

Burnout and patient safety in operating room nurses during the COVID-19 pandemic: A cross-sectional study

Supplement 1: Table of burnout levels across the dimensions of emotional exhaustion, depersonalisation and personal accomplishment, stratified by socio-demographic and occupational characteristics (N = 233)

Characteristic		EE level (% low/moderate/high)	PA level (% low/moderate/high)	DP level (% low/moderate/high)
Gender	female	34.6 / 21.6 / 43.8	36.4 / 34.6 / 29.0	47.5 / 22.2 / 30.2
	male	46.5 / 22.5 / 31.0	43.7 / 26.8 / 29.6	33.8 / 29.6 / 36.6
Age	< 30 years	60.6 / 15.2 / 24.2	39.4 / 33.3 / 27.3	48.5 / 27.3 / 24.2
	30–40 years	28.8 / 27.3 / 43.9	25.8 / 34.8 / 39.4	40.9 / 16.7 / 42.4
	40–50 years	37.7 / 22.1 / 40.3	44.2 / 31.2 / 24.7	46.8 / 23.4 / 29.9
	> 50 years	36.8 / 19.3 / 43.9	45.6 / 29.8 / 24.6	38.6 / 33.3 / 28.1
Home situation	single	42.2 / 19.3 / 38.6	43.4 / 27.7 / 28.9	45.8 / 24.1 / 30.1
	cohabiting	36.0 / 23.3 / 40.7	36.0 / 34.7 / 29.3	42.0 / 24.7 / 33.3
Work location	north	40.8 / 18.4 / 40.8	40.8 / 30.6 / 28.6	52.0 / 20.4 / 27.6
	centre	37.9 / 24.1 / 37.9	31.0 / 34.5 / 34.5	36.2 / 25.9 / 37.9
	south and islands	35.1 / 24.7 / 40.3	41.6 / 32.5 / 26.0	37.7 / 28.6 / 33.8
OR work experience	< 5 years	43.6 / 14.5 / 41.8	29.1 / 34.5 / 36.4	45.5 / 21.8 / 32.7
	5–15 years	29.6 / 27.2 / 43.2	30.9 / 30.9 / 38.3	45.7 / 21.0 / 33.3
	> 15 years	42.3 / 21.6 / 36.1	50.5 / 32.0 / 17.5	40.2 / 28.9 / 30.9
Academic background	diploma or bachelor degree	37.2 / 20.9 / 41.9	38.5 / 29.7 / 31.8	43.2 / 26.4 / 30.4
	postgraduate qualification	40.0 / 23.5 / 36.5	38.8 / 36.5 / 24.7	43.5 / 21.2 / 35.3
Role/s performed	multiple role	37.4 / 20.0 / 42.6	36.5 / 33.9 / 29.6	37.4 / 24.3 / 38.3
	instrument nurse	39.8 / 21.6 / 38.6	38.6 / 33.0 / 28.4	44.3 / 27.3 / 28.4
	nurse anaesthetist	34.6 / 26.9 / 38.5	50.0 / 23.1 / 26.9	65.4 / 15.4 / 19.2
	circulating nurse	50.0 / 50.0 / 0.0	25.0 / 25.0 / 50.0	50.0 / 25.0 / 25.0
Work surgical specialty	orthopaedic	41.0 / 20.5 / 38.5	38.5 / 38.5 / 23.1	41.0 / 30.8 / 28.2
	general surgery	32.1 / 22.6 / 45.3	38.0 / 32.8 / 29.2	40.1 / 27.7 / 32.1
	vascular surgery	52.9 / 23.5 / 23.5	52.9 / 23.5 / 23.5	64.7 / 11.8 / 23.5
	cardiac surgery	55.2 / 20.7 / 24.1	44.8 / 27.6 / 27.6	55.2 / 10.3 / 34.5
	neurosurgery	36.4 / 18.2 / 45.5	9.1 / 27.3 / 63.6	27.3 / 18.2 / 54.5

EE = emotional exhaustion, PA = personal accomplishment, DP = depersonalisation

Note: Values are reported as percentages of participants with low / moderate / high levels according to Maslach burnout inventory cut-off scores.

Supplement 2: Bivariate analysis of burnout dimensions and professional experience questions 1, 3 and 4 (N = 233)

Professional experience question	Response	EE level (% low/ moderate/high)	t-test χ^2	PA level* (% low/ moderate/high)	t-test χ^2	DP level (% low/ moderate/high)	t-test χ^2
Question 1: Have you ever encountered risk / made mistakes that could potentially harm the patient, in the last year of work?	no	41.8 / 23.0 / 35.2		40.0 / 33.3 / 26.7		48.5 / 25.5 / 26.1	
	yes	29.4 / 19.1 / 51.5	0.06	35.3 / 29.4 / 35.3	0.42	30.9 / 22.1 / 47.1	0.01
Question 3: Has a colleague told you that they made a mistake that could cause damage to the patient, in the last year of work?	no	45.3 / 20.3 / 34.5		39.2 / 34.5 / 26.4		50.0 / 21.6 / 28.4	
	yes	25.9 / 24.7 / 49.4	0.01	37.6 / 28.2 / 34.1	0.40	31.8 / 29.4 / 38.8	0.02
Question 4: Do you think that your job performance has decreased in the last year?	no	53.5 / 20.1 / 26.4		42.4 / 29.2 / 28.5		51.4 / 22.2 / 26.4	
	yes	13.5 / 24.7 / 61.8	0.00	32.6 / 37.1 / 30.3	0.28	30.3 / 28.1 / 41.6	0.00

Note: Values are reported as percentages of participants with low / moderate / high levels according to Maslach burnout inventory cut-off scores.

Supplement 3: Multivariable logistic regression for risks/mistakes

	Predictor		Odds ratio (95% CI)	p-value
Demographic characteristics	Gender	female	1.46 (0.70–3.02)	0.310
		< 30 years	0.51 (0.13–1.92)	0.320
	Age	30–40 years	0.34 (0.11–1.01)	0.052
		40–50 years	0.39 (0.17–0.91)	0.030
Professional characteristics	OR work experience	< 5 years	2.11 (0.83–5.37)	0.117
		> 15 years	0.70 (0.29–1.73)	0.444
	Role/s performed	instrument nurse	1.25 (0.62–2.51)	0.539
		nurse anaesthetist	1.29 (0.45–3.69)	0.632
		circulation nurse	0.84 (0.07–10.35)	0.895
		general surgery	0.66 (0.28–1.54)	0.335
		vascular	0.63 (0.15–2.58)	0.518
	Work surgical specialty	cardiac surgery	1.15 (0.37–3.51)	0.811
		neurosurgery	0.64 (0.13–3.28)	0.595
Burnout dimensions	Emotional exhaustion (per point)		1.02 (0.99–1.05)	0.214
	Depersonalisation (per point)		1.08 (1.02–1.15)	0.007
	Personal accomplishment (per point)		1.00 (0.96–1.04)	0.955

CI = Confidence interval; 'per point' = effect per one-point increase in the Maslach burnout inventory dimension score.

Reference categories: male (gender); > 50 years (age); 5–15 years (OR work experience); multiple role (role/s performed); orthopaedic (work surgical specialty).

Supplement 4: Multivariable logistic regression for decreased performance

	Predictor		Odds ratio (95% CI)	p-value
Demographic characteristics	Gender	female	0.39 (0.18–0.82)	0.013
		< 30 years	0.16 (0.03–0.79)	0.024
	Age	30–40 years	0.32 (0.10–1.02)	0.053
		40–50 years	1.08 (0.45–2.57)	0.865
Professional characteristics	OR work experience	< 5 years	0.73 (0.26–2.02)	0.539
		> 15 years	0.45 (0.18–1.10)	0.080
	Role/s performed	instrument nurse	0.80 (0.39–1.63)	0.536
		nurse anaesthetist	0.16 (0.04–0.64)	0.009
		circulation nurse	2.20 (0.21–23.56)	0.515
	Work surgical specialty	general surgery	1.94 (0.81–4.65)	0.137
		vascular	0.66 (0.13–3.33)	0.617
		cardiac surgery	0.70 (0.19–2.62)	0.595
		neurosurgery	0.68 (0.12–3.85)	0.662
Burnout dimensions	Emotional exhaustion (per point)		1.10 (1.06–1.14)	<0.001
	Depersonalisation (per point)		0.98 (0.92–1.04)	0.522
	Personal accomplishment (per point)		1.00 (0.96–1.04)	0.993

CI = Confidence interval; 'per point' = effect per one-point increase in the Maslach burnout inventory dimension score.

Reference categories: male (gender); > 50 years (age); 5–15 years (OR work experience); multiple role (role/s performed); orthopaedic (work surgical specialty).