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NURSING STUDENT'S VIEWS ON THE DUTY OF CARE: A CROSS-SECTIONAL STUDY IN TWO COUNTRIES

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ABSTRACT

Background: The shortage of nurses during the COVID-19 pandemic made it necessary to recruit nursing students to provide care. Although research suggests that the care that students provided was invaluable, their views on ethical concerns and dilemmas related to the duty of care remain unexplored.
Objectives: Using predefined hypotheses, a cross-sectional study was conducted to explore students' well-being and views on the duty of care.
Method: Between May and June 2020, Chilean and Spanish nursing students participated in a web-based survey, including the 5-Item WHO Well-Being Index

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(WHO-5) and views on the duty of care reported through a scale related to beliefs about pandemics. Student's *t*-test, Mann–Whitney *U* test, χ^2 tests, and multivariable log-linear analysis were used to explore differences between nursing students in Spain and Chile and to examine the relationships between categorical variables.
Results: Students (N = 183) from both countries self-reported low levels of psychological well-being (WHO-5, M = 10.8, SD = 4.3). Concerning ethical statements, although most students from both countries (71%) agreed that nurses and doctors have a duty of care, significant differences were found concerning the statement that every healthcare worker has a duty to work during a health emergency (39% agreement in Chile and 74% in Spain; $p < 0.001$).
Conclusions: Students reported emotional and ethical challenges associated with the pandemic. Besides receiving help to deal with ethical challenges and given that a significant proportion of students from both countries reported low well-being, we recommend developing strategies to mitigate and enhance students' well-being.

Keywords: Duty of care; COVID-19; Nursing; Pandemic; Nursing students; Ethical dilemmas; Well-being; Moral distress; Ethics

INTRODUCTION

The COVID-19 pandemic impacted nursing students' lives [1, 2]. The preventive social distancing, lockdown, and isolation or quarantine measures decreased activities [3], introduced new learning forms [4, 5], and suspended clinical placements [2]. The pandemic created additional challenges, such as economic problems [6], stressful work-related events [7], and family issues [6], all of which may have negatively impacted students' well-being.

Among nursing students and healthcare workers, psychological well-being seems to be an essential factor for maintaining a stable workforce during emergency events, such as the COVID-19 pandemic, to ensure a stable quality of care [8–10]. According to previous studies [9, 11], nursing students reported low well-being and were at risk of mental health problems due to various stressors. The mandatory transition from traditional to online learning posed an additional challenge, and students reported increased perceived stress [2]. Nursing students also reported concerns about their well-being, were fearful of becoming infected with SARS-CoV-2 [5, 7], and experienced depression and anxiety [12].

The COVID-19 pandemic increased the need for healthcare personnel in several countries, which led to the recruitment of senior nursing students [2] to care for critically ill and contagious patients [13]. The experience of working during a pandemic might be challenging. Nursing students may face ethical dilemmas that could impact their sense of belonging to the profession [14–16]. While students are willing to provide care during a pandemic [17], some may experience social

pressure related to the moral obligation to work [18–20] and others, living with family in high-risk groups, may be reluctant to work due to fears of potentially infecting these family members. In these cases, one must balance one's duty to work with the duty of care for oneself and one's own family.

In the context of ethics, particularly professional ethics, the concept of "duty" is fundamental. According to Kant, we have the duty to act on the rule of "Act only according to that maxim whereby you can, at the same time, will that it should become a universal law" [21]. However, during a pandemic, moral rules are subverted, creating the ethical dilemma of balancing personal duties with the duty of care. Concerns about their ability to prevent their patients and families from becoming infected are important ethical dilemmas that nurses might face when working during a pandemic. Many have associated the Kantian approach to duty and ethics with Protestantism [22]. The Protestant work ethic, which is centered on duty and diligence, permeates modern health services in most high- and middle-income countries [21, 22]. Hannah Arendt famously criticized the historical conception of this understanding of duty [23]. Arendt succinctly pointed out that performing one's duty is not a moral virtue in itself. It is our acts as autonomous moral agents that carry moral value, and no one can evade moral responsibility by claiming that they were only doing their duty.

The history of nursing is, in many ways, the history of the development of a modern profession that, in parallel to similar professions, claimed integrity, a scientifically founded professional ethos and consistent professional standards and ethics. As such, the concept of duty, to both the patient and the hospital, has been a constitutive element of the professionalization of nursing [23]. For example, the four principles of biomedical ethics, famously laid down by Beauchamp and Childress [24], are formulated as duties with clear references to the Kantian concept of autonomy.

The duty of care in nursing received scarce attention during the COVID-19 pandemic [2, 25]. In our previous study [26], clinical nurses from Chile and Spain reported low well-being during the pandemic, even though two-thirds agreed that nurses have a duty of care, regardless of their well-being. However, studies on nursing students' views on their duty of care and its relationship with well-being during a pandemic are lacking. Furthermore, studies concerning the duty of care among nursing students during a pandemic have been conducted as qualitative studies, and comparative studies between different countries are needed.

OBJECTIVES

We aimed to explore nursing students' views on the duty of care during the COVID-19 pandemic, as no such studies have previously been conducted in a nursing student population. Based on the results of our previous study [26], we

expected that students would report poor well-being (Hypothesis 1) and that two-thirds of the respondents would agree with the statement "Doctors and nurses have a duty to care for the sick even when there are high risks for themselves or their families" (Hypothesis 2). We also aimed to identify the relationships between ethical statements, well-being, and country.

METHOD

Settings, Context, Participants, Procedures, and Data Collection

Using a cross-sectional design, students in Spain and Chile were invited to participate in an anonymous online survey. The university degree in nursing in Spain and Chile is a practical evidence-based profession. Students must be prepared to offer continuity of care, based on technical scientific knowledge, via theoretical and clinical instructions, given by teachers at the university. To enhance the clinical skills, knowledge, and preparedness of care, supervised practice normally transfers this practical knowledge, from nursing teachers to students in clinical and community settings. In Chile teachers tend to be based on the university campus, from where they visit hospitals for clinical practice. However, in Spain the teachers tend to be based at hospitals but visit the university campuses to give lectures. In both countries the COVID-19 pandemic impacted the student's preparation, suspending the supervised clinical practices and in-person lectures. In both countries there were nursing shortages, and COVID-19 increased the need for staffing. Both the Spanish and Chilean governments established initiatives which allowed students to join the workforce, as paid assistants or in voluntary positions in hospital facilities.

The researchers e-mailed invitations to participate in the study to the head of the department of nursing in two universities (Spain and Chile). The e-mail invitation contained a letter with information about the study, an informed consent request, a description of anonymity procedures and a link to the online questionnaire. The head of the department invited senior students to participate. The list with names was kept at the nursing faculty and the researchers had no access to this information. Data were collected between May 7 and June 28, 2020. To be included, the respondents had to be nursing students and declare their willingness to participate. There were no other exclusion criteria. A total of 364 students, listed as senior students, were invited to participate, 158 from Chile and 206 from Spain.

Measures

The 15-item scale "Beliefs and attitudes of health workers towards an influenza pandemic" was used to identify ethical challenges [27, 28]. Although the scale was initially validated to measure attitudes during a hypothetical influenza pandemic

[27] the scale provides adequate recognition of ethical beliefs concerning pandemics, and has been used in previous studies to explore healthcare workers' attitudes during pandemics [29]. The statements are dichotomous (i.e., agree/disagree).

The 5-Item World Health Organization Well-Being Index (WHO-5) is a tool for measuring well-being with good psychometric properties [30]. The items are rated on a six-point Likert scale (0 = "At no time"; 5 = "All of the time"). The total score ranges from 0 to 25. Scores of less than 13 points indicate poor well-being [31].

In addition, the survey collected data about sociodemographic characteristics (e.g., sex, age, and living status) and clinical practice experience (have you any clinical work experience, yes/no, where no was classified as lack of working experience).

Statistical Analyses

Categorical variables were expressed as numbers and percentages. The Mann–Whitney *U* test and Student's *t*-test were used to compare well-being between nursing students in Spain and Chile (Hypothesis 1). The reported agreement or disagreement with each statement was used to compare ethical statements, and differences between nursing students in both countries were assessed using χ^2 tests. To test Hypothesis 2, the association between WHO-5 scores (low or high) and the statement "Doctors and nurses have a duty to care for the sick even when there are high risks for themselves, or their families" was assessed using a χ^2 test. *p*-values of < 0.05 were considered statistically significant.

To evaluate the relationships between ethical statements and the country, χ^2 tests and Yates' correction were used. As the χ^2 test was used with only two related variables (country and duty of care), we aimed to explore a third variable, using log-linear analysis. As such, Log-linear analysis was used to examine whether the differences by country were affected by students' well-being, identifying a model accounting for the observed frequencies according to the country, duty of care (agreement vs disagreement) and well-being (low vs high). The saturated model, main effect, and interactions were first estimated, and the models were then evaluated using ANOVA. Interaction terms were not removed randomly but hierarchically from the highest to the lowest order.

The statistical analyses were performed using IBM SPSS Statistics, version 22.0 for Windows and R software with ULLRToolbox. Multivariate category analyses were performed using the R libraries vcdExtra, glma, and ca [32].

RESULTS

A total of 183 nursing students took part in the study (50% response rate). Table 1 provides a summary of the characteristics of the students.

Table 1. Characteristics of study participants (*N* = 183)

Characteristics	Global = 183 *N* (%)	Spain = 92 *n* (%)	Chile = 91 *n* (%)
Female, *n* (%)	151 (72)	67 (73)	84 (92)
Age (SD)	24 (4.7)	22 (6.0)	25 (2.5)
Cohabitation with children[a]	29 (13)	9 (7)	20 (22)
with elderly dependents	52 (24)	25 (21)	27 (29)
with chronic illnesses	73 (34)	21 (17)	52 (57)
with sick dependents	12 (6)	3 (2)	9 (10)
with adolescents	37 (17)	22 (18)	15 (16)
with others	146 (69)	67 (57)	79 (86)
Living alone	2 (1)	1 (1)	1 (1)
Lack of working experience, *n* (%)	160 (87)	70 (76)	90 (99)

[a] This adds up to more than 100 (due to multiple options and multiple selections).

Abbreviations: *N*, the total sample; *n*, sample by country; *SD*, standard deviation.

Well-being

Regarding the first hypothesis, we expected that the majority of the students would report poor well-being. A well-being index score under 13 indicates poor well-being and risk for depression. As shown in Table 2, most students (76%) were classified under this category [($\chi^2(1) = 47.26$, $p < 0.001$)] and students in both countries had similar mean scores ($p = 0.49$).

Table 2. Well-being (WHO-5) among nursing students (*N* = 183)

Characteristics	Global	Chile (*n* = 91)	Spain (*n* = 92)
WHO-5 Well-being Index, total mean scores (*SD*) [a]	10.8 (4.3)	10.4 (3.8)	11.1 (4.7)
WHO-5, range	2–24	3–20	2–24
WHO-5 Well-being Index < 13, *n* (%)	138 (76)	68 (75)	70 (76)
High well-being (over 13), *n* (%)	45 (24)	23 (25)	22 (24)

[a] Raw score varies from 0 to 25.

Abbreviations: *N*, the total number of participants in the sample; *n*, a total of participants that were included in the respective analysis; *SD*, standard deviation.

Table 3. Association between the WHO-5 Well-Being Index and the "duty to care for the sick" statement

Ethical statement		Disagreement/ Agreement (*n*, %)	Well-being		*P*-value
			Low (*n*)	High (*n*)	
Doctors and nurses have a duty to care for the sick even when there are high risks for themselves or their families.	Disagree	53 (29)	42	11	0.3219
	Agree	130 (71)	92	38	

Abbreviations: *n*, number of participants included in the respective analysis.

Duty of Care

Regarding the second hypothesis, we expected students to agree with the statement "Doctors and nurses have a duty to care for the sick even when there are high risks for themselves or their families." Most participants (71%) agreed that doctors and nurses have a duty of care independent of the risks during a pandemic (Table 3). No significant relationship between agreement and well-being was found (p = 0.32). Among the Spanish students, 75% agreed with the statement, while 67% of the Chilean students agreed with the statement.

Regarding the statement "Every healthcare worker, not just doctors and nurses, has a duty to work during a health emergency even if there are high risks" (statement 3), the odds ratio, as a measure of effect size, suggests that a Spanish nursing student is 4.37 times more likely to agree with this statement than a Chilean nursing student. The odds ratio of agreement with statement 7 ("People who refuse to work in a time of health crisis should be penalized in some way") was 7.14 times higher if the respondent was a student from Spain. A high percentage of students from Chile (74%, compared to 55% of the sample from Spain) agreed with the statement "Healthcare workers should be allowed to refuse to work with, or near, infected patients" (statement 5) is noteworthy. The probability of agreeing was 2.34 times higher among Chilean than among Spanish students.

As shown in Table 4, significant differences between the two countries were found regarding five ethical statements. To examine whether these differences were affected by the students' well-being or country, log-linear analyses were performed. The results showed that the triple interaction was dispensable. The saturated and unsaturated (without the triple interaction) models showed no significant differences in statements 3 ($\Delta(1) = 1.087$; $p > 0.05$), 5 ($\Delta(1) = 1.38$; $p > 0.05$), 6 ($\Delta(1) = 1.10$; $p > 0.05$), 7 ($\Delta(1) = 1.31$; $p > 0.05$) or 8 ($\Delta(1) = 0.44$; $p > 0.05$). As shown in Figure 1, a double interaction between country and agreement was

Table 4. Distributions of agreement and disagreement with ethical statements regarding the pandemic and corresponding χ^2 tests

Ethical statement	Spain (*n* = 92)		Chile (*n* = 91)		*P*-value
	Agree *n* (%)	Disagree *n* (%)	Agree *n* (%)	Disagree *n* (%)	
1. Doctors and nurses have a duty to care for the sick even when there are high risks for themselves or their families.	69 (75)	23 (25)	61 (67)	30 (33)	0.235
2. Health workers should not receive any special priority during a pandemic, and everyone should have equal access to treatment.	18 (19)	74 (81)	19 (20)	72 (80)	0.825
3. Every healthcare worker, not just doctors and nurses, has a duty to work during a health emergency even if there are high risks.	68 (74)	24 (26)	36 (39)	55 (61)	**0.000**
4. Everyone should cooperate during a pandemic.	87 (94)	5 (6)	88 (96)	3 (4)	0.479
5. Healthcare workers should be allowed to refuse to work with, or near, infected patients.	50 (55)	42 (45)	67 (74)	24 (26)	**0.007**
6. Healthcare workers must lose their wages if they are unwilling to work during a pandemic.	16 (17)	76 (83)	5 (6)	86 (94)	**0.012**
7. People who refuse to work in a time of health crisis should be penalized in some way.	27 (30)	65 (70)	5 (6)	86 (94)	**0.000**
8. Healthcare workers must face disciplinary action if they refuse to work during a pandemic.	30 (32)	62 (68)	11 (12)	80 (88)	**0.001**
9. Professional bodies and unions should offer explicit guidance on whether there is a duty to work during a pandemic.	88 (96)	4 (4)	88 (97)	3 (3)	0.711
10. People who work during a health crisis should be rewarded in some way.	79 (86)	13 (14)	83 (91)	8 (9)	0.257
11. My employer has the responsibility to offer me protective equipment if I have to work during a pandemic.	90 (98)	2 (2)	91 (100)	0	0.157
12. My employer has the responsibility to offer me vaccination (if available) if I am asked to work during a pandemic.	84 (91)	8 (9)	89 (98)	2 (2)	0.053
13. My employer has the responsibility to offer my family vaccination (if available) if I am asked to work during a pandemic.	62 (67)	30 (33)	69 (76)	22 (24)	0.206
14. My main responsibility is to myself and my family. My family has priority over my work.	80 (87)	12 (13)	82 (90)	9 (10)	0.644
15. I have to go to work because I could not support myself if I lost any of my wages.	67 (73)	25 (27)	70 (77)	21 (23)	0.523

Abbreviations: *n*, number of participants included in the respective analysis.

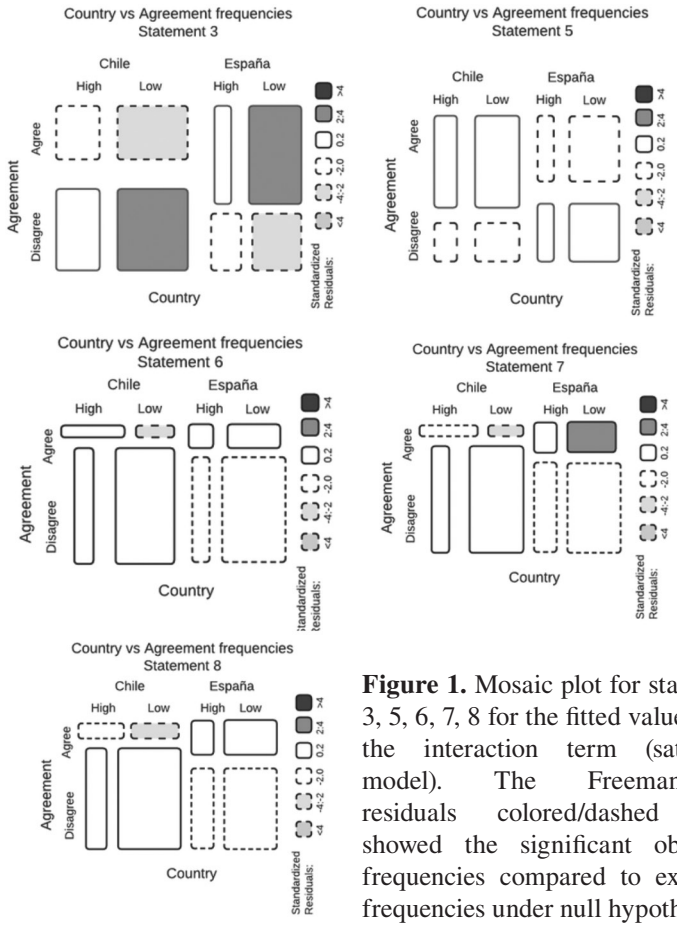

Figure 1. Mosaic plot for statement 3, 5, 6, 7, 8 for the fitted values with the interaction term (saturated model). The Freeman-Tuker residuals colored/dashed lines showed the significant observed frequencies compared to expected frequencies under null hypothesis.

found for statements 3 ($\Delta(1) = 22.46$; $p < 0.001$), 5 ($\Delta(1) = 7.42$; $p < 0.01$), 6 ($\Delta(1) = 6.83$; $p < 0.01$), 7 ($\Delta(1) = 19.84$; $p < 0.001$), and 8 ($\Delta(1) = 10.67$; $p < 0.01$).

DISCUSSION

The COVID-19 pandemic presented unfamiliar psychological and ethical challenges to nursing students worldwide. Although recent studies have documented these challenges [2, 33], there is a lack of studies comparing the challenges of nursing students in two different countries. Therefore, this study aimed to measure Chilean and Spanish nursing students' well-being and explore their views on the duty of care. This study also aimed to gain insights into nursing students' views on the duty of care in Chile and Spain, exploring the relationships between ethical statements, well-being, and country.

Based on the results of our previous study [26], we expected that students would report poor well-being (Hypothesis 1). We found that 76% of the respondents in both countries reported poor well-being, which was higher than in our previous study, where 59% of the clinical nurses in Spain and 50% of nurses in Chile reported poor well-being [26]. This may suggest that the pandemic had a more serious impact on nursing students' mental health, than on that of clinical nurses. The low level of well-being reported by the students can be explained as they experienced several challenges due to the pandemic-related restrictions, but it can also be explained by their age, since a previous study has suggested that the youngest can have difficulty coping with pandemic [34]. However, since the WHO-5 Well-Being Index is a tool for measuring well-being and not a diagnostic tool for depression [31], this finding needs to be interpreted with caution.

Regarding Hypothesis 2, and based on our previous study of nurses in Spain and Chile [26], we expected that students would agree with the statement "Doctors and nurses have a duty to care for the sick even when there are high risks for themselves or their families." Students generally agreed with this statement, supporting our hypothesis. Nevertheless, contrary to our previous study, we found no significant association between agreement with this statement and well-being. Interestingly, however, we identified significant differences between the two countries in five ethical statements. This led us to investigate the factors causing these differences. Log-linear regressions indicated that well-being had no effect on these results, perhaps because most students reported low levels of well-being. However, we found differences that could be explained by country. This is in line with our previous study [26]. For instance, we observed that a higher proportion of respondents from Chile disagreed and a higher proportion of participants from Spain agreed with the statement "Every healthcare worker, not just doctors and nurses, has a duty to work during a health emergency even if there are high risks" (statement 3).

Participants from Chile showed a greater tendency to reject sanctions against healthcare workers refusing to provide care than their Spanish counterparts. For instance, we found that a high percentage of students from Chile who disagreed with the statements about healthcare workers must lose their wages if they are unwilling to work during a pandemic (statement X) and they must face disciplinary action if they refuse to work during a pandemic (statement Y). This suggests that students do not approve sanctions for those who reject the duty of care. On the other hand, the high percentage of students from Chile (74%, compared to 55% of the sample from Spain) who agreed with the statement "Healthcare workers should be allowed to refuse to work with, or near, infected patients" (statement 5) is noteworthy. The probability of agreeing was 2.34 times higher among Chilean than among Spanish students. This suggests that Chilean students place somewhat less emphasis on the issue of one's duty than Spanish students. However, one

should not conclude that the latter have higher professional ethics standards. It might, for example, well be the case that Chilean students have more faith in their own capacity to make morally sound decisions while working and may thus feel less inclined to consider the concept of duty as morally significant in itself.

A high proportion of the students in our sample agreed with the right to refuse to provide care without being penalized. This suggests that nursing students faced challenging and stressful situations due to the pandemic. Student nurses in Chile have more dependents, either elderly and/or children and therefore the burden of care in their private life is increased compared to their Spanish counterparts, and this may explain some of the group differences we found. However, the fact that most students disagreed with the statement about sanctions, and these percentages were higher than that found in our previous study [26], suggests the need to further investigate whether the educational components of the ethical aspects of the duty of care should be reinforced due to the risk that it poses when coping with pandemic situations. It seems crucial to ensure that nursing students are adequately prepared to work in emergency situations, to be part of a professional group and to assume the responsibilities involved [35]. Besides being prepared to deal with ethical challenges, nursing students need support to learn to care for themselves and others. Considering that previous studies have reported that low well-being is associated with intellectual and emotional impairment [9, 11], and given that a significant proportion of our respondents could be considered at risk of mental health problems, we recommend developing strategies to enhance students' well-being.

The main strengths of this study are its design and the novelty of its objectives. Our findings add to the significance of our previous study, as we documented students' views on ethical concerns and dilemmas related to the duty of care. These findings have implications for developing educational strategies and teaching programs that support students' critical thinking and ethical competency. Given this study's novelty, the findings can contribute to the ongoing investigation of the ethical dilemmas arising during pandemics. Moreover, this study provides a better understanding of students' views, which can help support a mature ethical framework for managing nursing dilemmas. Such a framework is relevant to clinical practice and has implications for policymakers when considering how to use nursing students in future emergencies.

One of the limitations of this study is its small sample size. Moreover, the scales used were self-reported, which may entail response bias. Furthermore, the "duty-of-care" scale has not been validated for students in a real pandemic context, which may have influenced the results. Nevertheless, the scale has been used in similar studies, which allowed comparisons. As this study is one of the few addressing the duty of care, further investigation is required to corroborate our results.

CONCLUSIONS

In this study, nursing students reported experiencing emotional and ethical challenges due to the COVID-19 pandemic. Given that a significant proportion of students in both countries reported low well-being, we recommend developing strategies to mitigate and enhance students' well-being. Students agreed that nurses have a duty to care, nevertheless, we found no significant association between agreement with this statement and well-being. However, we found significant differences between the two countries in several ethical statements concerning that healthcare workers have a duty to work during a health emergency and concerning statements related to sanctions against healthcare workers who refuse to provide care during a pandemic. These findings highlight the need to support nursing students in developing a mature duty of care and the skills needed to handle the potential challenges posed by pandemics.

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Institutional Review Board Statement

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Research Ethics Committee of the Universidad Central de Chile (IDs CHUC_2020_33 and 27/2020_CEIC).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

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Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; the collection, analysis, and interpretation of data; the writing of the manuscript, or the decision to publish the results.

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