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1-4 September 2026 | Toronto, Canada

Beyond the Operating Room

Burnout and Resilience in Metabolic & Bariatric Surgery Surgeons

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TORONTO2026

The Future of Obesity Management:
From Weight Loss to Health Gain

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IFSO GLOBAL SURGEON WELL-BEING STUDY
Young IFSO Executive Board Study

Beyond the Operating Room

Burnout and Resilience in Metabolic & Bariatric Surgery Surgeons

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IRAN UNIVERSITY OF MEDICAL SCIENCES

- I have no potential conflict of interest to report

Introduction & Background

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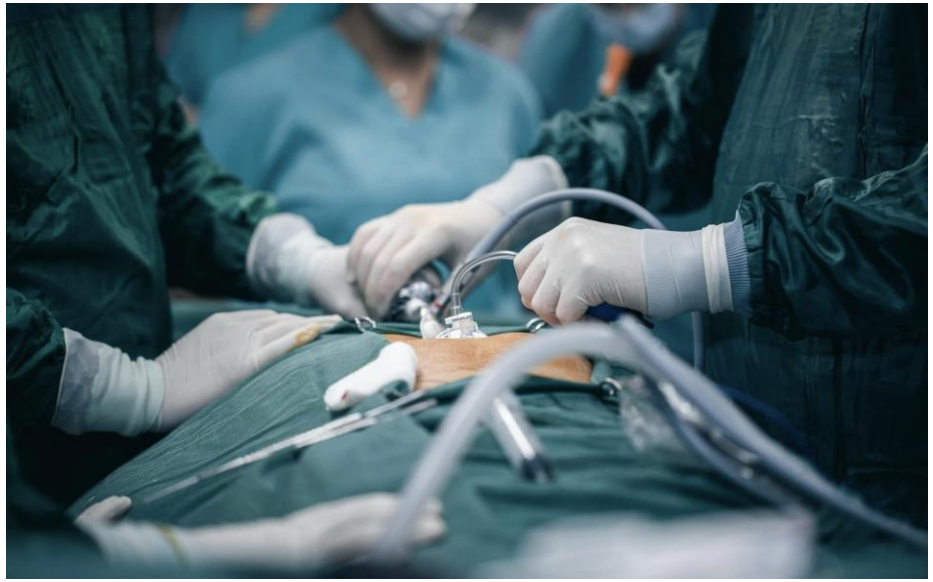
WHY THIS STUDY MATTERS

The Growing Burden of Obesity

- Obesity rates continue to rise worldwide
- MBS remains the most effective long-term treatment
- Alternative therapies (medications, endoscopic treatments) are emerging

Unique Challenges in MBS

- Technically demanding procedures with steep learning curves
- Patients with multiple comorbidities increasing perioperative risk
- Complex emergency/revisional surgeries
- Long-term follow-up requirements
- Medico-legal issues and demanding patients



The Gap: No published data on how MBS surgeons are affected by these stressors in terms of mental and physical health

Study Objectives & Methods

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STUDY DESIGN

Objective: Evaluate the prevalence and determinants of burnout and resilience among MBS surgeons worldwide

Study Design

Study Type
Cross-sectional online survey

Duration
January - March 2025

Platform
SurveyMonkey

Participants

419 IFSO members invited → **330 completed (79%)**

Global representation across multiple countries

Response rate: ~5.24% of ~8,000 eligible IFSO members

Survey Instrument (63 items)

Maslach Burnout Inventory (MBI)
Validated burnout assessment

Connor-Davidson Resilience Scale (CD-RISC-10)
Resilience measurement

Custom-designed questions
Demographic, lifestyle, and professional

419
IFSO members invited

330 (79%)
completed the survey

63
survey items

3
validated + custom instruments

Global Distribution of Participants

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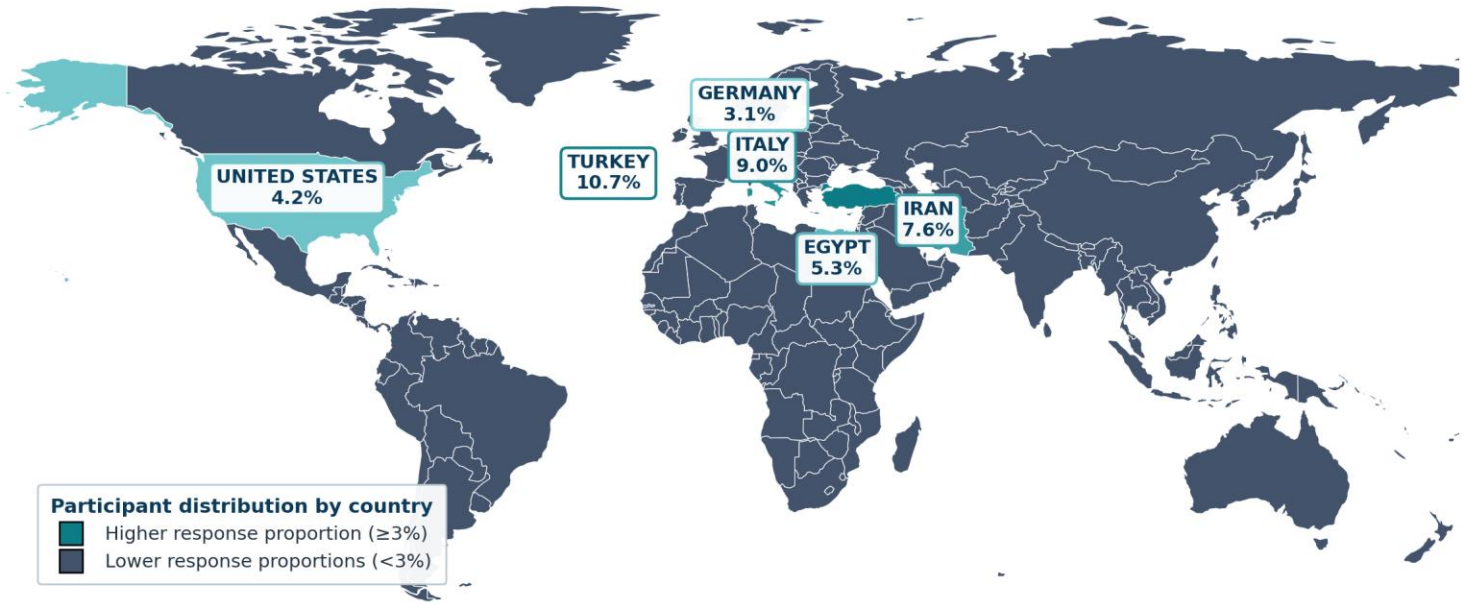
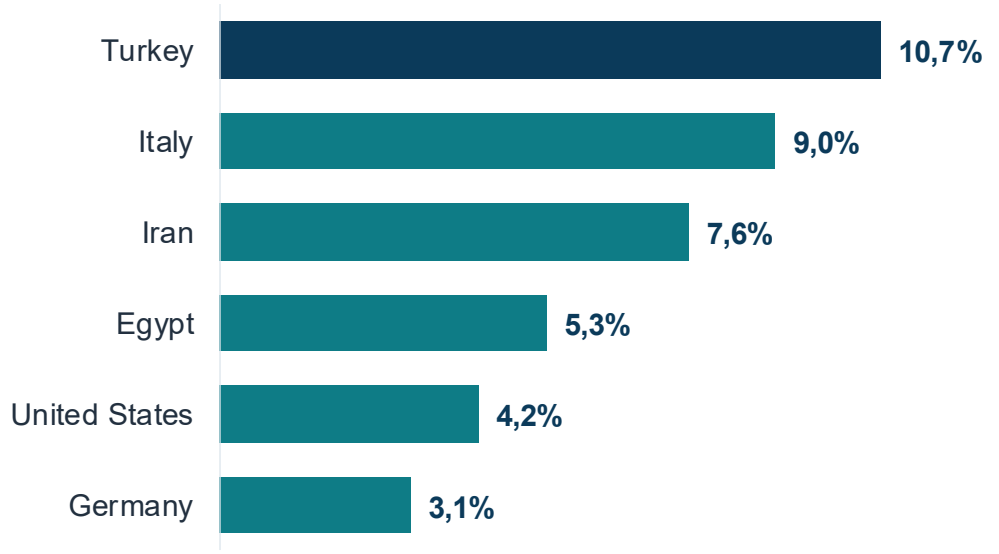
PARTICIPANT DISTRIBUTION BY COUNTRY



Top Responding Countries:



~8,000
Total eligible IFSO members

~5.24%
Response rate

Countries shaded in darker tones represent regions with lower response proportions

Darker shaded regions represent lower response proportions (<3%)

Broad international representation across IFSO regions; remaining 72.7% distributed across 30+ countries.

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Participant Profile — Who Responded

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SECTION 03 · COHORT

A globally representative, seasoned cohort (n = 330)

LIFESTYLE HABITS

Physical Activity

"Sometimes" 33.7%

"Often" 27.0%

Sleep Quality

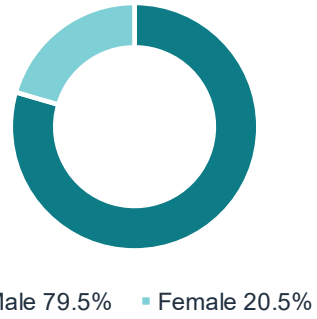
"Fair" 37.2%

"Good" 28.2%

"Poor" 27.9%

DEMOGRAPHICS

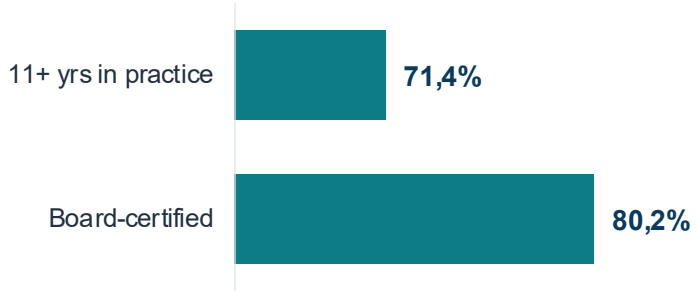
Sex, marital status & age



Male-predominant, mid-career cohort — typical of active MBS surgeons worldwide. Largest age group: 35–44 years (45.5%); 77.2% married.

EXPERIENCE

Practice maturity



A seasoned cohort — most respondents have crossed the early-career threshold and carry the bulk of global MBS volume.

29.0%
needed psychological support

Professional Practice Characteristics

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SURGICAL PRACTICE PROFILE

Practice Settings

Private practice — 28.9%

Both academic and private — 27.4%

Academic institutions — 21.9%

Experience

11-20 years — 36.7%

20 years — 34.7%

Senior, high-volume workforce: 71.4% with >10 years in practice

Workload

40-59 hours/week — 44.4%

60 hours/week — 27.5%

On-call Shifts

1-5 / month — 40.5%

6-10 / month — 29.3%

Research & Teaching

79.7%
involved in research

82.4%
involved in teaching / training

Work Environment Rating

"Good" — 35.1%

"Excellent" — 27.8%

62.9% rate their environment good or excellent

Surgical Practice Details

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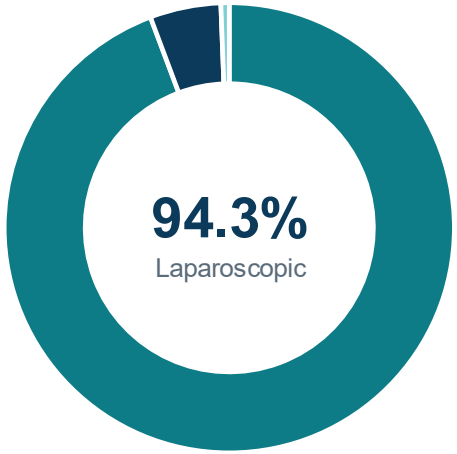
OPERATIVE PRACTICE PATTERNS

Dominant Surgical Technique



- Laparoscopic **94.3%**
- Robotic **5.1%**
- Endoscopic **0.6%**

"Laparoscopic surgery was the dominant technique used (94.3%)"

Laparoscopic approach: surgeon operating via monitor guidance

Primary Procedures

Both SG and Gastric Bypass equally	38%
Sleeve Gastrectomy alone	38%
Gastric Bypass alone	16.3%

Surgical Position

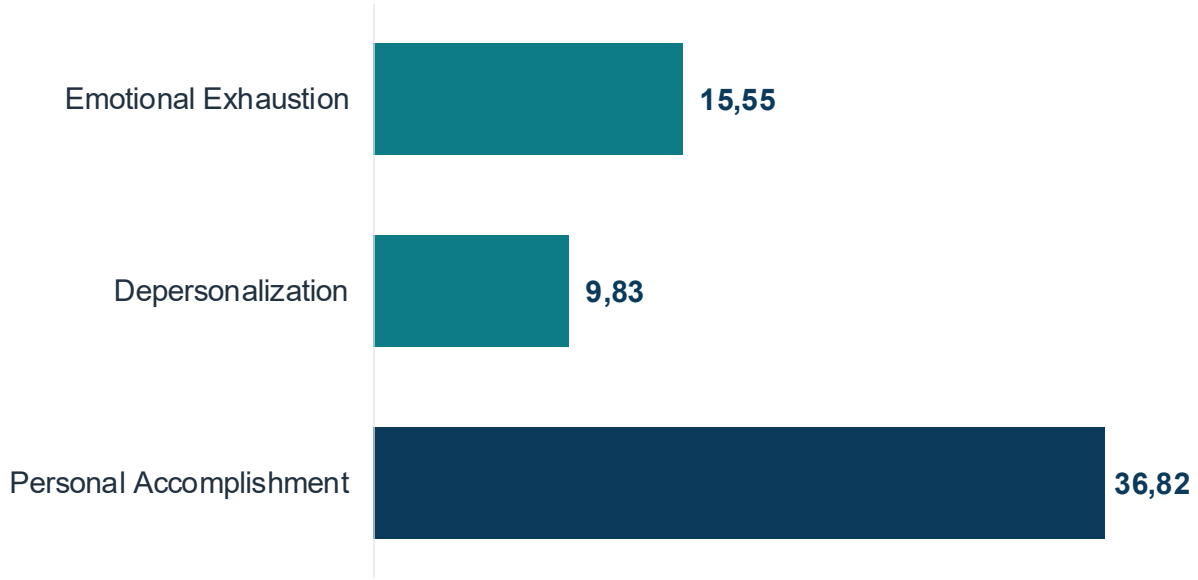
French position (supine, split-leg)	77.1%
American position	18.2%

Burnout Levels — MBI Scores

SECTION 04 · RESULTS

Mean scores ± SD across the three Maslach Burnout Inventory subscales (n = 330)

MBI Subscale Mean Scores



Reading the Scores

LOW

Emotional Exhaustion

15.55 ± 9.65

Surgeons are not, on average, emotionally depleted despite heavy caseloads.

LOW–MOD

Depersonalization

9.83 ± 7.65

Cynical detachment is present but not dominant in the cohort.

HIGH

Personal Accomplishment

36.82 ± 8.89

Critical finding — strong sense of competence and meaningful achievement.

"Overall, MBS surgeons showed low to moderate burnout levels with high personal accomplishment"

High personal accomplishment offsets emotional exhaustion — a critical resilience buffer.

Key Determinants of Burnout

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FACTORS ASSOCIATED WITH HIGHER BURNOUT SCORES

Significant Predictors (p<0.05)

- ✓ Older Age
- ✓ Lower Physical Activity
- ✓ Poor Sleep Quality
- ✓ More Years of Experience
- ✓ Longer Weekly Work Hours **≥60h** + on-call
- ✓ Academic + Private Practice (for depersonalization)

Statistical Significance

Sleep quality	$\chi^2 = 50.66$	p<0.001
Age	$\chi^2 = 20.31$	p<0.001
Physical activity	$\chi^2 = 13.92$	p=0.008

Higher Personal Achievement associated with:

- **Older age, more exercise, better sleep, more experience**
- **Academic-only settings**

✓MOST of key determinants are modifiable — interventions targeting sleep, exercise, and workload can move the needle

✓Age and experience present a dual effect: more years correlate with more exhaustion, but also with more personal accomplishment — a paradox worth exploring in longitudinal follow-up.

Resilience Levels — CD-RISC-10

SECTION 04 · RESULTS

High overall resilience, corroborated by satisfaction and collaboration indicators

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28.75

± 6.13 SD

Mean CD-RISC-10 Score

Classified as HIGH overall resilience (max 40)

82%

of respondents

Report Job Satisfaction

Strong personal accomplishment and satisfaction despite daily pressures

63%

rate good / excellent

Departmental Peer Collaboration

Collegiality is a meaningful resilience asset

The CD-RISC-10 mean of 28.75 (±6.13) places this global MBS cohort firmly in the HIGH resilience band.

Resilience here is not merely the absence of burnout — it is an active capacity to adapt, recover, and find meaning under sustained occupational load. The high satisfaction (82%) and collaboration (63%) rates corroborate that MBS surgeons, despite known stressors, derive genuine professional reward from their work and report functional peer relationships.

Resilience Scores - CD-RISC Results

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CONNOR-DAVIDSON RESILIENCE SCALE (CD-RISC-10)

Mean Score

28.75 ± 6.13

Scale Range: 0 (not true at all) to 4 (true nearly all the time)

"Nearly 75% of respondents feel they are frequently or almost always able to handle changes"

Interpretation

"Metabolic and bariatric surgeons show high capacity for resilience"

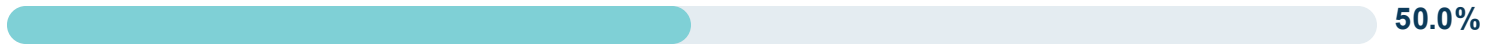
Key Findings

~75% Able to adapt to change — "frequently/almost always"

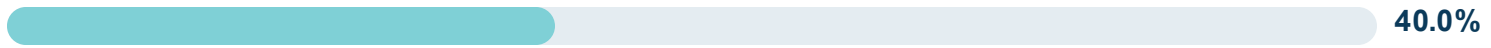
~75% Feel capable of handling any situation

~90% Feel self-confident

~50% Reach targets — "usually"



~40% Tackle problems with good humor — "often"



Musculoskeletal Injuries & Ergonomics

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THE PHYSICAL TOLL OF MBS

Prevalence: **52.2%** reported musculoskeletal injuries

Relationship to Surgical Technique

Laparoscopic surgery: 94.3% - High physical strain

French position: 77.1% - Associated with back/shoulder pain

"It is still unclear whether different MBS procedures are associated with varying rates of musculoskeletal injuries"

Current Literature Comparison

AlSabah et al. (2019)

66%
experienced discomfort

27.2%
reduced caseload due to pain

Most affected:

Back — 52%

Shoulders — 41%

Neck — 35%

Shoulder region: a top pain location among laparoscopic surgeons

Robotic Surgery Impact

- Reduced upper extremity strain but increased static neck positioning
- Lower REBA scores (3.0 vs 6.0 for laparoscopic)
- Future implications for ergonomics and injury prevention

Work-Related Stressors

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SECTION 05 · DETERMINANTS

Prevalence of four occupational burdens in MBS practice

Prevalence of Work-Related Stressors (%)

73%

Financial Instability

Fee-for-service volatility and seasonal nature of elective bariatric caseloads.

55%

Patient Expectations

Weight-loss outcomes, complication anxiety, and demand for sustained results.

52%

MSK Pain

Back (49%) and shoulders (39%) — prolonged laparoscopic rigging posture.

44.6%

Documentation

Long-term follow-up workflows — the continuity that defines quality MBS care.

Protective Factors — What Builds Resilience

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SECTION 05 · DETERMINANTS

Three independently significant predictors of higher resilience and personal accomplishment

82.4%

of respondents teach

Teaching Involvement

Involvement in education correlates directly with higher personal accomplishment scores. The act of teaching reinforces professional meaning and consolidates expertise.

p<0.05 (correlation)

Higher CD-RISC

vs. mixed / private practice

Academic-Only Practice

Surgeons in academic-only practice settings show significantly higher resilience scores — likely reflecting protected academic time, structured mentorship, and reduced fee-for-service volatility.

p = 0.029

11+ years

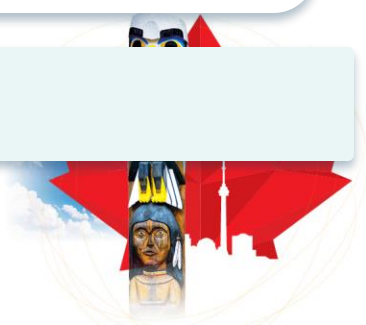
independently predicts resilience

Years of Experience

More years in practice is an independent predictor of greater resilience, even after controlling for age. Cumulative mastery, peer network depth, and refined case selection appear to convert experience into resilience.

p = 0.001

Resilience is partly structural — protect teaching time, academic roles, and experienced surgeons.



Work Environment & Protective Factors

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THE ROLE OF COLLEGIAL SUPPORT

Cohesive teams: the strongest buffer against surgical burnout

Work Environment Ratings

"Good"

35.1%

"Excellent"

27.8%

Evidence from Literature

- Supportive work environment = strongest buffer against burnout
- Cohesive teams = lower burnout scores
- Collegial interactions sustain engagement and purpose

"A growing body of evidence shows that a supportive work environment is one of the most substantial buffers against surgical burnout"

Professional Relationships Link to:

- Better physical and mental health
- Heightened motivation for lifelong learning
- Improved job performance

The Problem:

Physician distress → **Undermines quality of care** → **Accelerates staff turnover**

Clinical Implications — The Burnout-Resilience Paradox

SECTION 06 · DISCUSSION

Low-to-moderate burnout coexisting with high resilience is not a contradiction — it is the central finding

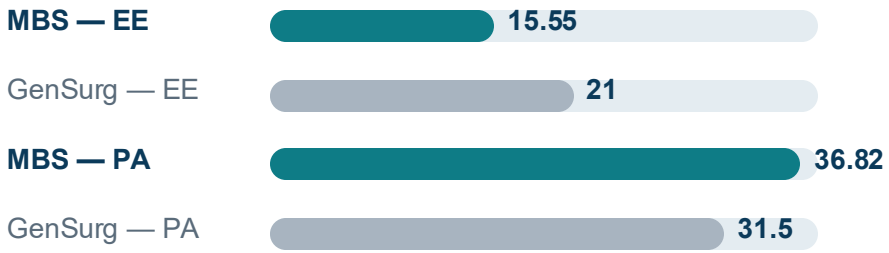
The Paradox

MBS surgeons in this cohort simultaneously carry significant occupational burdens — musculoskeletal injury (52%), income volatility (73%), administrative load (44.6%) — and yet report LOW burnout and HIGH resilience. This is not survey error.

Personal accomplishment, job satisfaction, and peer collaboration function as active counterweights that absorb occupational stress before it manifests as exhaustion or depersonalization. The implication: burnout is not the inevitable endpoint of a high-stress specialty — meaning and mastery are protective.

Cross-Specialty Context

General surgery and surgical subspecialties typically report Emotional Exhaustion means in the 18–24 range and Personal Accomplishment means around 30–33.



MBS sits below typical EE and above typical PA — long-term patient relationships and visible outcomes reinforce accomplishment.

High personal accomplishment is the load-bearing wall of MBS well-being. Interventions that erode it (cutting teaching, fragmenting follow-up, reducing autonomy) will accelerate burnout.

Actionable Interventions for MBS Surgeon Well-Being

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SECTION 07 · ACTION

Four modifiable domains, evidence-mapped to the study determinants

1 Sleep & Recovery

Sleep quality (p<0.001)

- Protect circadian-friendly call rotation
- Structured post-call recovery time
- Screen & treat sleep disorders in wellness programs

2 Activity & Ergonomics

Physical inactivity (p=0.008); MSK pain (52%)

- Mandate ergonomic laparoscopic rigging assessment per OR
- Subsidize fitness or physiotherapy programs
- Institutional MSK-injury surveillance for surgeons

3 Workload & Admin Streamlining

Workload ≥60h + on-call (p=0.019); documentation (44.6%)

- Cap weekly clinical hours in departmental policy
- Deploy AI-assisted documentation for follow-up
- Protected non-clinical time for complex case review

4 Teaching, Academic & Peer Support

Teaching (82.4%); academic practice (p=0.029); experience (p=0.001)

- Formalize teaching appointments
- Mentorship dyads: junior + senior surgeons
- Peer-support networks for adverse events

Findings → **Tailored Interventions** → **Sustained well-being · reduced attrition · safer patient care**

Take-Home Messages

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SECTION 08 · CONCLUSION

What to remember and where the field goes next

01 Burnout is low-to-moderate, resilience is high

Despite heavy occupational load, MBS surgeons report LOW emotional exhaustion (15.55), high personal accomplishment (36.82), and high resilience (28.75). This is a healthy specialty — by global comparison.

02 Sleep is the strongest modifiable lever

Sleep quality affects all three MBI domains ($p<0.001$). Any surgeon-wellness program that does not address sleep is incomplete.

03 Personal accomplishment is the load-bearing wall

High PA buffers exhaustion. Interventions must protect, not erode, the structures that produce it — teaching, autonomy, follow-up continuity, peer collaboration.

04 Target four modifiable domains

Sleep & recovery; physical activity & ergonomics; workload & admin streamlining; teaching & academic structure. Future studies should identify the most effective adaptations tailored to MBS.

Surgeon well-being is patient safety.

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