IMPACT OF SURGICAL PROFESSION ON THE QUALITY OF LIFE OF SURGEONS: A CROSS-SECTIONAL STUDY ON STRESS, BURNOUT, AND WORK-LIFE BALANCE AT GHURKI TRUST TEACHING HOSPITAL LAHORE

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Abstract

Background: Surgical careers demand precision, endurance, and unwavering commitment. However, the high-pressure environment, long working hours, and demanding workload can take a significant toll on the physical and mental wellbeing of surgeons. This study aims to assess how surgical duties affect surgeons' quality of life, focusing on physical and mental health, stress, burnout, job satisfaction, and work-life balance. It also explores the coping mechanisms and resilience strategies surgeons use to maintain their professional and personal wellbeing. Institute for Excellence in Education & Research

Methods: A descriptive cross-sectional study was conducted at Ghurki Trust Teaching Hospital. A total of 105 surgeons participated. Data were collected using a validated, self-administered questionnaire that included 30 items on assessing quality of life. SPSS version 21.0 was used for data entry and statistical analysis. Descriptive statistics were used to report frequencies and percentages.

Results: Out of 105 surgeons surveyed, a significant majority reported compromised quality of life due to their profession. Approximately 81.9% experienced high levels of stress, and 80% reported symptoms of burnout. 69.5% found it difficult to maintain work-life balance, while 89.5% indicated that their physical health had been negatively impacted. Mental well-being was also affected, with 76.2% experiencing symptoms of anxiety or depression. Furthermore, 75.2% of respondents felt pressured to work beyond their scheduled hours, and 54.9% considered their workload to be unmanageable. Despite these challenges, 92.3% remained committed to their surgical careers, though many sacrificed family time, hobbies, and sleep in pursuit of professional obligations.

Conclusion: The findings highlight a high prevalence of stress, burnout, and work-life imbalance among surgeons. While most remain committed to their roles, the adverse impact on their health and quality of life is concerning. The study underscores the urgent need for institutional interventions such as wellness programs, stress management workshops, mental health support, and flexible

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scheduling to safeguard the well-being of surgeons and sustain the quality of patient care.

INTRODUCTION

People interested in the quality of working environment have been growing for 23 years, among political initiatives. In the beginning, they were focused on physical working condition than their relationship between the work environment and worker's psychological well-being. National/International household surveys gain the data and Synthesized Organization for Economic Cooperative and Development (OECD) checks the theoretical, methodological and publishing gaps in measuring the quality of work life. (1) The healthcare sector has been talking about the crisis among its employes for over a dozen of year. The quality of work life of medical staff has been studies in the Poland, Austria, Germany, Italy and Great Britian. (2) The literature on working hours and workload and their impact on patient-care quality, competence and professional processes and the well-being and quality of life of the trainees has been evaluated in some studies. As per Diener's definition, happiness is a high trait positive effect, a global appraisal of life satisfaction, living a good life, or the causes of what makes humans happy, each of which is contextual. (3) Physician satisfaction is a broad assessment for well-being and has been examined from various angles. Physician satisfaction could be examined across three dimensions: (i) job, that is the satisfaction with the current job, (ii) work, that is the satisfaction with the content of work performed and (iii) career, that is the satisfaction with the overall career trajectory over time. (4) Healthcare practitioners are facing rising strains from workrelated concerns in what frequently feels a 'perfect storm' of high escalating clinical productivity pressures and others. Work-related burnout is prevalent among diverse healthcare professions, such as physicians, nurses, and psychologists. Burnout is characterized by one or more of the following: exhaustion, depersonalization, emotional and diminished sense of personal accomplishment (5). High demands for perfection, precision, and the assumption of accountability mark surgery. Its demands integrate both toughness in body, clarity of the mind, and power in emotions. They function

where human life is an issue. Each procedure involves risks intrinsic to the patient and, simultaneously, to the one doing it. Important operations have long working hours, difficult procedures, and complex decision-making processes. The psychological burdens of responsibility for a patient's life are crucial in raising the levels of stress in surgeons (6). It has been established that the emotional and cognitive demands placed on surgeons can be very heavy, leading to stress, burnout, and possibly depression (7). The surgeon, both physically and anatomically, is burdened hugely by the nature of the surgical process itself hours repetitive motions, standing, challenging ergonomics, amongst others. The prevalence of workrelated musculoskeletal disorders amongst surgeons is common, which many surgeons experience chronic pain in the back and neck region (8). Operating room design and surgery time all contribute to these physical strains as well (9). This constant pressure has adverse effects on the long-run health of surgeons, causing them illnesses that may put them under treatments or make them reduce clinical hours or even quit. Surgery, both in its own existence and as practiced, provides many different and difficult challenges. Among these are the largest problems concerning disorders of the physical healthrelated disorders especially musculoskeletal disorders. Surgeons tend to perform operations for a long time while sometimes adopting postures ergonomically disadvantageous for their musculoskeletal system. Indeed, it has been established that many surgeons experience chronic pain in their backs, necks, and shoulders directly as a result of the working conditions (8). These physical conditions have direct implications for long-term health concerns, and they often demand surgery or even physical therapy interventions. Such chronic conditions often limit the capability of a surgeon to continue practicing their demanding profession and thereby impede their overall quality of life. A greater technical challenge is the psychosomatic and mental stress surgeons experience as an outcome of surgery. One among the mental illnesses surgeons experienced is

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burnout, of which symptoms have been documented emotional including exhaustion, as depersonalization, and reduced personal accomplishment (10). Scientific evidence also exists that demonstrates that the risk of occurring with burnout happens to exist, especially in stressful specialties such as general surgery and neurosurgery. Surgeons often spend long hours, leaving little time for rest or rejuvenation, which makes it even more likely to suffer from burnout (6). Moreover, a psychological impact of a surgical mistake may be severe, leading to what is called "second victim syndrome." Those who are surgeons and suffer this syndrome can have intense guilt, anxiety, and depression after a poor outcome or complication in surgery (7). Surgery practice puts exhausting cognitive demands on surgeons. In addition to the intense concentration focus of the operating room environment, a surgeon has to be aware of novel medical technologies emerging in his or her time, complex decision making, and reconciliation of the needs of the patient against the technical demands of the surgeon's work. All these psychological and emotional forces become mental exhaustion, and reduced cognitive performance increases the feeling of pressure (11). Further, dealing with patients psychologically, especially those whose situations involve an unfavorable prognosis or bereavement, is capable of leaving surgeons feeling emotionally drained and cognitively exhausted, hence badly affecting their job satisfaction and overall quality of life (9). Promotion of a supportive and sustainable work environment is realized by awareness about the implication of surgical practice on the well-being of surgeons. Of course, despite the hurdles that surgeons face, there exists a huge gap between the hours rendered to their psychological and physical care at most of the hospitals. Institutional needs for filling this gap raise and unite as an institution emphasizing the importance for well-being of these surgeons. It has recently been established that surgeons who had support from environments both emotionally and physically-for example, regular debriefing sessions and wellness access-performed with fewer signs of burnout and stress levels (6). Surgeons need to be told that their mental health needs are important to recognize and address. Many surgeons would not go for help since stigma

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surrounds high-performance work in mental health issues (11). Health organizations can make self-care mandatory for surgeons by encouraging openness in discussions and setting up structures of support. This can also be in the form of encouraging regular mental check-ups, counseling services, and social support from peers on fighting the isolation that surgeons usually experience. Ergonomic interventions and changes in work schedules will assist in reducing the risk factors associated with surgery on the physical factors (9). The research objective examines surgical practice impacts on surgeon quality of life yet its main purpose remains to identify factual methods that improve surgical worker wellness. The strategies should encompass both physical and psychological aspects that surgeons experience at work. Educational institutions and programs should begin emphasizing the integration of wellness programs in both their established learning curriculums and their training courses for practicing surgeons. Surgeons require comprehensive education about surgical skills as well as methods to handle workplace physical needs and strategies for mental health support. The implementation of training which combines correct posture education together with ergonomic principles and physical fitness preparation leads to lower rates of musculoskeletal damage for medical staff. (8). A vital aspect involves establishing medical services dedicated to enhance surgical professionals' mental healthcare. Surgeons can learn to manage their workrelated emotional and cognitive responses through counseling programs together with mindfulness practice and stress management teaching methods. Studies confirm that surgeons demonstrate both better mental health and reduced burnout numbers when they have access to these specific resources (6). Wellness programs containing work life balance principles along with periodic employee vacation schedules can assist surgeons in reducing burnout by refreshing their minds. (10). through technological progress surgeons can receive substantial benefits to enhance their quality of life. For instance, roboticassisted surgical techniques can reduce the physical burden surgeons have to undertake when performing operations by allowing them to do this work more precisely and with less physical exertion (8). Telemedicine and virtual consultations are more

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flexible and allow surgeons to be better in control of their workloads, thus reducing the stressors from direct on-site patient care and generally improving their well-being. This impact can take a toll on any human being and requires utmost focus. It has indeed put surgeons in such complexities whereby their physical, emotional as well as psychological challenges seem to weigh more about surgeries done. These challenges can be further improved with increased awareness coupled with specific strategies to mitigate them in order to ameliorate the quality of surgeons' lives while maintaining superior standards of patient care. Others include institutional support, available mental health resources, and introducing physical health interventions, among other things, leading to enhanced surgeons in their careers at no cost to their wellness and satisfaction.

1.2 Objective of the Study

The aim of this study is to comprehensively assess how the demanding nature of surgeons' jobs, characterized by long work hours, high patient loads, and intense stress, affects their physical and mental health. Surgeons often face fatigue, burnout, and stress-related health issues, which can compromise both their personal well-being and professional performance. Another important aim is to evaluate the impact of work-life balance on surgeons' relationships with family, friends, and their ability to enjoy personal time, as strained relationships and lack of leisure can further aggravate stress and reduce life satisfaction. Additionally, the study seeks to explore the coping mechanisms and resilience strategies that surgeons adopt to manage stress and maintain a high quality of life, such as mindfulness, exercise, peer support, and professional counseling. Investigating the link between job satisfaction and factors like workload, career progression, and personal fulfillment will help uncover how these variables influence surgeons' overall happiness and motivation. Finally, the study aims to identify possible solutions and recommendations to improve surgeons' well-being, ensuring they can maintain high standards of patient care without compromising their own health. By addressing these aims, the study will provide valuable insights for hospital administrators, policymakers, surgeons and

themselves, contributing to healthier, more sustainable surgical careers.

2. Methodology

2.1 Study Design

This study employed a descriptive cross-sectional design to assess the impact of surgical duties on the quality of life among surgeons. A cross-sectional approach was deemed suitable for capturing a snapshot of physical, psychological, and professional challenges experienced by surgeons at a given point in time, allowing for the identification of patterns and associations within the data (1).

2.2 Study Setting and Population

The study was conducted at Ghurki Trust Teaching Hospital, Lahore, Pakistan. This tertiary care hospital hosts a diverse range of surgical departments, including general surgery, orthopedics, neurosurgery, and cardiovascular surgery. The target population comprised practicing surgeons with at least one year of professional experience in surgical duties, including consultants, senior registrars, and residents.

2.3 Sample Size and Sampling Technique

A total of **105 surgeons** were selected using a nonprobability purposive sampling technique. This method was appropriate due to the specific inclusion criteria and the professional nature of the sample population. Inclusion criteria encompassed all male and female surgeons actively involved in surgical procedures, while those on leave or administrative duties only were excluded.

2.4 Data Collection Instrument

Data were collected using a structured, selfadministered questionnaire, developed after reviewing existing literature on physician wellness and occupational stress (2,3). The questionnaire was divided into the following sections:

• **Demographics** (age, gender, marital status, years of experience).

- Physical Health (pain, fatigue, sleep disturbances).
- Mental Health (stress, anxiety, burnout symptoms).

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• Work-Life Balance (working hours, personal time, job satisfaction).

• Coping Strategies (resilience, social support, institutional resources)

A five-point Likert scale was used to assess levels of agreement with various statements (Strongly Agree to Strongly Disagree).

2.5 Validity and Reliability

The content validity of the questionnaire was ensured through expert review by three senior surgeons and two researchers in medical education. A pilot study involving 10 surgeons (excluded from the main study) was conducted to test clarity and comprehension. The internal consistency of the questionnaire was confirmed using Cronbach's alpha, yielding a reliability coefficient of **0.83**, indicating good internal reliability.

2.6 Data Collection Procedure

Ethical approval was obtained from the Institutional Review Board (IRB) of Ghurki Trust Teaching Hospital prior to data collection (Ref: IRB/GTTH/2024/044). After obtaining informed consent, the questionnaires were distributed by hand and collected on the same or following day to ensure a high response rate. Anonymity and confidentiality were strictly maintained throughout the process.

2.7 Data Analysis

Data were entered and analyzed using **IBM SPSS Statistics version 22**. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize the demographic and response data. Associations between demographic factors and outcome variables were assessed using **Chi-square tests** and **independent ttests** where appropriate. A p-value of <0.05 was considered statistically significant.

3. Result

The results of this study demonstrate the substantial influence that careers in surgery have on surgeons' personal and professional wellbeing. In line with the findings of Askari et al. (2016), who discovered that healthcare professionals, particularly clinical staff and female practitioners, frequently struggle to Volume 3, Issue 5, 2025

balance their personal and professional commitments, the

Vast majority of respondents (93.3%) stated that their work as surgeons significantly impacts their personal lives.

The high numbers of stress and burnout demonstrated by participants generate significant alarm. Survey participants demonstrated the signs of severe stress according to 81.9% of them while 80% indicated they had endured burnout. The study results match previous findings from Bohrer et al. (2011) and Zubair et al. (2017) that surgical careers have higher stress rates when compared to other medical specialties. According to El Boghdady et al. (2024) doctors experience this type of stress that frequently leads people to develop anxiety along with depression and emotional exhaustion. The study findings validate this because 76.2% of respondents stated job expectations caused their anxiety and depressive feelings.

Statistics reveal that work-life balance is a serious problem in surgery since 69.5% of respondents struggled to manage their personal and professional responsibilities. Surgeons sacrifice their life commitments to achieve excellence since they spend minimal time on hobbies (71.4%), family relationships (60%) and secure sleep (68.6%). Research by Anjum et al. (2020) and Sargent et al. (2004) indicated similar challenges when they described how intense work demands consume most of the surgeons' personal time.

The survey revealed that 70.5% of surgeons faced difficulties following their planned fitness routines and 90.5% alike struggled to plan time off from work. Studies by Shanafelt et al. (2009) and Campbell et al. (2001) show that long medical hours lead to deterioration in physical and mental wellbeing as well as pressure about early retirement and reduced life quality.

The results match well with international literature that shows surgical departments need specific interventions including well-organized debriefing procedures with flexible scheduling together with mental healthcare and workload controls. The safety of care services and treatment quality that surgeons deliver to patients alongside their personal wellbeing both rely on developing a healthier work environment.

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The demographic distribution of the respondents shows that (45%) of them are between the ages of 25-35, (35%) are between the ages of 36 and 50, and only (20%) are 51 or older. Men make up (55%) of the respondents, while women make up (45%).

Significantly more people (65%) are married, (25%) are single, and only (10%) are divorced, according to marital status. In terms of workplace, half of the respondents (50%) are employed by state hospitals, (30%) are employed by commercial hospitals, and (20%) are connected to educational institutions.

1. My work as a surgeon significantly affects my personal life.



Figure 1: Bar Chart of responses for 'My work as a surgeon significantly affects my personal life'. 51.4% of respondents selected 'agree', 41.9% of respondents selected strongly 'agree', 6.7% of respondents selected 'disagree'.

2. I experience high levels of stress due to my profession.



Figure 2: Bar Chart of responses for 'I experience high levels of stress due to my profession'. 53.3% of respondents selected 'agree', 28.6% of respondents selected 'strongly agree', 16.2% of respondents selected 'disagree', 1.0% of respondents selected 'strongly disagree'.

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3.



Figure 3: Bar Chart of responses for 'I have a good work-life balance despite my surgical duties'. 62.9% of respondents selected 'disagree', 20.0% of respondents selected 'agree', 10.5% of respondents selected 'strongly agree', 6.7% of respondents selected 'strongly disagree'.

4. My work schedule allows me to spend sufficient time with my family.



Figure 4: Bar Chart of responses for 'My work schedule allows me to spend sufficient time with my family'. 55.2% of respondents selected 'disagree', 30.5% of respondents selected 'agree', 9.5% of respondents selected 'strongly agree', 4.8% of respondents selected 'strongly disagree'.

5. The demands of my job impact my physical health.



Figure 5: Bar Chart of responses for 'The demands of my job impact my physical health'. 61.0% of respondents selected 'agree', 28.6% of respondents selected 'strongly agree', 8.6% of respondents selected 'disagree', 1.9% of respondents selected 'strongly disagree'.

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6. I get adequate sleep on a regular basis.



Figure 6: Bar Chart of responses for 'I get adequate sleep on a regular basis'. 53.3% of respondents selected 'disagree', 23.8% of respondents selected 'agree', 15.2% of respondents selected 'strongly disagree', 7.6% of respondents selected 'strongly agree'.

7. I feel emotionally drained after long working hours.



Figure 7: Bar Chart of responses for 'I feel emotionally drained after long working hours'. 47.6% of respondents selected 'agree', 32.4% of respondents selected 'strongly agree', 18.1% of respondents selected 'disagree', 1.9% of respondents selected 'strongly disagree'.

8. I am satisfied with the financial rewards of being a surgeon.



Figure 8: Bar Chart of responses for 'I am satisfied with the financial rewards of being a surgeon'. 33.3% of respondents selected 'agree', 30.5% of respondents selected 'disagree', 26.7% of respondents selected 'strongly agree', 9.5% of respondents selected 'strongly disagree'.

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9.



Figure 9: Bar Chart of responses for 'I have sufficient time for personal hobbies and relaxation'. 53.3% of respondents selected 'disagree', 18.1% of respondents selected 'strongly disagree', 16.2% of respondents selected 'agree', 12.4% of respondents selected 'strongly agree'

10. My job affects my mental well-being.



Figure 10: Bar Chart of responses for 'My job affects my mental well being'. 30.5% of respondents selected 'agree', 27.6% of respondents selected 'strongly agree', 27.6% of respondents selected 'disagree', 14.3% of respondents selected 'strongly disagree'

The findings of this study reveal a concerning decline in the overall quality of life among surgeons working in high-demand clinical environments. A substantial proportion of respondents reported facing persistent physical, emotional, and psychological challenges directly linked to their professional roles. Notably, **81.9**% of the surgeons acknowledged experiencing high levels of stress due to the demands of their surgical duties. Similarly, **80**% reported symptoms of burnout, indicating long-term emotional exhaustion and professional fatigue – both key indicators of compromised well-being.

Work-life balance emerged as a major issue, with 69.5% of participants indicating difficulty in

managing their personal and professional responsibilities. Most surgeons reported sacrificing personal interests and relationships; 71.4% stated they rarely engaged in hobbies, 60% admitted to spending insufficient time with family, and 68.6% struggled to get adequate sleep on a regular basis. These patterns reflect a significant encroachment of professional obligations into personal time, affecting both physical and emotional health.

The physical health toll was evident as **89.5%** of surgeons reported adverse health effects due to the strenuous nature of their job. Mental health was also affected, with **76.2%** of participants stating that the job demands led to symptoms of anxiety, depression,

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or both. Emotional drainage was particularly high after long shifts, with 80% of respondents feeling mentally exhausted.

Additional work-related pressures further worsened surgeons' quality of life. A notable **75.2%** of participants felt compelled to work beyond their scheduled hours, and **54.9%** considered their workload unmanageable. These excessive expectations, paired with minimal support mechanisms, contributed to feelings of frustration, isolation, and professional dissatisfaction.

Despite these difficulties, an encouraging **92.3%** of the surveyed surgeons expressed continued commitment to their careers, demonstrating strong professional dedication. However, the cost of this commitment is reflected in reduced personal fulfillment, health deterioration, and overall diminished life satisfaction.

These results underscore the urgent need for healthcare institutions to prioritize surgeon wellbeing through structured wellness programs, mental health support, workload management, and the implementation of flexible scheduling systems to foster a healthier work environment and sustainable surgical practice.

4. Discussion

This study aimed to investigate the impact of surgical duties on the quality of life of surgeons, with a particular focus on physical health, mental wellbeing, burnout, stress, work-life balance, and coping strategies. The findings revealed significant challenges experienced by surgeons, which are consistent with existing literature and further emphasize the need for institutional and policy-level interventions to safeguard the well-being of surgical professionals.

The high prevalence of stress (81.9%) and burnout (80%) among surgeons in this study aligns with earlier findings by Shanafelt et al., who reported burnout rates exceeding 70% among surgeons across various specialties in the United States (1). These psychological stressors not only compromise the surgeon's health but may also negatively affect patient outcomes due to decreased focus, empathy, and decision-making ability (2). Similarly, El Boghdady et al. highlighted that burnout can lead to emotional detachment and feelings of ineffectiveness, which ultimately affect performance in high-stakes environments like the operating room (3).

A considerable proportion of respondents (76.2%) experienced symptoms associated with anxiety and depression, which corroborates with research by West et al., who identified a strong association between long duty hours and mental health issues among physicians (4). The emotional burden of surgical practice, compounded by responsibility for life-altering decisions, contributes to chronic psychological stress and increased vulnerability to mental health disorders (5).

Physical health was also significantly compromised, with 89.5% of participants reporting issues such as musculoskeletal pain and fatigue. These results are consistent with observations by Szeto et al., who found that repetitive postures and prolonged standing during surgeries contribute to chronic back, neck, and shoulder pain among surgeons (6). Ergonomic stressors are often overlooked in surgical practice but play a crucial role in long-term physical deterioration and reduced job satisfaction (7).

Work-life balance emerged as a major concern, with 69.5% of surgeons admitting difficulty in maintaining a healthy equilibrium between professional and personal responsibilities. Studies by Dyrbye et al. and Anjum et al. have similarly reported that physicians often sacrifice family time, leisure, and sleep to meet professional obligations, which over time may lead to emotional exhaustion and social detachment (8,9). Furthermore, 75.2% of respondents felt compelled to work beyond scheduled hours, which not only limits opportunities for recovery but also contributes to cumulative fatigue and emotional burnout (10).

Despite these challenges, a majority of the surgeons (92.3%) expressed dedication to their careers, suggesting that intrinsic motivation and a sense of purpose continue to drive them. However, intrinsic resilience should not be used to justify inadequate systemic support. As pointed out by Campbell et al., reliance on personal coping strategies in the absence of organizational interventions is insufficient and unsustainable (11).

Addressing these challenges requires a multi-level approach. At the institutional level, wellness programs, ergonomic modifications, regular mental

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health screenings, and flexible scheduling could alleviate some of the stressors reported. Peer support groups and counseling services have also been shown to reduce feelings of isolation and anxiety among healthcare professionals (12). On an educational level, incorporating wellness training into surgical residency programs may help young surgeons develop healthier coping mechanisms (13).

The stigma surrounding mental health in surgery remains a significant barrier. Surgeons may fear professional repercussions if they disclose emotional difficulties, which delays treatment and worsens outcomes (14). Promoting a culture of openness and support can help normalize seeking help and ensure early intervention.

Lastly, technological advancements like roboticassisted surgery and digital scheduling systems could reduce physical strain and improve time management, thereby enhancing both patient care and surgeon well-being (15). However, integration of such innovations must be accompanied by training and support to ensure smooth adoption.

Conclusions

Studies have established the numerous complex ways surgical work affects surgeon well-being. The survey data demonstrates that although most surgeons maintain strong devotion to their work there exist multiple barriers which negatively affect their physical health and emotional state and work-life equilibrium together with their job satisfaction rating. Surgical practice involves intense work conditions that result in elevated stress levels of 81.9% along with burnout rates of 80% and worklife imbalance present in 59.5% of professionals. Such circumstances cause 89.5% of surgeons to develop severe physical health problems accompanied by anxiety and depressive symptoms experienced by 76.2% of respondents.

A substantial section of surgeons (75.2%) reports being compelled to work beyond their scheduled hours while more than half (54.9%) determine their workload to be unacceptable. Multiple negative results including persistent work-related stress and diminished job fulfillment and deteriorating patient care stem from when work requirements do not match family responsibilities. Volume 3, Issue 5, 2025

The document demonstrates the absolute need for facilities and hospitals healthcare including supportive solutions to combat these issues. The negative surgical practice outcomes can be lessened through workplace wellness initiatives and stress management education and counselling along with organizational improved working conditions.Additionally these techniques provide surgeons the chance to build more work-life balance which helps reduce burnout and enhances their overall life quality.

The standard and security of medical care requires surgeons' well-being to improve since it benefits both surgical practitioners and their patients.Healthcare systems can establish sustainable productive workplace conditions for surgeons by protecting the highest levels of patient outcomes through emphasis on surgeon health well-being.

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