



Association of Job Satisfaction and Sleep Quality with Psychological Symptom Severity among Hospital Security Personnel: A Cross-Sectional Study

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Abstract

Aim: Hospital security staff encounter specific occupational stressors, such as irregular work hours, exposure to violence, and crises, but research on their mental health remains limited. This study aimed to examine the association between psychological symptom severity and sleep quality, job satisfaction, work schedule, and psychiatric history among hospital security personnel.

Methods: A cross-sectional study was performed with 115 hospital security personnel from May 1, 2025, to July 1, 2025. All security workers completed structured questionnaires. The assessment tools included the Minnesota Satisfaction Questionnaire, the Pittsburgh Sleep Quality Index, and the Symptom Checklist-90-Revised (SCL-90-R). Participants' sociodemographic data were recorded. Spearman correlation analysis was used to examine associations between continuous variables. Multiple linear regression analysis was performed to determine variables that were independently associated with SCL-90-R scores.

Results: Significant differences in psychological symptoms were not found across demographic groups, work schedules, or psychiatric history. Correlation analysis revealed a significant negative association between job satisfaction and psychological distress ($r=-0.253$, $p=0.006$). Multiple linear regression analysis demonstrated that job satisfaction was independently associated with SCL-90-R scores ($B=-0.004$, 95% confidence interval: -0.007 to -0.001 , $p=0.031$), whereas sleep quality ($p=0.310$), age ($p=0.299$), gender ($p=0.130$), and work schedule ($p=0.965$) showed no statistically significant association. Sleep quality, age, gender, work schedule, and other variables showed no significant predictive value.

Conclusion: Job satisfaction was the only variable independently associated with psychological well-being among hospital security personnel, independent of traditional occupational stressors such as shift work and sleep quality. These findings suggest that organizational interventions targeting job satisfaction may be associated with improved mental health outcomes in this population.

Keywords: Health personnel, job satisfaction, psychological distress, shift work, sleep quality

Introduction

Hospitals and other healthcare centers are workplaces that can impose a significant psychosocial burden on support staff and healthcare workers. In this setting, security guards are a professional group at high risk of violence and frequent crises, and they play a vital role in patient-caregiver interactions. Research on the mental health of hospital security personnel is lacking.

Security officers in healthcare centers face a unique confluence of stressors: irregular work hours, sleep

disruption, limited institutional support, and chronic exposure to crises. These stressors are known risk factors for psychological symptoms such as depression, anxiety, hostility, and somatization (1,2). The main factors affecting psychological symptom severity include sleep quality, work schedule, and job satisfaction. Psychopathological conditions, particularly depressive and anxiety symptoms, have been linked to poor sleep quality (3). Similarly, low job satisfaction may cause burnout, somatization, and depression (4). Shift work can interfere with the circadian

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rhythm, which can negatively impact sleep and mental well-being (5). However, despite the well-documented associations among nurses, paramedics, and other clinical personnel, there is a dearth of research on the mental health of hospital security staff (6-12). Given their unique exposure to occupational risks and their integral role in maintaining hospital safety, it is crucial to examine the psychological outcomes in this population.

We hypothesized that lower job satisfaction and poorer sleep quality would be associated with higher levels of psychological symptom severity among hospital security personnel. Therefore, this study aimed to examine the association of sleep quality, job satisfaction, work schedule, and psychiatric history with psychological symptom severity in hospital security staff. By identifying modifiable occupational factors associated with psychological distress, such as job satisfaction and sleep quality, this study may contribute to the development of organizational strategies aimed at improving mental well-being among hospital security personnel.

Materials and Methods

Compliance with Ethical Standards

This study was conducted between 01 May 2025 and 01 July 2025 at the University of Health Sciences Türkiye, Umraniye Training and Research Hospital, Istanbul, Türkiye. The University of Health Sciences Türkiye, Umraniye Training and Research Hospital Scientific Research Ethics Committee approved the study protocol (approval no.: 70, date: 10.04.2025). All study procedures adhered to the principles of the Declaration of Helsinki. Prior to enrollment, written informed consent was obtained from each participant.

Study Design

The study was designed as prospective and cross-sectional. The study population comprised security personnel employed at the University of Health Sciences Türkiye, Umraniye Training and Research Hospital. Individuals aged 18-65 who agreed to participate in the study and did not have an active psychiatric diagnosis, neurological disorder, or history of serious medical illness were included. Participants were excluded if they had an active psychiatric diagnosis at the time of evaluation, a known neurological disorder, a history of severe medical illness that could affect psychological functioning, or incomplete questionnaire data. In addition, personnel assigned to external units were not eligible for participation due to limited access during the study period. A history of psychiatric diagnoses in remission was not considered an exclusion criterion and was recorded as a separate

variable. At the time of the study, 140 hospital security personnel were employed by our institution. A total of 115 personnel, representing 82% of the hospital security workforce, met the inclusion criteria, provided informed consent, and were included in the study. The participant selection and inclusion process is presented in the study flow diagram (Figure 1). Data were collected through face-to-face interviews using structured questionnaires administered during participants' annual psychiatric examinations. After completion of all procedures, data from all patients were anonymized.

Working Conditions and Employment Characteristics

All hospital security personnel were employed under standardized institutional contracts with fixed monthly salaries and full social insurance coverage in accordance with national labor regulations. Personnel were entitled to standard employment rights, including regulated working hours, annual leave, and occupational health protections. These institutional working conditions were uniform across participants and not performance-based.

Sociodemographic and Occupational Characteristics

A structured questionnaire collected data on demographics, work characteristics (shift type, years in the security sector, tenure at the current workplace), and psychiatric history.

Psychological Symptoms

The Turkish version of the Symptom Checklist-90-Revised (SCL-90-R) assessed psychological symptom severity. Derogatis and Cleary (13) developed the scale in 1977. The validity and reliability of the Turkish version were established in 1991 (14). The SCL-90-R, a 90-item self-report scale, assesses psychological symptoms across nine domains (depression, anxiety, phobic anxiety, hostility, paranoid ideation, psychoticism, somatization, obsessive-compulsive, and interpersonal sensitivity). Items are rated on a 5-point Likert scale (0-4). The Global Severity Index, reflecting overall distress, was computed as the mean of all items.

Sleep Quality

Buysse et al. (15) developed the Pittsburgh Sleep Quality Index (PSQI) in 1989 to assess subjective sleep quality over the last month. The Turkish validity and reliability of the scale were established by Agargün et al. (16) in 1996. The PSQI comprises 19 self-report items that assess seven domains of sleep: daytime dysfunction, use of sleeping medication, sleep disturbances, sleep efficiency, sleep latency, sleep duration, and subjective sleep quality. The total score (0-21) reflects overall sleep quality, with higher scores denoting greater impairment.

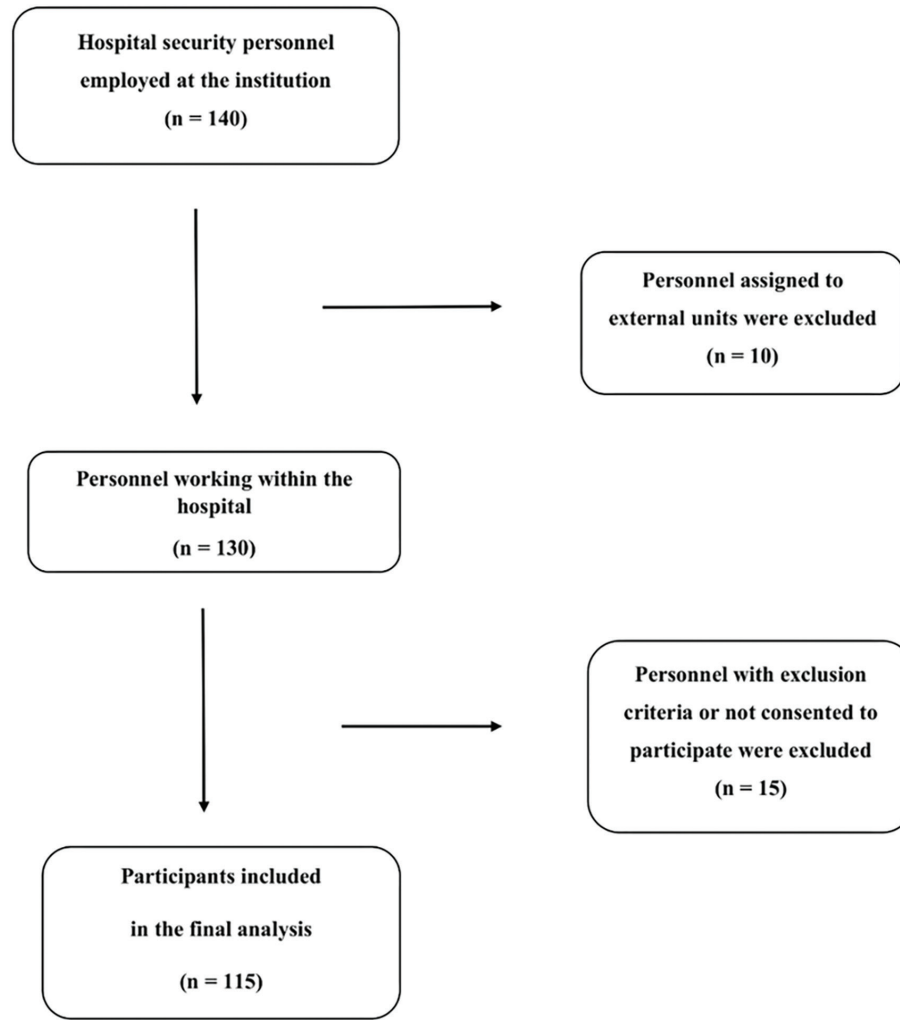


Figure 1. Flow diagram of participant recruitment and inclusion process

Job Satisfaction

In 1967, Weiss et al. (17) developed the Minnesota Satisfaction Questionnaire (MSQ). The validity and reliability studies were conducted, and this questionnaire was translated into Turkish by Baycan (18) in 1985. The MSQ short form contains 20 items rated on a 5-point Likert scale (1= very dissatisfied, 5= very satisfied), yielding intrinsic, extrinsic, and general satisfaction scores. The total score ranges from 20 to 100, with higher scores indicating greater job satisfaction.

Statistical Analysis

Statistical analyses were conducted with IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics included means±standard deviations for continuous variables and frequencies (percentages) for categorical variables. We used the Kolmogorov-Smirnov

test to assess the normality of continuous variables. Skewness and Kurtosis values and visual inspection of histograms were used to assess normality. Since the SCL-90-R scores showed a non-normal distribution based on these assessments, non-parametric statistical tests were employed for group comparisons. Mann-Whitney U tests were used to compare SCL-90-R scores between groups for categorical variables with two levels (gender, work schedule, and psychiatric history). Kruskal-Wallis tests were conducted on categorical variables with more than two categories to examine differences in SCL-90-R scores across the following groups: education level, marital status, experience in the security sector, and experience in the current workplace. In cases where significant differences emerged, post-hoc pairwise analyses were performed via Dunn's test, incorporating Bonferroni correction to control for multiple comparisons. Associations between continuous

variables were examined using Spearman's rank-order correlation coefficient due to the non-normal distribution of SCL-90-R scores. Correlation analyses were conducted to assess the relationships between SCL-90-R scores and age, MSQ scores, and PSQI scores. A multiple linear regression model was constructed to evaluate variables independently associated with SCL-90-R scores. All independent variables (job satisfaction, sleep quality, psychiatric history, marital status, gender, age, education level, work schedule, years of experience in the security sector, and tenure at the current workplace) were entered into the model simultaneously using the enter method. The threshold for statistical significance was established at $p < 0.05$.

Results

Participant Characteristics

A total of 115 hospital security personnel were included in the study. The mean age of the participants was 37.99 ± 7.17 years, and the majority were male. Most participants were high school graduates and were married. Rotating shift work was the most common working pattern. Most participants had 6–10 years of experience in the security sector and a similar duration of employment at the current institution.

The mean SCL-90-R score was 0.24 ± 0.19 , the mean PSQI score was 3.72 ± 2.55 , and the mean MSQ score was 74.31 ± 10.77 . A history of psychiatric diagnosis or treatment was reported by a minority of participants. Detailed descriptive characteristics are presented in Table 1.

Group Comparisons

Non-parametric analyses were conducted to compare SCL-90-R scores across demographic and occupational variables. No statistically significant differences in psychological symptom severity were observed according to gender, education level, marital status, work schedule, work experience, or psychiatric history. Detailed group comparisons are presented in Table 2.

Correlation Analysis

Correlation analysis revealed a significant negative association between job satisfaction and psychological symptom severity ($r = -0.253$, $p = 0.006$). No significant correlations were found between SCL-90-R scores and age or sleep quality. The full correlation matrix is presented in Table 3.

Regression Analysis

Multiple linear regression was performed to determine the factors associated with psychological symptom severity. The regression model explained a modest proportion of the variance in SCL-90-R scores ($R^2 = 0.110$, adjusted $R^2 = 0.021$). Multicollinearity diagnostics indicated no significant multicollinearity among the independent variables, with

variance inflation factor (VIF) values ranging between 1.15 and 2.86.

Job satisfaction was the only variable independently associated with SCL-90-R scores ($B = -0.004$, 95% confidence interval: -0.007 to -0.0004 , $p = 0.031$), while age, gender, education level, marital status, work schedule, work experience, psychiatric history, and sleep quality were not significantly associated with SCL-90-R scores. Full regression results are presented in Table 4.

Table 1. Descriptive characteristics and sociodemographic findings of all patients

Characteristics	n (%) or Mean \pm SD
Age (years)	37.99 \pm 7.17
Gender	
Male	79 (68.7)
Female	36 (31.3)
Education	
High school	72 (62.6)
Vocational school	18 (15.7)
University	25 (21.7)
Marital status	
Married	78 (67.8)
Single	29 (25.2)
Divorced/Widowed	8 (7.0)
Work schedule	
Day shift only	43 (37.4)
Rotating shifts	72 (62.6)
Experience in security sector	
<1 year	4 (3.5)
1-5 years	15 (13.0)
6-10 years	52 (45.2)
11-15 years	21 (18.3)
>15 years	23 (20.0)
Experience in current workplace	
<1 year	11 (9.6)
1-5 years	15 (13)
6-10 years	60 (52.2)
11-15 years	19 (16.5)
>15 years	10 (8.7)
Psychiatric history	
Present	14 (12.2)
Not present	101 (87.8)
SCL-90-R	0.24 \pm 0.19
MSQ	74.31 \pm 10.77
PSQI	3.72 \pm 2.55

N: Number of patients, SD: Standard deviation, SCL-90-R: Symptom Checklist-90-Revised, MSQ: Minnesota Satisfaction Questionnaire, PSQI: Pittsburgh Sleep Quality Index

Table 2. SCL-90-R scores by demographic and occupational characteristics

	SCL-90-R (Mean ± SD)	p-value
Gender		
Female	0.26±0.18	0.098
Male	0.22±0.19	
Education		
High school	0.26±0.21	0.432
Vocational school	0.23±0.15	
University	0.18±0.12	
Marital status		
Married	0.24±0.20	0.905
Single	0.23±0.18	
Divorced/Widowed	0.23±0.16	
Work schedule		
Day shift only	0.25±0.18	0.350
Rotating shifts	0.23±0.19	
Experience in security sector		
<1 year	0.37±0.10	0.302
1-5 years	0.21±0.21	
6-10 years	0.23±0.15	
11-15 years	0.24±0.24	
>15 years	0.24±0.21	
Experience in current workplace		
<1 year	0.28±0.23	0.966
1-5 years	0.20±0.12	
6-10 years	0.22±0.17	
11-15 years	0.26±0.25	
>15 years	0.25±0.21	
Psychiatric history		
Present	0.24±0.19	0.617
Not present	0.20±0.16	

The Mann-Whitney U test and the Kruskal-Wallis test were used for group comparisons. Statistical significance was set at p<0.05.
SD: Standard deviation, SCL-90-R: Symptom Checklist-90-Revised

Table 3. Correlations of different variables with SCL-90-R scores

	r	p
Age		0.042
		0.660
MSQ		-0.253
		0.006
PSQI		0.126
		0.179

Spearman's rank correlation coefficient was used for correlation analysis. Statistically significant p-values (<0.05) were shown in bold.
SCL-90-R: Symptom Checklist-90-Revised, MSQ: Minnesota Satisfaction Questionnaire, PSQI: Pittsburgh Sleep Quality Index

Table 4. Regression model for determining factors independently affecting SCL-90-R scores

Variable	B	Std. error	Lower bound	Upper bound	p-value
Constant	0.538	0.202	0.137	0.938	0.009
Age	0.003	0.003	-0.003	0.009	0.299
Gender	-0.068	0.045	-0.157	0.020	0.130
Education level	-0.024	0.023	-0.07	0.022	0.297
Marital status	-0.027	0.037	-0.099	0.046	0.465
Work schedule	-0.002	0.046	-0.093	0.089	0.965
Experience in security sector	-0.013	0.028	-0.068	0.041	0.626
Experience in current workplace	0.017	0.028	-0.039	0.073	0.544
Psychiatric history	-0.049	0.057	-0.162	0.065	0.395
MSQ	-0.004	0.002	-0.007	-0.0004	0.031
PSQI	0.008	0.008	-0.008	0.023	0.310

Multiple linear regression analysis using the enter method was performed. Confidence intervals are presented at the 95% level. Statistically significant p-values (<0.05) were expressed in bold.
SCL-90-R: Symptom Checklist-90-Revised, MSQ: Minnesota Satisfaction Questionnaire, PSQI: Pittsburgh Sleep Quality Index

Discussion

This research analyzed the association between psychological symptom severity and factors including job satisfaction, sleep quality, and shift arrangements among hospital security personnel. Our findings indicate that job satisfaction was the only variable independently associated with psychological symptom severity in the regression analysis. In contrast, gender, age, work modality, psychiatric history, and sleep quality did not show a statistically significant association with distress levels.

The inverse relationship between job satisfaction and psychological distress found in this study is consistent with prior research showing that lower satisfaction is associated with increased depression, anxiety, and burnout (1,4,19). Lack of job satisfaction may increase perceived job distress, reduce resilience, and exacerbate the psychological burden experienced in high-stress work environments, such as hospitals, where security staff are frequently exposed to aggression, unpredictable emergencies, and interpersonal conflict. A study of Chinese army officers found that higher job satisfaction was linked to a stronger sense of calling. This link was made stronger by how meaningful they thought their work and life were (20). Such findings suggest that organizational strategies enhancing these dimensions indirectly support mental health by increasing job satisfaction.

Our findings can be interpreted through the perspective of the Job Demands-Resources (JD-R) model, which suggests that workplace factors include job demands (stressors requiring sustained effort) and job resources (factors that facilitate goal achievement and reduce distress) (21). Interestingly, traditional job demands like shift work and poor sleep quality did not show a significant association with psychological symptoms in our sample, despite being commonly recognized as major factors affecting mental health in shift workers (22,23). In contrast, job satisfaction—a crucial job resource—emerged as the only significant predictor. This unexpected pattern may be explained by an adaptive phenomenon among our experienced security personnel (mean experience >6 years), who appear to have habituated to the chronic, unchangeable demands inherent in security work. When job demands become fixed aspects of the occupational role that cannot be modified (such as mandatory shift rotations and exposure to workplace violence), workers may psychologically adapt to these stressors, rendering them invisible to well-being assessments. Consequently, job resources, particularly satisfaction, become the primary determinants of psychological health. This suggests that for hospital security personnel, the traditional dual-process JD-R model may collapse into a resource-dominant model in which variations in job satisfaction may be associated with differences in psychological outcomes. This interpretation has important practical implications: rather than attempting to modify unchangeable job demands through costly structural changes to shift systems, interventions should focus on enhancing modifiable job resources through recognition programs, professional development opportunities, and initiatives that strengthen a sense of organizational belonging—approaches that are both more feasible and potentially more effective in this population.

We found no significant differences in psychological distress across gender, marital status, or education level. Neither rotating shift work nor sleep quality was significantly associated with the severity of psychological symptoms among hospital security staff. This finding contrasts with some studies on healthcare professionals and paramedics, where rotating shifts were linked to higher stress, poorer sleep, and increased depressive symptoms (2,10,11,24-26). The absence of such an effect in our data may reflect occupational adaptation among experienced security personnel—indeed, most of our participants had more than six years of sector experience—or the influence of institutional policies mitigating shift-related distress. Nonetheless, certain studies involving different occupational groups, in which shift patterns and perceived sleep quality were not consistently associated with mental health outcomes, corroborate our findings

(27). For example, among Icelandic nurses, Sveinsdóttir (28) reported no significant differences in job satisfaction, illness experience, or sleep quality across different shift types. Similarly, a study of healthcare workers in Egypt and Saudi Arabia during the coronavirus disease-2019 pandemic found no association between night-shift schedules and increased anxiety or depression. Although poor sleep quality was prevalent, it did not independently predict mental health outcomes in multivariate analysis. The study's authors further suggested that the absence of a direct effect may be due to different variables, such as individual or institutional coping strategies, which can play a decisive role in shaping psychological well-being in shift-working populations (29). Aside from shift work, other independent variables (age, gender, and sleep quality) were not significantly associated with psychological symptom severity in our analysis. While occupational adaptation may partly explain the absence of an association between shift-related factors and psychological distress, it is less likely to account for the non-significant findings observed for demographic variables. One possible explanation is that the study population was relatively homogeneous in terms of sociodemographic characteristics and occupational roles, potentially limiting variability across these factors. Furthermore, the relatively stable employment conditions and standardized working environment within the hospital security unit may have attenuated the influence of individual-level differences on psychological outcomes.

The absence of a significant association between shift work and psychological symptom severity in our study may be related to the institutional characteristics of the shift scheduling system. In our hospital, security personnel do not work under extended 24-hour duty schedules; instead, shorter and more ergonomically structured rotating shifts are implemented. Emerging evidence suggests that transitioning from prolonged 24-hour shifts to shorter and safer scheduling systems may reduce fatigue, circadian disruption, and psychological distress among healthcare personnel. For example, Cerela-Boltunova and Klavina (30) reported that replacing extended 24-hour shifts with shorter duty periods for healthcare staff was associated with improved occupational safety and reduced mental distress. Therefore, the relatively ergonomic shift structure in our institution may have mitigated the adverse psychological effects typically attributed to shift work in previous studies. These results, together with our findings, suggest that other factors may moderate the impact of shift work and sleep quality on psychological well-being. Occupational role, individual coping strategies, and organizational support systems underscore the need for multifactorial approaches when assessing mental health risks in shift-working populations. From a practical perspective, these results underscore the importance of

managerial strategies aimed at enhancing job satisfaction and promoting the mental health of hospital security staff. Interventions include improving working conditions, offering opportunities for professional development, and fostering a supportive workplace climate.

Study Limitations

The study has limitations, particularly its cross-sectional design, which restricts causal interpretation of the link between job satisfaction and psychological symptoms. The single-center setting and specific cultural context may limit generalizability to other healthcare institutions or countries. All measures were self-reported, potentially introducing response bias and social desirability effects. The modest sample size may have reduced the statistical power to detect small effects, especially in subgroup analyses. Additionally, an a priori sample size or statistical power calculation was not performed because the study aimed to include all accessible hospital security personnel at the institution. Although a large proportion of the workforce participated (82%), the absence of a formal power analysis should be considered a methodological limitation.

Despite these limitations, the study has several strengths. The study aimed to include the entire accessible population of the hospital security unit, thereby reducing selection bias. Moreover, the use of validated psychometric instruments and the consideration of both occupational and psychological variables provide a comprehensive evaluation of factors associated with psychological symptom severity in this understudied occupational group.

Conclusion

Our findings indicate that job satisfaction is associated with psychological symptom severity among hospital security personnel, independent of demographic characteristics and sleep quality. These findings suggest that organizational interventions that focus on increasing job satisfaction may be more effective in improving mental health outcomes among healthcare security workers than interventions that address structural work demands. Longitudinal research is needed to clarify causal links and explore mediators such as coping styles and institutional support.

Ethics

Ethics Committee Approval: The University of Health Sciences Türkiye, Umraniye Training and Research Hospital Scientific Research Ethics Committee approved the study protocol (approval no.: 70, date: 10.04.2025).

Informed Consent: Prior to enrollment, written informed consent was obtained from each participant.

Footnotes

Authorship Contributions

Surgical and Medical Practices: S.C.H., K.S.P, Concept: S.C.H., Design: S.C.H., Data Collection or Processing: S.C.H., K.S.P, Analysis or Interpretation: S.C.H., Literature Search: S.C.H., Writing: S.C.H.

Conflict of interests: The authors declare that they have no conflict of interest related to this study.

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