the work of coping with COVID-19 were related to unfamiliar processes, lack of specific training, and redeployment to other areas of healthcare.[17]

Reports from ICU nurses in a COVID-19 referral hospital in Singapore show the turbulence in their psychosocial well--being due to the rapid deterioration of COVID-19 patients and witnessing the process of death and dying in the ICU. Accompanying the patients' suffering was very emotionally provoking and influenced the care. The deaths caused moral distress as it became impossible to provide end-of-life care to patients and grief to family members, leading nurses to bear the burden of the perceived lack of care.[18]

ICU nurses during the second wave of the pandemic in Canada (January/March 2021) reported shortages of resources such as equipment, staff and limited negative pressure rooms and management was not transparent about PPE. Nurses were asked to reuse PPE or make do with what they had. They felt at high risk of contagion because of management's fault, as they observed no plan or coordination to manage high intensity situations. They suffered from moral distress, worked in a chaotic and unsafe environment, with rapidly changing rules, and felt abandoned by management. They needed clearer guidelines, more education, and involvement in the unit's decisions.[19]

ICU nurses suffered intense psychological and physical effects due to the demand of patients with COVID-19, among others coming from the social environment such as stigma, additional responsibilities, tense interactions and isolation/solitude. There was a social perception of nurses as a threat and risk of infection, provoking avoidance and family relationship difficulties, very different from the image disseminated by the media of health heroes.[20]

In the interviews we observed disbelief of a safe future, fear and concern, crying, revelations of professional and personal secrets that caused suffering, a sense of relief for having someone to vent their anguishes.

Nurses from the US and wealthy countries had little experience in practice and training when faced with such a compromising and overwhelming situation as the COVID-19 pandemic. Many were overwhelmed, restless, confused, scared, angry, but committed to work to the point of compromising their health and that of their loved ones.[21]

Nurses transferred to the ICU due to the pandemic COVID-19 received little or no introduction to the new location, many said they lacked the skills and experience to do this work, felt insecure or alone; they were promised to work closely with experienced nurses in these units to have help if needed, but were often left alone in their care. ICU nurses reported increased workload as they constantly had to introduce and assist new colleagues.[4]

ICUs were often understaffed leaving nurses exhausted, and nurses from other areas were quickly trained to assist in the ICUs, but it brought a problem of transferred staff without ICU experience. The shortage of ICU nurses and increased ICU admissions due to COVID-19 compromised patient care and safety.[19]

US ICU nurses were heavily impacted during the COVID-19 pandemic by, among other factors, the shortage of ICU nurses and physicians without prior ICU training.[22]

We had important background problems of worldwide scope during the COVID-19 pandemic, highlighting the high demand for few qualified professionals, especially in the ICU. Improvising, taking professionals from general units or hiring new graduates or those with no experience in ICU care and placing them in the ICU without prior training and adequate supervision obviously could not give adequate results.

It is necessary to invest in permanent education in the institutions, to greatly improve the undergraduate training of health professionals, to strengthen the commitment to the profession and patients, to train critical, reflective individuals who are committed to the health of the community. Managers and governors must have plans for emergency situations like the pandemic COVID-19 in the face of the possibility of new events, so that errors can serve as learning for planning and managing new crises.

We were touched by the contents and forms of expression during the interviews and shocked to see that some nurses believed they had done nothing. They reported so many

problems that were mostly out of their control and so much sacrifice and exposure to risks to do their best. Many professionals lost their lives to care for the unknown other. They did their best, the result of a lot of dedication and personal and team effort.

CONCLUDING REMARKS

Inadequate working conditions were aggravated during the COVID-19 pandemic and related to the promotion of mental distress and development and worsening of depressive symptoms in nurses.

Factors for this were work overload, excessive workload, lack of PPE, materials, supplies, and equipment, lack of human and qualified resources, risk of exposure and contagion, moral distress, absence of leadership and managers and psychic support, excess deaths, lack of information, isolation of loved ones, and fear of their contamination.

As a limitation of the study is the possibility of bias due to the subjectivity of the participant and researcher in the involvement with the situations experienced. It contributes to adequate planning for similar future events.

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