

## Occupational violence in the nursing team: prevalence and associated factors

Violência ocupacional na equipe de enfermagem: prevalência e fatores associados

Violencia laboral en el equipo de enfermería: prevalencia y factores asociados

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## Keywords

Workplace violence; Occupational health; Working Conditions; Hospitals, university

## Descritores

Violência no trabalho; Saúde do trabalhador; Condições de trabalho; Hospitais universitários

## Descriptorios

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## Abstract

**Objective:** To identify the prevalence of and factors associated with occupational violence among members of the nursing team.**Methods:** This was a cross-sectional study, conducted with a sample of 242 nursing professionals from a university hospital in the southern region of Brazil. The data were collected from January to June of 2018, using a sociodemographic and occupational characterization questionnaire, and the Questionnaire for assessing violence in work suffered or witnessed by nursing staff. Data were analyzed using descriptive statistics and multiple logistic regressions.**Results:** The prevalence of physical violence was 20.2%; verbal abuse 59.1%; and sexual harassment, 12.8%. The factors associated with physical violence were: being a witness to physical occupational aggression ( $p < 0.001$ ;  $OR_{adjusted} = 5.757$ ), and, poor interpersonal relationships ( $p = 0.043$ ;  $OR_{adjusted} = 2.172$ ). Factors related to verbal abuse were: being a witness to verbal violence in the work environment ( $p < 0.001$ ;  $OR_{adjusted} = 11.699$ ), being a victim of physical violence ( $p = 0.043$ ;  $OR_{adjusted} = 2.336$ ); and, lack of professional recognition ( $p = 0.004$ ;  $OR_{adjusted} = 0.361$ ). Factors related to sexual harassment were: being a witness to this type of harassment ( $p = 0.030$ ;  $OR_{adjusted} = 3.422$ ), being a victim of verbal abuse ( $p = 0.031$ ;  $OR_{adjusted} = 3.116$ ); working during the night shift ( $p = 0.036$ ;  $OR_{adjusted} = 0.396$ ); and, being of a younger age ( $p = 0.001$ ;  $OR_{adjusted} = 0.924$ ).**Conclusion:** Members of the nursing team were victims of different modes of workplace violence, associated mainly with occupational factors, such as witnessing occupational violence.

## Resumo

**Objetivo:** Identificar a prevalência e os fatores associados à violência ocupacional na equipe de enfermagem.**Métodos:** Trata-se de um estudo transversal realizado com uma amostra de 242 trabalhadores de enfermagem de um hospital universitário da Região Sul do Brasil. A coleta de dados ocorreu de janeiro a junho de 2018, por meio de um questionário de caracterização sociodemográfica e ocupacional e o Questionário para Avaliação da Violência no Trabalho Sofrida ou Testemunhada por Trabalhadores de Enfermagem. Os dados foram analisados por estatística descritiva e regressão logística múltipla.**Resultados:** A prevalência de violência física foi de 20,2%; de abuso verbal, 59,1%; e a de assédio sexual foi de 12,8%. Os fatores associados à violência física foram ser testemunha de agressão física ocupacional ( $p < 0,001$ ;  $OR_{ajustado} = 5,757$ ) e relacionamento interpessoal ruim ( $p = 0,043$ ;  $OR_{ajustado} = 2,172$ ); ao abuso verbal, ser testemunha de violência verbal no ambiente de trabalho ( $p < 0,001$ ;  $OR_{ajustado} = 11,699$ ), ser vítima de violência física ( $p = 0,043$ ;  $OR_{ajustado} = 2,336$ ) e falta de reconhecimento profissional ( $p = 0,004$ ;  $OR_{ajustado} = 0,361$ ); e ao assédio sexual, ser testemunha desse tipo de assédio ( $p = 0,030$ ;  $OR_{ajustado} = 3,422$ ), ser vítima de abuso verbal ( $p = 0,031$ ;  $OR_{ajustado} = 3,116$ ), trabalhar no turno noturno ( $p = 0,036$ ;  $OR_{ajustado} = 0,396$ ) e idade mais jovem ( $p = 0,001$ ;  $OR_{ajustado} = 0,924$ ).**Conclusão:** A equipe de enfermagem foi vítima de diferentes tipos de violência no trabalho e associaram-se a ela, principalmente, os fatores ocupacionais, como testemunhar a violência ocupacional.

## Resumen

**Objetivo:** identificar la prevalencia y los factores asociados a la violencia laboral en el equipo de enfermería.**Métodos:** se trata de un estudio transversal realizado con una muestra de 242 trabajadores de enfermería de un hospital universitario de la región sur de Brasil. La recolección de datos se realizó de enero a junio de 2018, por medio de un cuestionario de caracterización sociodemográfica y laboral y el Cuestionario para Evaluación de la Violencia Laboral Sofrida o Presenciada por Trabajadores de Enfermería. Los datos fueron analizados por estadística descriptiva y regresión logística múltiple.**Resultados:** la prevalencia de violencia física fue de 20,2%; de acoso verbal, 59,1%; y de acoso sexual, 12,8%. Los factores asociados a la violencia física fueron: presenciar agresión física laboral ( $p < 0,001$ ;  $OR_{ajustado} = 5,757$ ) y mala relación interpersonal ( $p = 0,043$ ;  $OR_{ajustado} = 2,172$ ); al acoso verbal: presenciar violencia verbal en el ambiente de trabajo ( $p < 0,001$ ;  $OR_{ajustado} = 11,699$ ), ser víctima de violencia física ( $p = 0,043$ ;  $OR_{ajustado} = 2,336$ ) y falta de reconocimiento personal ( $p = 0,004$ ;  $OR_{ajustado} = 0,361$ ); y al acoso sexual: presenciar este tipo de acoso ( $p = 0,030$ ;  $OR_{ajustado} = 3,422$ ), ser víctima de acoso verbal ( $p = 0,031$ ;  $OR_{ajustado} = 3,116$ ), trabajar en el turno nocturno ( $p = 0,036$ ;  $OR_{ajustado} = 0,396$ ) y edad más joven ( $p = 0,001$ ;  $OR_{ajustado} = 0,924$ ).**Conclusión:** el equipo de enfermería fue víctima de diferentes tipos de violencia laboral, a la que se asocia, principalmente, los factores laborales, como presenciar violencia laboral.

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## Introduction

Occupational violence represents a public health problem, and has been the focus of studies in the scientific community around the world,<sup>(1,2)</sup> as it is associated with several negative impacts on professionals' biopsychosocial health.<sup>(2)</sup>

Occupational violence is understood to be any action, incident, or behavior based on an instinctive attitude of the aggressor, as a result of which a professional is assaulted, threatened, harmed, or injured while performing his or her work.<sup>(3)</sup> It is also a result of the complex relationship between several factors, with an emphasis on the working conditions and the relationship between the professional and the aggressor.<sup>(3)</sup>

While at work, health professionals are in daily contact with people experiencing different health conditions, and with family members who are often stressed by the process of illness or the precariousness of the health services, which can lead to a violent response to these professionals.<sup>(4,5)</sup>

Although these professionals experience different forms of violence in their work environment, the most common are: physical, which consists of attacks on their bodies, such as kicking, beating, biting, or throwing something; verbal, in which the aggressor uses words that humiliate, disrespect, and affect the dignity of the victim; and, sexual harassment, comprised of any unwanted, unilateral, and unexpected sexual conduct.<sup>(3)</sup>

Episodes of violence are experienced by 70 to 80% of the nursing teams around the world. About one-third of the world's population of nurses are physically assaulted or injured, one-quarter are sexually harassed, and two-thirds are verbally abused.<sup>(6)</sup> As a consequence, a decrease in organizational commitment to correcting this issue, and a reduction in quality are present at an institutional level.<sup>(7,8)</sup> Professionals experience physical, psychological, and/or social repercussions, such as burnout and minor psychiatric disorders,<sup>(9)</sup> violation of their rights, dignity, and personal integrity.<sup>(10)</sup>

Thus, it becomes relevant to investigate the occupational violence suffered by nursing professionals, as this has only been explored a little in Brazilian

studies. In addition, important gaps are identified in knowledge, such as understanding of the factors associated with workplace violence; these are necessary to raise awareness of the need to offer a safe working environment, with minimum risks and exposures.<sup>(5,11)</sup>

This study aimed to identify the prevalence of and factors associated with occupational violence in members of the nursing team.

## Methods

This was a cross-sectional study, conducted in a university hospital in the southern region of Brazil, where teaching, research, and caregiving activities are performed. This institution is a public hospital with 313 beds, all-available to the Unified Health System for medium and high complexity health care.

The study population consisted of 680 nursing professionals. For representativeness, we calculated the number of participants required for prevalence at the 50% and 95% confidence intervals, in which a sample of 242 individuals was obtained.

A questionnaire was used for data collection, with the following sociodemographic and occupational information: age (in years), sex (male/female), skin color (white/brown/black/other), marital status (yes/no), professional category (nurse/technician/auxiliary), institutional working time (in years), weekly workload (in hours), work shift (day/night), age of patients (adults/children), recognition at work (yes/no), job satisfaction (yes/no), interpersonal relationships at work (poor/good), concerns about occupational violence (yes/no), existence of institutional protocols for reporting violence (yes/no), and encouragement to report violence (yes/no).

Next, the collection instrument contained the Questionnaire for assessing violence in work suffered or witnessed by nursing staff developed and validated by Bordignon and Monteiro,<sup>(5)</sup> based on the model of the World Health Organization, International Labor Organization and Public Services, and International Council of Nursing.

The instrument is structured into the following sections: physical violence, verbal abuse, sexual harassment, and other types of violence referenced by the professional.

All eligible participants were met by the first author, between January and June of 2018, at the place and time of work, and the research was clarified. Those who consented and signed the Terms of Free and Informed Consent forms received the questionnaires, which were returned after completion into sealed ballot boxes, available in the sectors where the data collection was performed.

The data were analyzed using SPSS software, version 20.0, by means of descriptive statistics, in which absolute frequencies, percentages, and central and variation measures were used.

The dependent variables were: physical violence in the last 12 months (yes/no), verbal abuse in the last 12 months (yes/no), and sexual harassment in the last 12 months (yes/no). The association between the outcomes and the independent variables (socio-demographic, occupational and violence characteristics) was analyzed using the Fisher's exact test, selecting for the next step those who presented an  $\alpha < 0.20$ , the recommended cut-off point for exploratory analyses of associated factors.

The multiple models were obtained using binary logistic regression by the stepwise forward method, that is, the order of entry of the independent variables in the models was determined by the value of greater significance. The variables with an  $\alpha < 0.05$ , and the adjustment variables based on the Wald chi-square test remained in the model. All analyses were adjusted by sex and age, using the statistical criterion of adjusting the values of  $\beta_1$ , in at least 10%. The odds ratio, with a 95% confidence interval, was selected as a measure of association. The Hosmer-Lemeshow test was used to verify goodness-of-fit, in which the higher the p-value, the better the adjustment. An  $\alpha < 0.05$  was considered statistically significant.

The research followed the current recommendations of ethics in research with human beings, including approval by Committee of Ethics in Research, under CAAE nº 78866017.1.0000.5231.

## Results

The mean age among the 242 nursing professionals participating in this study was 43 years, ranging from 20 to 68 years. The majority were female (74.4%,  $n=180$ ), identified as white (74.4%,  $n=180$ ), had a stable marital status (51.7%,  $n=125$ ), and had children (76.9%,  $n=186$ ). Regarding occupational role, nursing technicians and auxiliaries prevailed (71.9%,  $n=174$ ), as did those working on the day shift (60.7%;  $n=147$ ), mainly with adults (81%;  $n=196$ ). In terms of the sector, the majority worked in an adult inpatient unit (37.2%;  $n = 90$ ); others worked in adult intensive care unit (ICU) (18.6%;  $n=45$ ), emergency room (15.7%;  $n=38$ ), pediatric/neonatal ICU (12.0%,  $n=29$ ), pediatric clinic (6.6%,  $n=16$ ), maternity unit (5.4%,  $n=13$ ), and surgical room (4.5%,  $n=11$ ).

A large part of the sample was satisfied with their job (83.5%,  $n=202$ ), felt recognized at work (64%,  $n=155$ ), and had good workplace interpersonal relationships (78.5%,  $n = 190$ ).

Regarding occupational violence, 43% ( $n=104$ ) reported being concerned, and 36.8% ( $n=89$ ) indicated having institutional protocols for reporting; however, 76% ( $n= 84$ ) reported absence of incentive for documentation.

The prevalence of physical violence in the last 12 months was 20.2% ( $n=49$ ), of which 49% ( $n=24$ ) showed a frequency of twice or more in the period. In 6.2% ( $n=3$ ) of the cases, the violence involved cold weapons and guns and in the others it was body to body. Patients and their families (63.3%,  $n = 31$ ) prevailed as the initiators of violence, followed by work colleagues (24.5%,  $n=12$ ), and supervisors (12.2%,  $n=6$ ). The majority of aggressors were male (56.2%,  $n=27$ ), and in 50% of cases, victim and aggressor were of opposite sexes. In only 8.5% ( $n=4$ ) of the cases did participants report that physical violence was recorded within internal communications. In 4.3% ( $n=2$ ), a verbal warning was the consequence for the offender, which was known to the victim.

Witnessing physical violence and poor interpersonal relationships at work were significantly associated with physical violence (Table 1).

**Table 1.** Factors associated with physical violence in members of the nursing team

Multiple model <sup>a</sup>	Physical violence		p value	Odds ratio (95% Confidence interval)
	Yes	No		
Witness of physical violence				
Yes	25(48.1)**	27(51.9)**	<0.001	5.757(2.823-11.740)
No	24(12.6)**	166(87.4)**		
Interpersonal work relationships				
Poor	18(34.6)**	34(65.4)**	0.043	2.172(1.027-4.595)
Good	31(16.3)**	159(83.7)**		

<sup>a</sup>Hosmer-Lemeshow test of the model, adjusted by sex and age  $p=0.938$ ; \*\*n(%)

The prevalence of verbal abuse in the last 12 months was 59.1% (n=143), of which 77.5% (n=110) showed a frequency of twice or more in the period. In relation to the initiation of abuse, work colleagues prevailed (38.4%; n=55), followed by supervisors (35.7%; n=51), and patients and their families (26.9%; n=37). The majority of abusers were female (82.5%, n=118), and in 69.9% of the cases, the victim and the abuser were of the same sex. In 17.4% (n=24) of the cases, the verbal abuse was documented administratively (ombudsman, patient record, case book) or by the police. Consequences for the abuser were present in 3.6% (n = 5) of the instances, which were known to the victim to be: verbal warning (2.2%; n=3), writing warning (0.7%; n=1), or administrative meeting (0.7%, n=1).

The factors associated with verbal abuse were: witnessing this form of abuse, being a victim of physical violence, and lack of recognition in the workplace, as shown in table 2.

**Table 2.** Factors associated with verbal abuse in members of the nursing team

Multiple model <sup>a</sup>	Physical violence		p-value	Odds ratio (95% Confidence interval)
	Yes	No		
Witness of verbal abuse				
Yes	86(89.6)**	10(10.4)**	<0.001	11.699(5.474-25.006)
No	57(39.0)**	89(61.0)**		
Physical violence				
Yes	37(75.5)**	12(24.5)**	0.043	2.336(1.027-5.313)
No	106(54.9)**	87(45.1)**		
Recognition at work				
Yes	75(48.4)**	80(51.6)**	0.004	0.361(0.180-0.724)
No	68(78.2)**	19(21.8)**		

<sup>a</sup>Hosmer-Lemeshow test of the model, adjusted by sex and age  $p=0.112$ ; \*\*n(%)

The prevalence of sexual harassment in the last 12 months was 12.8% (n=31) and in 38.7%

(n=12), it occurred twice or more in the period. The harassers were co-workers (67.7%, n=21), followed by supervisors (22.6%, n=7), and patients and their relatives (9.7%, n=3). Most of the harassers were male (71%, n= 22), and in 71% of cases, the victim and aggressor were of opposite sexes. Among the participants, 13.3% (n= 4) stated that the sexual harassment was reported to the immediate chief or to the nursing director, and none of them knew if harasser faced any consequences.

Sexual harassment was associated with witnessing this type of harassment, and being a victim of verbal abuse. Still, it was higher among those who worked during the night shift when compared to the day shift. The adjustment variable, age, presented statistical significance, indicating that sexual harassment was higher among younger workers, in relation to the older workers (table 3).

**Table 3.** Factors associated with sexual harassment in members of the nursing team

Multiple model <sup>a</sup>	Assédio Sexual		p-value	Odds ratio (95% Confidence interval)
	Sim	Não		
Witnessed sexual harassment				
Yes	7(36.8)**	12(63.2)**	0.03	3.422(1.127-10.387)
No	24(10.8)**	199(89.2)**		
Verbal abuse				
Yes	26(18.2)**	117(81.8)**	0.031	3.116(1.108-8.767)
No	5(5.1)**	94(94.9)**		
Work shift				
Day	15(10.2)**	132(89.8)**	0.036	0.396(0.167-0.939)
Night	16(16.8)**	79(83.2)**		
Age (in years)	38(8.2)†	44.4(9.3)†	0.001	0.924(0.882-0.968)

<sup>a</sup>Hosmer-Lemeshow test of the model, adjusted by sex and age  $p=0.809$ ; \*\*n(%); †mean (standard deviation)

Other types of occupational violence were reported by 5.78% (n=14), such as, psychological violence and moral harassment. However, regression analysis was not used, because the absolute number of the outcome was small, which violates the prerequisite of this analysis.

## Discussion

In this study, the majority of nursing staff members were victims of some type of workplace violence, and were concerned about workplace violence; yet, only about one-third reported knowing about the



institutional forms for violence reporting. This may be related to the lack of incentive by managers to report, and to the lack of specific measures to deal with workplace violence, as indicated by other studies.<sup>(12,13)</sup> The lack of documentation of aggression suffered related to fear of losing one's job, persecution, shame, as well as the fear of unemployment.<sup>(14)</sup>

The feeling of impunity, represented by the few occurrences that resulted in consequences for the aggressor, should be considered and analyzed. In the face of violence, management must create actions to encourage notification, and provide feedback to the victims regarding the institutional measures taken in relation to the aggressor, and in the prevention of new episodes of violence.

When collective silence occurs in the face of violent acts, gradual disintegration and fragility of the victim can occur, leading to a loss of self-esteem, self-doubts, and feeling as if they are a liar when they are ridiculed and discredited by others, destroying their defenses and progressively affecting their self-confidence.<sup>(15)</sup> Thus, nursing professionals must be aware of the different forms of violence that occur in the workplace, which must be reported when they are victims of any situation, in view of the repercussions on the professional.<sup>(16)</sup>

The prevalence of physical violence found in this research was similar to that in other countries, where this type of violence is not the most frequent;<sup>(17-19)</sup> however, a hospital in The Gambia presented a periodicity of two or more times in the last 12 months, where individuals were physically assaulted two to four times in the past year.<sup>(12)</sup>

Although the use of firearms and weapons has been poorly reported, these objects are not exclusively used in underdeveloped countries with high rates of violence, because in European countries, such as Portugal, nursing professionals who were victims of physical violence were also threatened with weapons.<sup>(20)</sup>

In terms of the initiators of the physical aggressions, the majority were male, in contrast to the victims, demonstrating an approximation with other findings.<sup>(21)</sup> The literature demonstrates similarities to our results, in which the physical aggression mainly originates from patients and their compan-

ions, followed to a lesser extent by colleagues.<sup>(19)</sup> This is unlike the results of a study conducted in East Africa, which showed that teammates were the greatest perpetrators of occupational violence.<sup>(22)</sup>

In their work process, nursing professionals have a relationship with their patients, due to the care provided, and with their colleagues, due to the continuity of care. In this study, poor interpersonal work relationships were significantly associated with physical violence. Factors such as individualism, lack of respect and commitment, led to a hostile interpersonal relationship.<sup>(23)</sup> One study found that having a limited number of colleagues, and negative interpersonal relationships, were significant predictors of physical violence.<sup>(24)</sup> In addition, professionals who were physically assaulted by a user of the health services interpret and attribute meanings to the relationship established with the patient for whom they provided care, and, as a consequence, these professionals developed defense mechanisms, such as affective distancing from work.<sup>(25)</sup>

Verbal abuse, similar to the findings of other national and international studies, was the form of violence with the highest prevalence.<sup>(9,17,26,27)</sup> Different from physical violence, verbal abuse was primarily perpetrated by females, by peers and superiors. Studies conducted in Chile showed the same findings, and attributed the high occurrence of verbal abuse to the abuser's mild or absent punishment.<sup>(28)</sup>

Verbal abuse among colleagues may result from an employee's attempt to protect himself from uncivil relationships, responding (un)consciously to peers with hostility. Horizontal violence can still occur due to the employees' need to escape from the frustrations caused by some type of violence experienced by them.<sup>(9)</sup>

This predominance of verbal abuse influences the symbolic retribution of recognition of professional competence by coworkers, chiefs, and supervisors. Thus, verbal abuse was also associated with lack of professional recognition.

Employee recognition is fundamental for development and stability of one's identity and mental health, as well as for health and pleasure at work. The lack of recognition, manifested by a

lack of respect and verbal abuse, as well as suffering, triggers processes of depersonalization of and illness in professionals.<sup>(29)</sup>

Physical violence was associated with verbal abuse. The nursing professional who concomitantly suffers these two types of violence can exhibit physical and psychological manifestations, as the trauma caused by violence generates the intention to leave the profession.<sup>(7-9)</sup>

Less reported, but no less important, sexual harassment occurred among the participants in this research. This is a concerning phenomenon, as the nursing staff member suffers from the presence of a double threat: gender and professional role,<sup>(30)</sup> in addition to the difficulty in reporting such episodes due to cultural barriers.<sup>(31)</sup>

Analysis corroborates this assertion, in which harassment was associated with verbal abuse and with younger professionals, as compared to older workers, who consequently have fewer years of work in the institution. In the hospital setting, there is a traditional hierarchy in which there is an inherent assumption of domination or power over another person. When sexual harassment happens, it is often ignored because of shame, and the assumption that reporting will make no difference, especially if the offender is a physician or a chief.<sup>(32)</sup>

In addition, the media confers a negative stereotype to nurses, by exploring the nurse's body as a sex object, stigmatizing her image, or linking it to the history of the profession, when care was provided by prostitutes. Despite the advances obtained, it is still urgent that the associations and class organizations mobilize to link the image of nursing to excellence in the provision and management of human care.<sup>(33)</sup>

The night shift was associated with sexual harassment, which can be attributed to fewer managers available, and the reduction in number of personnel, making the professional more vulnerable.<sup>(4)</sup>

Violence affects not only victims, but also the witnesses to these violent acts.<sup>(34)</sup> The results of this study were significant in demonstrating that witnessing physical violence, verbal abuse, and sexual harassment was associated with the fact that the professional experiences this type of violence. These workers can be integrated into a place in which vi-

olence is commonplace and constant, so that more victims can exist.

This study cannot be generalized, because it was performed in a single teaching hospital. It is a self-referenced assessment, whose answers can be interpreted according to what is acceptable within society. Consideration should be given to the variation of the assessment used, which may have been influenced by the sample size, since the outcome prevalences were low.

This study provides important contributions to the analysis of occupational violence, showing that nursing professionals working in a university hospital are at high risk of exposure. The types of violence have prevalence, perpetrators, and associated factors, indicating that the planning of strategies to reduce these occurrences must be individualized with specific protocols. It is imperative to implement such actions, so that workplace violence is not seen as intrinsic to work or culturally accepted without solution, avoiding the crystallization in the daily work of the nursing team members.

## Conclusion

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The nursing team members suffered physical violence at work, mainly from patients and their relatives. They also suffered verbal abuse and sexual harassment, especially by co-workers, chiefs and supervisors, whose prevalence of violence was 20.2%, 59.1%, and 12.8%, respectively. The factors associated with physical violence were being a witness to this type of violence, and poor interpersonal relationships; to verbal abuse were being witness to this type of abuse, being victims of physical violence, and lacking recognition at work; and, sexual harassment was associated with younger professionals who witnessed sexual harassment, were victims of physical violence, and night shift employees.

## Collaborations

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Tsukamoto SAS, Martins JT and Galdino MJQ contributed with project design, data analysis and inter-

pretation, article writing, critical review of intellectual content and final approval of the version to be published. Robazzi MLCC, Ribeiro RP, Soares MH and Haddad MCFL contributed to data interpretation, relevant critical revision of the intellectual content, and final approval of the version to be published.

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