Prevalence and factors associated with workplace violence against Brazilian multiprofessional residents during the pandemic

Prevalência e fatores associados à violência no trabalho contra residentes multiprofissionais durante a pandemia

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ABSTRACT *Cross-sectional study which objective was to identify the prevalence and factors associated with workplace violence (physical and/or verbal) against multiprofessional residents working at a Brazilian university hospital during the COVID-19 pandemic. A census was developed in July 2020 with 67 residents. Data were collected through an electronic questionnaire, evaluating physical and verbal violence through self-report. Associations between the occurrence of violence experienced during the pandemic and independent variables (sociodemographic, psycho-emotional, and patient care with COVID-19) were analyzed using statistical tests and Poisson Regression (PR) with robust variance. Differences between groups were observed when comparing occupations and the degree of satisfaction with the residence, with a higher proportion of physical therapists and social workers, as well as dissatisfied residents among those who reported violence (p≤0.005). After regression analysis, violence was associated with increase in age (PR=1.25; 95%CI 1.12-1.40) and moderate/severe anxiety levels (RP=2.87; 95%CI 1.12-1.40). The findings point to the need to implement institutional measures for the prevention and control of workplace violence considering the factors associated with it during the pandemic.*

KEYWORDS *Workplace violence. Internship and residency. Pandemics. COVID-19. Prevalence.*

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RESUMO Estudo transversal cujo objetivo foi identificar a prevalência e os fatores associados à violência no trabalho (física e/ou verbal) contra residentes multiprofissionais que atuam em um hospital universitário durante a pandemia da Covid-19. Foi desenvolvido um censo, em julho de 2020, com 67 residentes. Dados foram coletados por meio de questionário eletrônico, avaliando-se a violência física e verbal mediante autorrelato. Associações entre a ocorrência de violência vivida durante a pandemia e as variáveis independentes (sociodemográficas, psicoemocionais e atendimento ao paciente com Covid-19) foram analisadas mediante testes estatísticos e Regressão de Poisson (RP) com variância robusta. A prevalência de violência foi de 22,4%. Diferenças entre grupos foram observadas ao comparar as ocupações e o grau de satisfação com a residência, com maior proporção de fisioterapeutas e assistentes sociais, assim como de residentes insatisfeitos entre os que relataram violência (p≤0,005). Após análise de regressão, a violência esteve associada ao aumento da idade (RP=1,25; IC95% 1,12-1,40) e a níveis de ansiedade moderados/graves (RP =2,87; IC 95% 1,12-1,40). Os achados apontam para a necessidade de implementação de medidas institucionais de prevenção e controle da violência no trabalho, considerando os fatores associados durante a pandemia.

PALAVRAS-CHAVE Violência no trabalho. Internato e residência. Pandemias. Covid-19. Prevalência.

Introduction

Violence develops in life and society and is influenced by historical, cultural and political contexts. It presents itself in relationships constituted by oppression, intimidation and fear, transforming differences into inequalities[1]. When violence is related to work, there may be deprivation of fundamental labor and social security rights, failure to offer healthy working conditions and naturalization of diseases resulting from it. In this sense, it manifests itself through physical and/or psychological violence, sexual harassment, abuse, bullying and gender or racial discrimination, impacting the health of workers and the quality of their performance[2-4].

Violence at work in the health area constitutes almost a quarter of all reported violence at work, being an important public health problem and a factor of concern in several countries[5]. In the United States of America, for example, the incidence of injuries in health workers related to violence increased by 67% between 2011 and 2018. They are five times more likely to experience violence in the workplace than all other workers. Furthermore, although less than 20% of all workplace injuries occur to healthcare workers, they suffer 50% of all assaults[6].

The few studies carried out in Brazil also revealed significant rates of violence against professionals in the area. One of them, produced with 267 nursing workers, revealed that 61.6% reported having been victims of verbal abuse, sexual harassment or physical violence at work in the last 12 months[7]. In another, which sample consisted of 269 professionals, the prevalence of physical and psychological violence was 15.2% and 48.7% respectively[8].

The multifaceted and social nature of violence presents new challenges today, when the world is experiencing a pandemic that is difficult to control. In Brazil, multidisciplinary health residents played a very important role in facing this health emergency, fighting for the proper functioning of public health services alongside working professionals, who often recognize residents as professionals with autonomy to carry out individual conducts without limitations or supervision, capable of supplying the immediate lack of human resources[3,9].

During the pandemic, residents have had to act under greater levels of pressure; weakened interpersonal relationships; demands of professionals and supervisors; and fear of the lack of Personal Protective Equipment (PPE), of not having equal access to vaccines in relation to other health professionals and of becoming infected and dying. Thus, the COVID-19 pandemic may have made this population more vulnerable to violence in their workplaces[10,11].

The context of violence at work for residents can be triggered and aggravated by numerous factors: occupational stress due to the high weekly workload, occurrence of burnout syndrome and its characteristics (emotional exhaustion, depersonalization and derealization) and lack of previous professional experience[12]. The latter hinders the development of coping strategies and/or the naturalization of violence when presented in a more subtle way[13].

Faced with this reality and the scarcity of studies that analyze the occurrence of violence at work in the health area[10], mainly among students and residents, and given the importance of verifying this phenomenon in a pandemic scenario, this study aimed to: identify the prevalence of violence (physical and/or verbal) and its associated factors in multidisciplinary residents working in a large Brazilian hospital during the first wave of the COVID-19 pandemic.

Material and methods

This is a cross-sectional study carried out in a large university hospital located in the state of Rio Grande do Norte, which has 242 hospital beds. It was conducted in

accordance with the ethical aspects to be observed in the provisions of Resolution nº 466/2012 of the National Health Council, on ethics in research with human beings, being, therefore, submitted and approved by the Research Ethics Committee of the Federal University of Rio Grande do Norte (Certificate No. 28003720.7.0000.5292).

Data collection was carried out between July 12 and 24, 2020, a period in which the hospital was already providing direct assistance to suspected and confirmed cases of COVID-19. Recruitment of participating residents took place through telephone contact and approach in service, and data collection took place online, on the Google Forms® platform. The form link was sent through the WhatsApp® application or by email, at the participant's discretion. After clarification and acknowledgement of voluntary participation, methods and procedures, all signed the Informed Consent Form.

The study consisted of a census. That is, all residents of the hospital's multidisciplinary health programs (Adult Intensive Care, Child Health, Cardiology and Psychosocial Care) were invited to participate in the study. Having no refusal, the sample consisted of all guests (n=67).

Residents were asked about their sociodemographic profile (age, sex, race/skin color, marital status, profession, family income); professional performance in the residency (program, year of residency) and their degree of satisfaction with the program; history of psychological and psychiatric care and use of psychotropic drugs; experience tackling COVID-19 (performance in the COVID-19 sector, training, safety, use of PPE and psychosocial coping strategies); and violence at work (physical and/or verbal suffered during the pandemic, regardless of the perpetrator). The race/skin color variable was broken down into the following categories: black (brown and black) and non-black (white).

The occurrence of violence was evaluated based on the question: 'Have you ever suffered physical and/or verbal aggression in hospital work during the COVID-19 pandemic?', with a possible dichotomous answer (yes or no). Physical aggression was considered as the use of force that results in physical or psychological harm; and verbal aggression as the use of words in offensive attitudes with the aim of humiliating, slandering or embarrassing an individual or a group[4,14].

Residents were also asked to complete the Beck Anxiety Inventory (BAI)[15] and the Beck Depression Inventory (BDI)[16], validated for use in Brazil and with high efficacy and reliability. Both consist of a 21-item self-assessment scale that identifies the intensity of anxiety and depression symptoms in psychiatric and non-psychiatric populations without psychodiagnostic intent. Each item is rated on four response options (0 to 3), and the total score can range from 0 to 63. Cutoff scores for the BAI are 0-7 (minimal anxiety), 8-15 (mild anxiety), 16-25 (moderate anxiety) and 26-63 (severe anxiety); and for the BDI, they are 0-9 (minimal depression), 10-16 (mild depression), 17-29 (moderate depression) and 30-63 (severe depression)[17].

Data were analyzed statistically. Descriptive analysis was performed using absolute and relative frequencies for categorical variables, and averages and Standard Deviations (SD) for quantitative variables. Then, the existence of statistical differences between groups was evaluated according to the occurrence of violence (residents who suffered violence and residents who did not suffer violence) and the nominal and ordinal variables using Pearson's chi-square test, likelihood ratio or Fisher's exact test. The Mann-Whitney U test and Student's t test were used for continuous variables, depending on the distribution of the variable under study. Values of $p \leq 0.05$ were considered significant.

Multiple analysis was applied through the sandwich library of the statistical package R version 4.1.0, using the Poisson regression model with robust variance. Several models were adjusted using the potential factors identified in the univariate analyses. Variables with a value of p≤0.20 were the initial candidates to compose the final model using an unoptimized stepwise-forward method.

After inclusion and exclusion of the variables added in order from most to least significant with the outcome, the significance of the interactions between the variables that remained throughout the process was tested. Comparison of model fit was performed using the Akaike Information Criterion. The choice of the final model considered epidemiological and biological plausibility, in addition to statistical significance at the 5% level, with estimates of associations based on adjusted Prevalence Ratio (PR) and Confidence Index (CI).

Results

The residents' sociodemographic and professional characteristics are presented in *table 1*. It is noteworthy that the majority were female (76.1%), single (84.4%), non-black (58.2%), resident of 1st year (52.2%) and linked to the Adult Intensive Care program (38.8%). The average age was 25.1 years, and 85% reported fair, good, or excellent satisfaction with the residency program.

Table 1. Distribution of multidisciplinary residents according to sociodemographic characteristics and variables related to the residency program and statistical significance of differences between residents who suffered and those who did not suffer verbal or physical violence during the COVID-19 pandemic. Rio Grande do Norte, 2020

	Suffered verbal/physical violence		Did not suffer violence			Total	
Variable	**n**	**%**	**n**	**%**	***p-value***	**n**	**%**
Gender							
Feminine	12	80.0	39	75.0	0.950 (1)	51	76.1
Masculine	3	20.0	13	25.0		16	23.9
Race/skin color							
Black	5	33.3	23	44.2	0.415 (1)	28	41.8
Non-black	10	66.7	29	55.8		39	58.2
Mean age (standard deviation)		26.3 (2.4)		24.8 (2.3)	0.156 (2)		25.1 (2.3)
Marital status							
Single	13	86.7	43	82.7	0.970 (1)	56	84.8
Married/living with partner	2	13,3	9	17.3		11	16.7
Family income							
R$ 3,997.43*	7	46.7	26	50.0	0.742 (3)	33	49.3
R$ 4,180.00 – R$ 10,450.00	8	53.3	25	48.1		33	49.3
>R$ 10,450.00	0	0.0	1	1.9		1	1.5

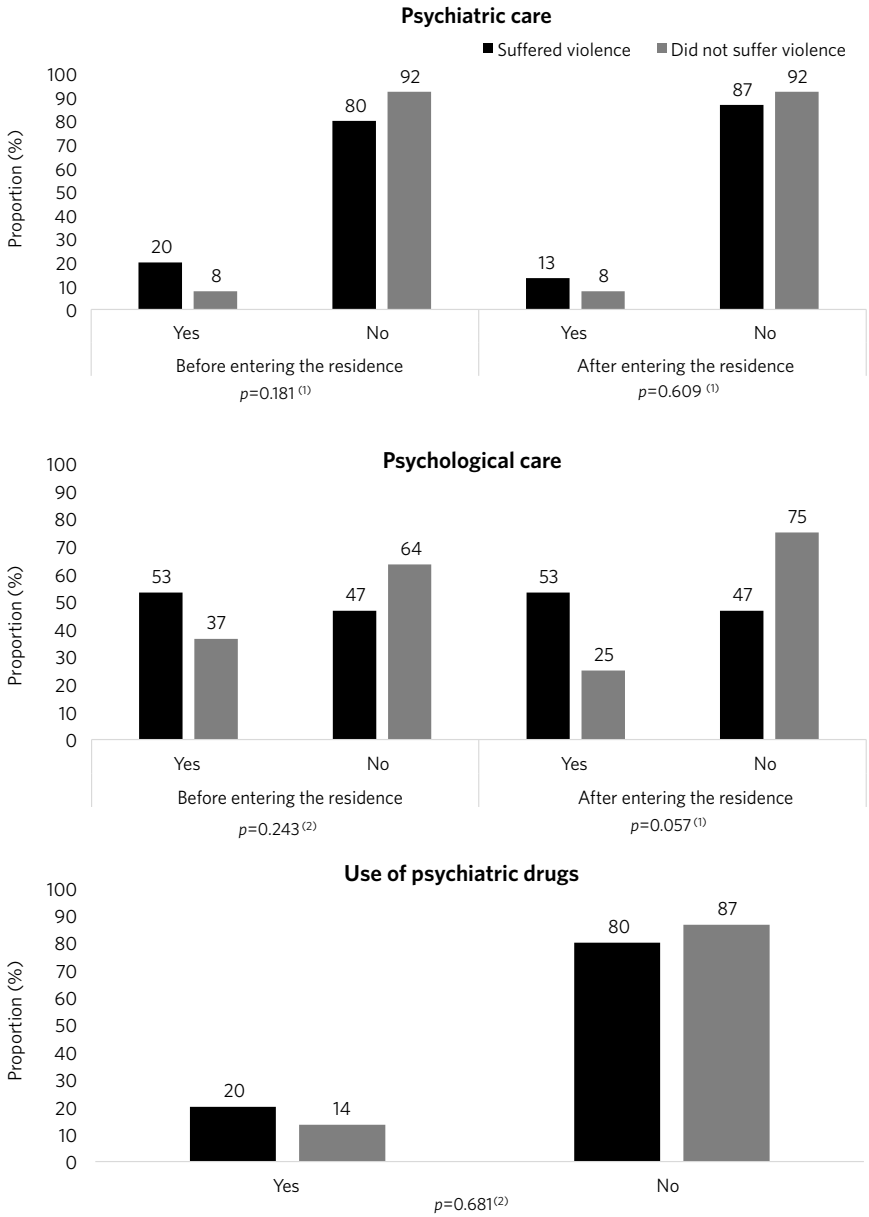
	Suffered verbal/physical violence		Did not suffer violence			Total	
Variable	**n**	**%**	**n**	**%**	***p-value***	**n**	**%**
Occupation							
Nurse	0	0.0	15	28.8	0.014 (3)	15	22.7
Psychologist	2	13,3	10	19,2		12	17.9
Pharmacist	2	13,3	9	17.3		11	16.4
Physiotherapist	4	26.7	6	11.5		10	14.9
Nutritionist	2	13,3	8	15.4		10	14.9
Social worker	5	33.3	3	5.8		8	11.9
Dental surgeon	0	0.0	1	1.9		1	1.5
Residency program							
Adult Intensive Care	7	46.7	19	36.5	0.551 (3)	26	38.8
Child Health	3	20.0	20	38.5		23	34.3
Cardiology	4	26.7	9	17.3		13	19.4
Psychosocial Care	1	6,7	4	7.7		5	7.5
Residency year							
First	5	33.3	30	57.7	0.096 (4)	35	52,2
Second	10	66.7	22	42.3		32	47.8
Satisfaction with residency							
reasonable/good/excellent	10	66.7	47	90.4	0.038 (1)	57	85.1
Bad/terrible	5	33.3	5	9,6		10	14.9
Established flow of psychological/psychiatric support for residents by the program							
No	14	93.3	51	98.1	0.400 (2)	65	97.0
Yes	1	6,7	1	1.9		2	3.0

Source: Self elaborated.

(1) Fisher's exact test; (2) Mann-Whitney U test; (3) Likelihood ratio; (4) Pearson's chi-square. *Restricted to residency grant (R$3,330.43) plus bonus (R$667.00) for supporting the fight against the pandemic.

A higher proportion of residents reported not receiving psychological or psychiatric care before or after starting the residency and not using psychotropic medication (*graph 1*).

Graph 1. Distribution of multidisciplinary residents according to variables related to health history and statistical significance of differences between those who suffered and those who did not suffer verbal or physical violence during the COVID-19 pandemic. Rio Grande do Norte, 2020

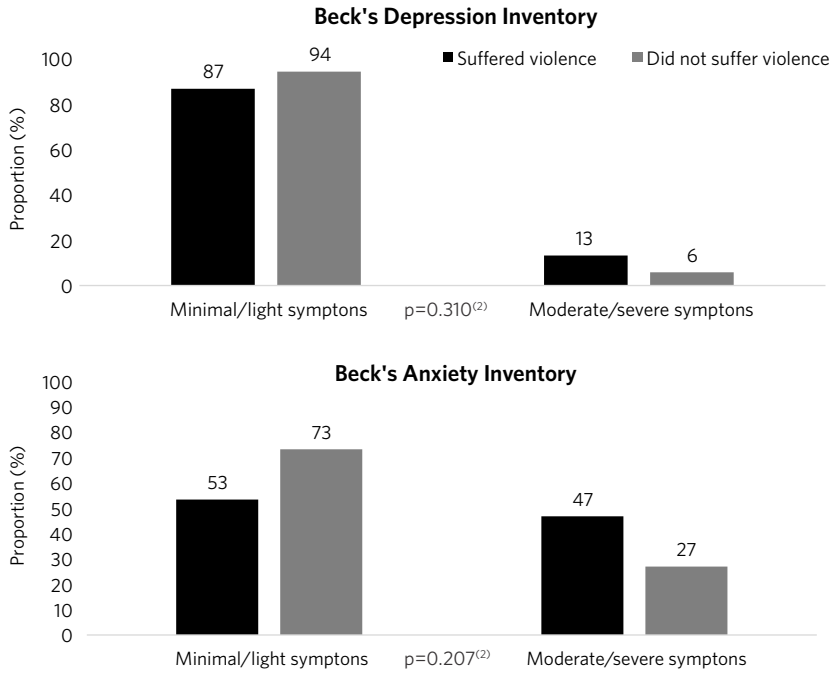


Source: Self elaborated.

(1)Fisher's exact test; (2)Pearson's chi-square.

Moderate/severe symptoms of depression and anxiety were identified in 7.5% and 31.3% of residents, respectively, based on the application of the BAI and BDI, which reliability tested by Cronbach's alpha resulted in 0.93 and 0.91 (*graph 2*).

Graph 2. Distribution of multidisciplinary health residents according to the classification of the Beck Inventories and statistical significance of the differences between those who suffered and those who did not suffer verbal or physical violence during the COVID-19 pandemic. Rio Grande do Norte, 2020



Source: Self elaborated.

(1)Likelihood ratio; (2)Fisher's exact test; (3)Pearson's Chi-Square.

During data collection, 59.7% of residents were on unscheduled rotation in hospital sectors caring for suspected or confirmed COVID-19 patients, but 67.2% had already seen this type of patient at some point during their residency. More than a third reported inadequate access to PPE provided by the work sector. In addition, 40.3% reported not feeling technically and scientifically confidence to care for patients affected by COVID-19 and their families (*table 2*).

Table 2. Distribution of multidisciplinary health residents according to work variables and statistical significance of differences between those who suffered and those who did not suffer verbal or physical violence during the COVID-19 pandemic. Rio Grande do Norte, 2020

	Suffered verbal/ physical violence		Did not suffer violence		
Hospital work during the pandemic	**n**	**%**	**n**	**%**	***p-value***
Work rotation					
Unscheduled rotation in other sectors, including those that care for suspected or confirmed COVID-19 patients	14	93.3	26	50.0	0.002 (1)
Scheduled rotation, but does not care for suspected or confirmed patients for COVID-19	0	0.0	19	36.5	

	Suffered verbal/ physical violence		Did not suffer violence		
Hospital work during the pandemic	**n**	**%**	**n**	**%**	***p-value***
Unscheduled rotation, but does not care for suspected or confirmed patients for COVID-19	0	0.0	4	7.7	
Other types of unscheduled rotation	1	6,7	3	5.8	
Have you ever worked directly with suspected or confirmed cases of COVID-19?					
Yes	13	86.7	32	61.5	0.117 (2)
No	2	13,3	20	38.5	
Have you received training in your area to care for people with COVID-19?					
Yes	9	60.0	43	82.7	0.083 (2)
No	6	40.0	9	17.3	
Do you feel technical and scientific confidence to work with people and family members affected by COVID-19?					
Yes	11	73.3	29	55.8	0.222 (3)
No	4	26.7	23	44,2	
Are you receiving financial incentives in addition to the residency grant to work in the pandemic?					
Yes	15	100.0	50	96.2	1,000 (2)
No	0	0.0	2	3,8	
Is personal protective equipment accessible in your work sector?					
Always	7	46.7	33	63.5	0.085 (1)
Sometimes	5	33.3	16	30.8	
Never	3	20.0	1	1.9	
Not applicable	0	0.0	2	3,8	
Do you know of a flowchart for triage and care for multiprofessional residents with suspected COVID-19?					
Sim	12	80.0	38	73.1	0.743 (2)
Não	3	20.0	14	26.9	
Do you know any psychosocial coping strategies for the context of COVID-19 available in the hospital or sector where you work?					
Sim	13	86.7	36	69.2	0.321 (2)
Não	2	13,3	16	30.8	

Source: Self elaborated.

(1) Likelihood ratio; (2) Fisher's exact test; (3) Pearson's chi-square.

In the first wave of the COVID-19 pandemic, 22.4% of residents reported exposure to verbal or physical violence. Although without statistical significance, violence was more reported by women, singles, 1st year residents and residents linked to the Adult Intensive Care program. In addition, they had a higher mean age when compared to those who did not suffer violence. Differences between groups were observed when comparing occupations and the degree of satisfaction with the residency program, with a higher proportion of physiotherapists and social workers (p=0.014), as well as dissatisfied residents among those who reported violence (p=0.038) (*table 1*).

History of psychological/psychiatric care, use of psychotropic drugs and levels of depression and anxiety did not produce significant differences between groups of individuals. However, a higher proportion of residents undergoing psychotherapeutic and psychotropic treatment and who had moderate/severe symptoms of depression and anxiety was observed in the group of individuals that reported violence (*graphs 1 and 2*).

The proportion of residents who worked in unscheduled rotation in hospital sectors that treated suspected and confirmed cases of COVID-19 was higher in the group of individuals who reported verbal/physical violence (93.3% versus 50%, p=0.002). In this group, the proportion of residents who did not receive training to deal with COVID-19 cases was also higher (40% versus 17.3%), although no statistical difference was observed between groups (*table 2*).

After adjusting the multiple model, the variables 'age' (PR=1.25, p<0.001) and 'moderate/severe anxiety' (PR=2.87, p=0.002) were associated with an increase in the prevalence of violence (verbal /physical) during the COVID-19 pandemic (*table 3*).

Table 3. Factors associated with verbal/physical violence during the COVID-19 pandemic in multidisciplinary residents working in a Brazilian hospital (n=67). Rio Grande do Norte, 2020

Variable	PR not adjusted (CI95%)	*p-value*	PR adjusted (IC95%)	*p-value*
Beck Anxiety Inventory				
Minimal/mild symptoms			1	
moderate/severe symptoms	1.92 (0.80-4.59)	0.140	2.87 (1.16-3.40)	0.022
Age	**1.18 (1.05-1.33)**	**0.003**	**1.25 (1.12-1.40)**	**0.000**

Source: Self elaborated.

PR=Prevalence Ratio; CI= Confidence Interval.

Discussion

People who work in the health field are at high risk of suffering aggression in the workplace and may be exposed to other occupational conditions that increase this risk. The social relevance of violence at work in the health sector lies in its upward trajectory and in the serious repercussions for workers, students, patients, organizations and health systems. Although it has become the subject of studies and political interventions in recent years, it is an underreported, widespread, persistent, tolerated and largely ignored problem by many countries[18,19].

Most studies on the subject have focused on doctors and nurses, with a smaller body of evidence on mixed populations of health workers and residents[18,19]. Therefore, with this study, we sought to give visibility to this phenomenon in the population of multidisciplinary residents who, in Brazil, are often incorporated by health services to act as 'cheap labor', especially in the pandemic context. The resident's performance has particularities due to the fact that they are students. However, these do not change their status as workers.

In the population of residents in this study, the prevalence of physical and/or verbal violence during the first wave of the COVID-19 pandemic was 22.4%. Similar values were found among English health professionals who reported bullying or harassment by other professionals[20] and among hospital nurses who suffered physical violence[21]. A comparable rate was also identified by Brazilian authors who conducted a study with health professionals to investigate the prevalence of five types of violence (physical, verbal, sexual harassment, discrimination and property damage)[22].

Review studies indicate prevalences ranging from 7% to 85%, depending on the country, professional category, work sector, type of violence, among other factors[19,23]. In a national study, for example, a prevalence of 62% was found among nursing professionals working in

oncology[14]. In China[24] and Nigeria[25], rates in multiprofessional samples were 77% and 88% respectively; and in Bosnia-Herzegovina[26], it was 90% among primary care physicians and nurses.

Studies carried out during the pandemic also identified different prevalence rates. In the first half of 2020, rates of 20.4% were recorded in China and 11.4% in a global sample[27,28]. In 2021, rates ranged from 42.6% (Egypt) to 65.5% (Jordan)[29,30]. In Brazil, a pioneering nationwide study also found a high prevalence (47.6%), whose associated risk factors were: being a nursing professional, having less than 20 years in the job, working more than 36 hours a week, having been infected by the virus and act directly in the care of patients infected by COVID-19[10].

Unlike other studies that point to nursing as the category most affected by violence in the health sector[8,10,11,22,31], in this investigation, none of the resident nurses reported having been victims. This finding should be analyzed with caution, as it may be related to the naturalization of violence in academic and professional nursing experiences, that is, when it is already seen as part of the work process[14,32]. Other factors that may be related to this result and the prevalence found are professional inexperience, which may have made it difficult to identify violence during professional practice, especially psychological violence; and the fact that this study did not use an assessment instrument that would allow residents to identify the type of violence suffered.

Nevertheless, in this study, the professional category produced differences between groups of individuals, with a higher proportion of social workers among those who reported violence. In this regard, it is conjectured that social workers more easily identify situations of violence because their professional work focuses on social and economic inequalities and, therefore, on facing and preventing situations of violence, abandonment, neglect and other material and existential needs[33].

In the present study, the variables sex and race/skin color were not statistically associated with a higher prevalence of violence. However, it is important to highlight that studies have shown a higher prevalence of work-related violence in women and black workers, a reality related to sexism and structural racism[2-4].

The degree of satisfaction with the residency program also produced differences between the groups, with a higher proportion of dissatisfied among those who reported violence, highlighting another important element, dissatisfaction with work. Although it is not intended to infer a cause and effect relationship, it is known that the fact that the worker suffers violence, especially if it is a frequent act, causes dissatisfaction at work, which is almost inevitable and paves the way for various physical and mental problems, such as body aches, anxiety, insomnia and fear. There seems to be agreement on the fact that victims of violence at work have lower levels of job satisfaction compared to non-victims[34,35].

In addition to dissatisfaction with the workplace and/or with the residency program, violence at work generates a feeling of professional devaluation that can increase workers' irritability. Thus, the quality of learning and provision of health care to patients and their families may be compromised, further increasing the risk of residents suffering aggression, feeding back the cycle of violence at work[34].

A higher prevalence of self-reported violence was also observed among workers who performed unscheduled rotation in hospital sectors where suspected and confirmed cases of COVID-19 are treated, as reported by other authors[10,27,29]. The overwhelming spread of COVID-19 cases has unleashed a wave of violence against healthcare workers, adding an additional burden to the already stressful healthcare work environment. Thus, the high prevalence among multidisciplinary frontline residents reveals greater environmental stress in hospital sectors that struggled to keep up with the intensification of care needs[36].

After adjusting the multiple model, which allowed to control the effect of possible confounding variables, the occurrence of physical and/or verbal violence was associated with increasing age and symptoms of anxiety (moderate/severe), the latter identified through the application of inventories which, in this and other studies[11,15,16], showed high internal consistency. The association with age had already been reported in previous studies[10,14]. It is possible that older individuals, because they have more professional experience, are better able to identify situations of violence, especially less noticeable types, such as verbal violence and bullying. On the other hand, there is evidence indicating that younger health workers are more frequently victims of violent events[37].

Regarding the association between violence and anxiety symptoms, the methodological design of this study (cross-sectional) did not allow identifying whether these symptoms resulted from episodes of violence or whether the risk of suffering violence was increased by the previous existence of these symptoms. Previous evidence has already determined that these risk factors feed each other[29,38]. The fact is, those who experience violence at work can experience such severe trauma to their mental health, well-being and self-esteem that they may never recover. Victims may feel sadness, shame, guilt, anxiety and depression, and may also suffer from Post-Traumatic Stress Disorder (PTSD)[2,18,39].

Other responses to violence include reactions such as anger, helplessness, sleep problems, chronic fatigue and increased risk of suicide[40-42]. At the same time, in the case of students, it affects learning and future career planning, negating the purpose of residency programs, as pointed out by a cross-sectional study[43] carried out in northern China with medical residents, which identified a prevalence rate of psychological violence of 24 .8%. Of the total number of victims, 51.9% had greater symptoms of anxiety and 22% considered changing their place of study. In another study, nursing students who were victims of violence at work reported relevant consequences, including fear, anxiety, disappointment and helplessness. In this sample, the experience of verbal abuse was associated with a higher score of psychological problems, higher levels of stress and lower levels of support[44].

Brazilian residents are not exactly the same as residents of other countries, not least because the multiprofessional residency model and the national health system have their particularities. Therefore, the similarities and discrepancies between the results of this and other international studies, such as those cited here, must be viewed with caution. From another point of view, the scarcity of national studies on the subject limited the discussion of the data found. The fact is that violence at work cannot be considered an isolated event or misfortune, but a phenomenon structurally linked to socioeconomic, cultural and environmental issues associated with institutional factors.

In the case of Brazil, the notorious increase in the number of events of violence against health professionals during the pandemic may be related to the resistance to the protective measures of COVID-19 and the distrust of health services due to generalized conspiracy theories, instigated by the President of the Republic himself, who even called on the population to invade hospitals to find out whether the hospitalization rates released by local health authorities reflected reality[45].

The present study is situational in nature and has limitations, such as the lack of use of a standardized scale to assess violence and the fact that it does not distinguish against aggressors and the types of violence suffered, whose classifications and concepts may differ between different authors, contexts and countries[4,46]. Considering this, the authors of this manuscript are developing a study with the purpose of mapping different instruments and concepts related to the phenomenon in order to later propose a central concept and a robust instrument for its evaluation.

The importance of this work is focused on giving visibility to the violence experienced by multidisciplinary residents, highlighting the high prevalence of this complex phenomenon. In this area, it is important to emphasize that Brazilian residents do not have a well-defined and approved social role, decent remuneration and a stable bond. For this reason, violence at work can easily undermine their self-esteem and morale and affect how they will approach their work in the future. In addition, violence has repercussions on professional conduct and interpersonal relationships, making workers more likely to provide unsafe health care and to make mistakes[34,47], which can lead to potentially catastrophic consequences for students, workers, patients and their families.

Research reports point to an association between violence in the health workplace and the increase in adverse events, such as medication errors and falls[48]; reduction in the amount of time with patients and in the performance of tasks, as well as a decrease in the quality of care provided[34]. Violence also changes individual behavior in situations of errors and incidents: victims consider that their failures during care can be used against them and, therefore, tend not to notify them[47].

Conclusions

This study identified a high prevalence of self-reported work-related violence in multidisciplinary residents who worked during the first wave of the COVID-19 pandemic. Analyzes revealed an association between increasing age and symptoms of anxiety (moderate/severe) with the occurrence of violence in this population.

The findings of this study point to the urgency of institutional strategies aimed at protecting residents, and more extensively health professionals, in work environments. For this, violence in health environments must be proactively addressed and must be highly valued by relevant managers, especially in the current pandemic context, even if this task is thorny and critical.

Collaborators

Dantas ESO (0000-0002-6595-6105)* participated in the design and planning, analysis and interpretation of data, article writing, critical review and final approval of the version to be submitted for publication. Magnago C (0000-0001-8799-3225)* participated in data analysis and interpretation, article writing, critical review and final approval of the version to be submitted for publication. Santos J (0000-0001-9961-3576)* participated in data analysis and interpretation, and final approval of the version to be submitted for publication. Araújo Filho JD (0000-0002-3873-4048)* participated in the conception and planning, writing of the article and final approval of the version to be submitted for publication. Meira KC (0000-0002-1722-5703)* participated in data analysis and interpretation, article writing, critical review and final approval of the version to be submitted for publication. ■

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