

## **Work Environment, Stress and burnout among Security Personnel during Covid 19 Pandemic**

**Asmita Patnaik<sup>1</sup>, Anshuman Dash<sup>2</sup>, Manas Ranjan Samal<sup>3</sup>, Sikata Nanda<sup>4</sup>**

<sup>1st</sup> , <sup>2nd</sup> and <sup>3rd</sup> Author PG Student , Dept of Community Medicine, S.C.B. Medical College and Hospital, Cuttack, Odisha, India

<sup>4th\*</sup> and Corresponding Author Associate Professor , Dept. of Community Medicine, S.C.B. Medical College and Hospital, Cuttack, Odisha, India

### **ABSTRACT**

**Background:** Odisha was also affected by the spread of the novel coronavirus (SARS-Cov-2), responsible for the COVID-19 disease. For its mitigation the health system in a tertiary care institution was frantically deploying all personnel like from health , security, food handlers , dealing with transportation.

**Objective:** Our aim was to assess exposure, perceptions, workload, and possible burnout of Security personnel during the COVID-19 pandemic and to suggest specific recommendations based on the study findings.

**Methodology:** The type of study was a cross sectional study, placed at Cuttack district in Odisha. Time Period of this study was April to June 2021. 465 were finally included in the study. On the days of the mental health status assessment security personnel's were appraised and accordingly a predesigned, pretested questionnaire was implemented to them.

**Results:** 57.5% males and 67.2% females were at the risk of burn out while 38.4% and 32.4% were at the edge of severe burn out. There was a significant difference in the mean score between those aged less than 30 years at F (5.434, 2) and those between 30 to 50 years as well as those aged above 50 years with *p*- value 0.008 and 0.009 respectively.

**Conclusions:** Specific strategies have to be recommended and adapted like changing work pattern taking breaks, avoiding overtime, balance work with life. The task should include different skills to cope with stress, time management and social support from family, friends and peer. Besides this various relaxation strategies to promote fitness, develop understanding of life, counseling, better sleep, exercise, and good balanced nutrition.

**Keywords:** Mental health status, Security Personnel, Burnout

### **Introduction**

Large numbers of security personnel are facing adversity in the workplace due to job stress. Symptoms like burnout and psychosomatic problems are self-perceived general health finding in the study population.<sup>1</sup> On exploration of the impact of the COVID-19 pandemic on security personnel mental health Occupational burnout syndrome is defined as a psychosomatic state of a working person characterized by a cynical attitude towards work values and conditions with no hope for effective working performance or work efficiency.<sup>2</sup> This happens to be as a result of depletion of mental and psychical energy as well as the cognitive domain of a person. Occupational burnout develops as a result of increase in overload caused by workplace requirements until a person's psychophysical resources are depleted which decreases their

motivation to engage with their work.<sup>3</sup>A person's state of mind,has control and influence over their work environment. Stressors occurring in the workplace cause job stressand deprive the basic needs resulting from separation from family and friends. Other stressors include a stringent watch system, shortage of time for sleep, night shift duty, and physical stressors like vibrations, noise, climatic change and time zones. Various social and psychological stressors like tension resulting from being in a closed group of people, the perception of constant emotional tension throughout the period of the guards' duty also plays a role in the burnout of the individual.

Objectives:

1. To study the influence of working shift over the mental health status of all the security guards working in the hospital.
2. To assess exposure, perceptions, workload, and burnout of Security personnel during the COVID-19 pandemic.
3. Suggest necessary recommendations based on the study findings.

### Materials and methods:

**Type of study:** Cross sectional design

**Place of study:** Tertiary Care hospital in Odisha

**Sample size:** 465 (398 males and 67 females)

**Sampling method:** Universal sampling. All security guards posted in the Medical College and hospital,

**Study duration:** April 2021 to June 2021

**Inclusion criteria:** Security Personnel posted in the Medical College and Hospital

**Exclusion criteria:** Individuals,

1. Not willing to participate
2. On medical leave

**Methodology:** 465 subjects aged between 20 to 60 years both males and females participated in the study. Written informed consent was obtained from subjects those willing to participate. A Pre- designed pretested Questionnaire comprising of outcomes and measures of assessment of burnout, indicated by a single item measure of emotional exhaustion variables was used. Under strict confidentiality, the questionnaire was implemented among the study subjects. The subjects with abnormal clinical findings were diagnosed and given prompt treatment. Data was entered and analysed in SPSS version 21.0. Proportions were calculated as mean and standard deviation. One-way ANOVA and Unpaired t-test was used to find out associations between various numeric and categorical variables.

### Results:

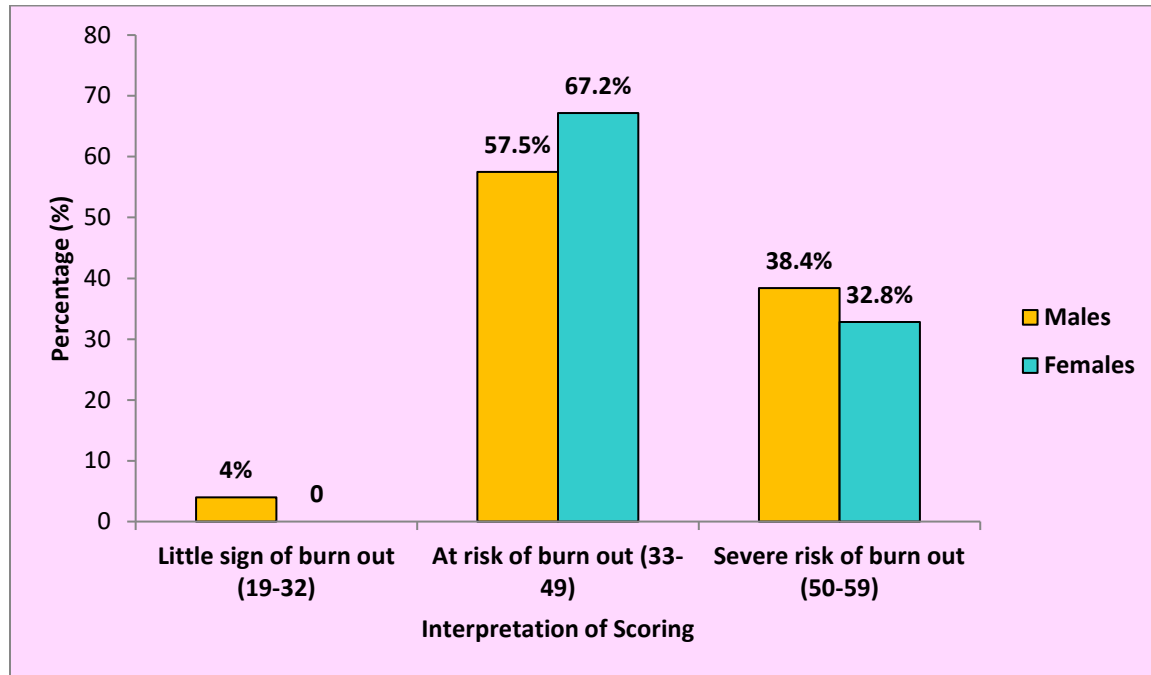
**Table I: MEAN SCORING OF INDIVIDUAL ITEMS OF BURN-OUT SELF TEST QUESTIONNAIRE**

Sl. No.	Items	Mean score
01	I feel run down and drained of physical or emotional energy	3.35 ± 1.06
02	I have negative thoughts about my job	2.60 ± 0.85

<b>03</b>	<b>I am harder and less sympathetic with people than they deserve</b>	<b>1.91 ± 0.84</b>
<b>04</b>	<b>I am easily irritated by small problems, or by my colleagues</b>	<b>3.51 ± 0.94</b>
<b>05</b>	<b>I feel misunderstood or unappreciated by my colleagues</b>	<b>3.56 ± 1.16</b>
<b>06</b>	<b>I feel that I have no one to talk to</b>	<b>1.92 ± 1.05</b>
<b>07</b>	<b>I feel I am achieving less than I should</b>	<b>3.68 ± 1.19</b>
<b>08</b>	<b>I feel under an unpleasant level of pressure to succeed</b>	<b>3.72 ± 1.17</b>
<b>09</b>	<b>I feel that I am not getting what I want out of my job</b>	<b>3.63 ± 1.12</b>
<b>10</b>	<b>I feel that I am in wrong organization</b>	<b>3.19 ± 1.43</b>
<b>11</b>	<b>I am frustrated with parts of my job</b>	<b>3.68 ± 1.19</b>
<b>12</b>	<b>I feel that organizational politics or bureaucracy frustrate my ability to do a good job</b>	<b>3.68 ± 1.19</b>
<b>13</b>	<b>I feel that there is more work to do than I practically have the ability to do</b>	<b>3.70 ± 1.18</b>
<b>14</b>	<b>I feel that I do not have time to do many things that are important to doing a good quality job</b>	<b>1.94 ± 1.06</b>
<b>15</b>	<b>I find that I do not have time to plan as much as I want to</b>	<b>3.49 ± 0.95</b>
	<b>TOTAL</b>	<b>28.43 ± 6.31</b>

**Table I** describes the mean and standard deviation of each item in the burn-out self-test questionnaire. The total average score was  $28.43 \pm 6.31$ . The answers were based on their experience during the past week. The scoring was based on a 5-point likert scale where the options were “not at all”, “rarely”, “sometimes”, “often” and “very often” scored from 1 to 5 in that order. The minimum score was 15 whereas maximum was 75. Minimum mean scores were observed for items 3, 6 and 14 and maximum mean scores for item number 8.

**FIGURE I: LEVEL OF BURNOUT AMONG BOTH THE GENDERS**



**Figure II** represents the various levels of burn-out that the security guards were confronting while working in the hospital. An individual was said to have no sign of burnout if he/she scored between 15 to 18, having little sign of burnout if the scores were between 19 and 32. The individual was tagged to be at the risk of burnout if the scores were between 33 and 49. Severe and very severe risk of burn out was assigned to individuals whose scores were between the ranges of 50 to 59 and 60 to 75 respectively. In our study, none of individuals were between the two extremes i.e. no burn out and very severe risk of burn out. Out of 398 males, 4% i.e. 16 showed little sign of burn out while none of the females were in this category. 57.5% males and 67.2% females were at risk of burn out while 38.4% males and 32.8% females were at severe risk of burn out.

**TABLE II: INFLUENCE OF SOCIO-DEMOGRAPHIC AND WORK RELATED FACTORS OVER BURN-OUT OF SECURITY PERSONNEL**

Parameters	Mean	SD	df	F-/t- value	P value
<b>Age</b>					
Less than 30	45.23	0.73	2	5.434	0.005*
30 to 50	47.43	0.73			
More than 50	47.80	0.87			
<b>Gender</b>					
Male	46.89	6.44	1	5.850	0.016*

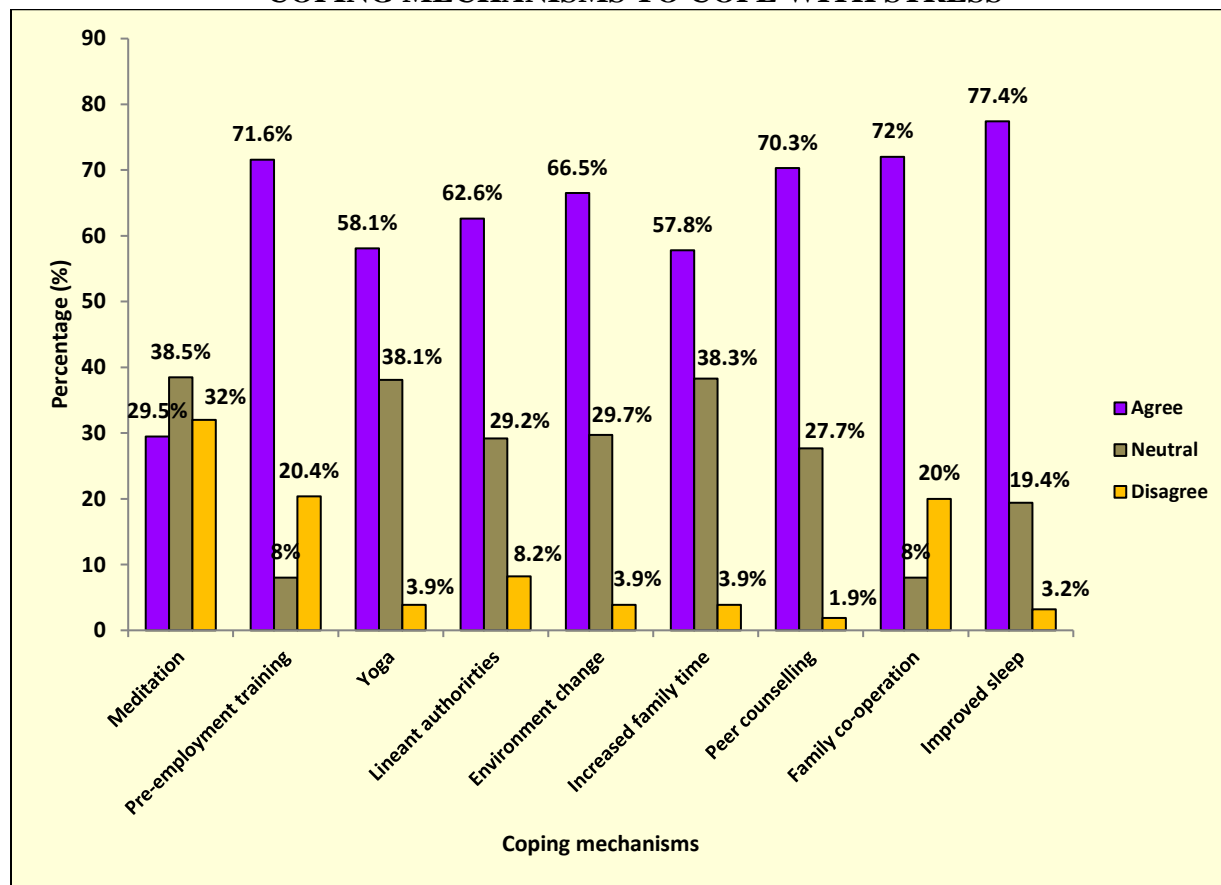
Female	48.07	4.57			
<u>Marital status</u>			1	13.595	<0.001*
Married	47.56	5.65			
Unmarried	43.29	8.62			
<u>Residence</u>			1	0.015	0.901
Rural	46.34	6.30			
Urban	47.54	6.18			
<u>SES</u>			2	0.176	0.839
Upper-middle	47.48	5.54			
Middle	46.86	5.70			
Lower-middle	47.15	6.61			
WORK PROFILE					
<u>Shift of duty</u>			2	9.587	<0.001*
Morning	48.38	5.03			
Evening	45.35	7.78			
Night	46.71	5.85			
<u>Number of jobs</u>			1	0.145	0.704
1	45.58	6.62			
>1	47.88	5.83			
<u>Working hours</u>			1	4.550	0.030*
<50	46.6	6.96			
50 and above	47.39	5.55			
<u>Years of service</u>			3	3.692	0.012*
<2 years	45.77	6.60			
2 to 5 years	46.27	6.20			
5 to 8 years	47.53	5.64			
>8 years	47.97	6.04			

**Table II** demonstrates the influence of various socio-demographic and work related factors over the burn out of individuals using one-way ANOVA and independent sample t-test for multivariate and bivariate groups respectively. For post-hoc analysis, Tukey test was employed to find out differences within groups and homogeneity of variances was checked by Levene's test. Among socio-demographic characteristics, a significant difference in the mean scores was observed among different age groups, genders and marital status of participants. Within various age groups, there was a significant difference in the mean score between those aged less than 30 years at  $F(5.434, 2)$  and those between 30 to 50 years as well as those aged above 50 years with  $p$ -value 0.008 and 0.009 respectively. Similarly, the mean scoring was significantly higher among females as compared males with  $p$ -value 0.016. The mean total score for burn out was significantly higher among married participants as compared to their unmarried counterparts. As far as the work profile is considered, the shifts of duty, average working hours per week and total years of service had a significant influence over the burn out response of participants. Those who worked during the morning shift at  $F(9.587, 2)$  had a higher mean total score value as compared to other two shifts with  $p < 0.001$ . similarly, those who worked for more than 50 hours per week at  $F(4.550, 1)$  and those who were employed as security guards for more than 5 years at  $F(3.692, 3)$  had significantly higher mean scores for burn out as compared to their counterparts with  $p$ -value 0.030 and 0.012 respectively.

**TABLE III: MEAN DIFFERENCE IN BASELINE PARAMETERS BASED ON SEVERITY OF BURN OUT**

Parameters	Little risk	At risk	Severe risk	F value	P value
Age	38.37 ± 10.38	40.93 ± 11.22	40.57 ± 11.33	0.415	0.661
Working hours	49.75 ± 2.62	51.48 ± 4.32	51.36 ± 4.45	1.212	0.298
Number of jobs	1.37 ± 0.50	1.59 ± 0.49	1.75 ± 0.43	9.132	<0.001*
Years of service	5.87 ± 7.36	10.54 ± 8.34	13.81 ± 8.44	12.094	<0.001*
BMI	27.98 ± 4.11	27.61 ± 6.01	27.65 ± 6.34	0.029	0.972
WHR	0.89 ± 0.02	0.90 ± 0.07	0.90 ± 0.06	0.279	0.756
SBP	112.37 ± 5.61	117.39 ± 9.60	116.58 ± 10.36	2.151	0.118
DBP	71.81 ± 5.34	75.67 ± 9.69	75.10 ± 10.58	1.218	0.297
Hb	13.36 ± 0.65	13.01 ± 1.07	13.05 ± 0.95	0.896	0.409

**Table III** describes the mean differences in the individual characteristics according to the severity of burn out score. There was a statistically significant difference observed in the mean scores of average working hours per week and number of years of service. Security guards those mean number of jobs were  $1.75 \pm 0.43$  were at severe risk of burn out than those whose mean number of jobs were lesser than that at  $F = 9.132$  and  $p < 0.001$ . Similarly, those individuals who had worked on an average of  $13.81 \pm 8.44$  years were on the edge of severe risk of burnout as compared to those who worked for fewer years than that at  $F = 12.094$  and  $p < 0.001$ . However, no significant difference between the severity grades of burn out was observed for other parameters.

**FIGURE II: PERCEPTION OF SECURITY GUARDS ABOUT ADOPTION VARIOUS COPING MECHANISMS TO COPE WITH STRESS**

**Figure II** represents the perception of the study participants regarding the various coping mechanisms that might be able to help them cope up with the stress that they are facing due to their immensely high work load. From all the options available, most of them i.e. 77.4% agreed that enhancing their sleeping hours might help them in reducing stress. This was followed by increased co-operation from family members (72%), provision of pre-employment training (71.6%), and better counselling from family and friends (70.3%). Disagreement over the coping mechanisms was highest when asked whether or not meditation will help them i.e. 32% and the least disagreement was over peer counselling i.e. 1.9%.

## Discussion

There are a very few scientific reports on the results of levels of burnout stress in different occupational groups in the subject literature. Most of the research concerns students, doctors, interns and staff nurses. This research happens to be only one in eastern India on Security Personnel occupational burn out as a perceived stress disorder. Security workers belong to a specific occupation that needs to deal with people / patients/ visitors, have tremendous work, long vigilant standing hours, and irregular work and life time in contrast to healthcare personnel. So security workers experience burnout because their work and stress are in correlation with

the professional background. Our study showed that Security workers have poor job satisfaction, poor quality of sleep.

In the current study, 57.5% males and 67.2% females were at the risk of burn out while 38.4% and 32.4% were at the edge of severe burn out. The highest mean score during the self-test was recorded for “I feel under an unpleasant level of pressure to succeed) i.e.  $3.72 \pm 1.17$  while the least recorded mean score was for “I am harder and less sympathetic towards people than they deserve”. Mean total burn out score was significantly higher among females, married security guards and those who were aged more than 30 years. As far as work related factors were taken into account, those who were working in this field for more than 5 years, mostly involved in morning shift duty and those who worked for more than 50 hours in a week scored a higher number in the burn out test. In a similar study conducted by **Sabbah I et al**<sup>4</sup> among Lebanese nurses found that emotional exhaustion was significantly associated with increasing age and among divorcees. Furthermore, perception about personal accomplishment was significantly associated with alternant shift duty and work overload. Similar results were found in another study conducted by **Glasberg AL et al**<sup>5</sup> among health care workers. In another study conducted by **Wing et al**<sup>6</sup>, apart from work related factors, no other socio-demographic variables were found to be significantly associated with burn-out. In a study conducted by **Lasebikan OV et al**<sup>7</sup> among health care workers of Nigeria, it was found out that burn out was higher among older individuals, females and those who were frequently posted for night duties. Similar results were found by **Wisetborisut A et al**<sup>8</sup> and **MusakaliS et al**<sup>9</sup> in their studies among healthcare workers and university students respectively. In another study on burn out among blue collar workers, identical results to our study were found out by **Hulsegge G et al**<sup>10</sup>. In a study conducted by **Qiao et al**<sup>11</sup>, no significant difference was found between age of health care workers and their burn out scores. This is in contrast to our study. They attributed negative coping styles as one of the prime reasons for burnout. 77% and 72% of study participants agreed that increasing their sleeping hours and co-operation from their family members might help them in coping with their work related stress while 32% disagreed that meditation might help them in coping with this issue. In a cohort study conducted in Southern Ethiopia by **SelamuM et al**<sup>12</sup> among primary healthcare workers, no significant difference was observed in their job satisfaction score even after 6 month follow up period.

### **Conclusion:**

Burnout is highly prevalent in 37.6 % in Security workers after meeting the accepted criteria for burnout. Effective interventions for Security workers should be designed to address burnout thereby alleviating psychological pressure .Pre placement examination of the security workers and refreshment programmes, life style modification like Yoga, Laughter clubs, and involvement in various recreation facilities. Interventions are to be adopted to alleviate psychological pressure. These stressors reduce energy level, sense of professionalism. Burnout symptoms like lack of energy, sleep, exhaustion, lack of concentration and memory problems, other symptoms like tightness in the chest, difficulty breathing, back pain, nausea, increased nicotine and alcohol consumption have to be tackled by various IEC strategies.

### **References:**

1. Freudenberger HJ. Satff burn out. A J Soc Psychol Study Soc Issues. 1974;30:159–65.
2. McGonagle AK, Beatty JE JR. Coaching for workers with chronic illness: evaluating an



- intervention. *J Occup Heal Psychol*. 2014;19(3):385–98.
3. Maslach, C., Leiter, M.P. and Schaufeli WB. “Measuring burnout”, in Cooper, C.L. and Cartwright, S. (Eds),. *Oxford Handb Organ Organ Wellbeing*, Oxford Univ Press Oxford. 2008;86–108.
  4. Sabbah I, Sabbah H, Sabbah S, Akoum H, Droubi N. Burnout among Lebanese nurses: Psychometric properties of the Maslach Burnout Inventory-Human Services Survey (MBI-HSS). *Health (Irvine Calif)*. 2012;04(09):644–52.
  5. Glasberg AL, Eriksson S, Norberg A. Burnout and “stress of conscience” among healthcare personnel. *J Adv Nurs*. 2007;57(4):392–403.
  6. Wing T, Pey Y, Subramaniam V, Raof N, Ting O, Ahmad M. Prevalence of Burnout in Medical and Non-medical Undergraduate Malaysian Students in Various International Universities - A Cross-Sectional Study. *J Adv Med Med Res*. 2018;25(11):1–13.
  7. Lasebikan VO, Oyetunde MO. Burnout among Nurses in a Nigerian General Hospital: Prevalence and Associated Factors. *ISRN Nurs*. 2012;2012:1–6.
  8. Wisetborisut A, Angkurawaranon C, Jiraporncharoen W, Uaphanthasath R, Wiwatanadate P. Shift work and burnout among health care workers. *Occup Med (Chic Ill)*. 2014;64(4):279–86.
  9. Musakali S, Aggrery M, Njonge T. Relationship between gender and job - burnout among student affairs personnel in kenyan universities. 2014;(1):6–23.
  10. Hulsegge G, van Mechelen W, Proper KI, Paagman H, Anema JR. Shift work, and burnout and distress among 7798 blue-collar workers. *Int Arch Occup Environ Health* [Internet]. 2020;93(8):955–63. Available from: <https://doi.org/10.1007/s00420-020-01536-3>
  11. Qiao Z, Chen L, Chen M, Guan X, Wang L, Jiao Y, et al. Prevalence and factors associated with occupational burnout among HIV/AIDS healthcare workers in China: A cross-sectional study. *BMC Public Health* [Internet]. 2016;16(1):1–7.
  12. Selamu M, Hanlon C, Medhin G, Thornicroft G, Fekadu A. Burnout among primary healthcare workers during implementation of integrated mental healthcare in rural Ethiopia: a cohort study. *Hum Resour Health*. 2019;17(1):58.

**Funding:** No funding sources

**Conflict of interest:** None declared

**Ethical approval:** The study was approved by the Institutional Ethics Committee