

Understanding Burnout in Surgeons: How to Avoid Burnout?

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SUMMARY:

Although surgeons work in more stressful medical fields, surgeons are generally considered to offer some of the best lifestyles among physicians. Burnout among surgeons is increasing at an alarming rate. The goals of this review are to increase awareness of the symptoms, causes, and consequences of surgeons' burnout and how to avoid burnout? Surgeons' burnout is largely attributed to work-related factors and personal -related factors. Burnout has many potential adverse consequences including professional consequences and personal consequences. The recovery from surgeon's burnout can take months or longer, therefore it's important to try to avoid it in the first place through preventative strategies.

Key words: Surgeons' burnout, Adverse consequences, Preventative strategies.

Mugda Med Coll J. 2023; 6(2): 99-106

INTRODUCTION

Medicines can cure diseases, but only doctors can cure patients. Doctors have the ability to apply their knowledge through a holistic approach, doctors can treat their patients with a comprehensive understanding of medicine. Doctors not only save lives but also prevent them from getting worse. Nobody entered the medical profession thinking it would be an easy job! Most people would have been aware of the shift work and long hours required.

Depression is as common among the medical profession as the general population. Lifetime rates of depression in women physicians were 39% compared to 30% the General Population.¹ Common symptoms of depression are loss of interest in the things that were previously pleasurable, depressed and sadness, hopelessness, anxiety, increased feeling of guilt, irritability, impatience, sleep disturbances, tearfulness, difficulty concentrating etc. Symptoms of anxiety and depression are prevalent among healthcare workers (HCWs) during the COVID-19 pandemic in Bangladesh.²

Training for and practicing surgery are stressful endeavors.³ Do you feel that the majority of your day is spent on tasks you find either dull or overwhelming. Stress among surgeons can have serious manifestations, including anxiety, depression, divorce or broken relationships, alcoholism, substance abuse, and suicide. Although most surgeons are aware of major depression and anxiety disorders, they may be less familiar with the specific symptoms associated with burnout or the consequences of those symptoms.⁴

The term "burnout" is commonly used in the medical literature, although definitions vary.⁵ Burnout is an emotional exhaustion caused by mental breakdown, physical fatigue, and long-term uncontrollable and unresolved work stress, personal stress, and environmental stress such as major illness, family difficulties, workplace bullying, or other persistent adversity.^{6,7,8}

According to the WHO, Burnout is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion, increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy.^{9,10} Thus, burnout is not considered a medical condition but is entirely an occupational phenomenon.¹⁰

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Work burnout is a type of strain resulting from prolonged exposure to chronic, job-related stressors.¹¹ Although surgeons work in more stressful medical fields, surgeons are generally considered to offer some of the best lifestyles among physicians. Still have questions? Are they working too many hours, or taking stress/tension home with them? Yes, Surgeons work hard, work long hours, deal regularly with life-and-death situations with their patients, and make substantial personal sacrifices to practice in their field.⁴ Accordingly, Burnout among surgeons is increasing at an alarming rate. Surgical burnout is a serious condition, which affects many surgeons across the country. The effects of burnout have untold consequences, and could significantly shorten the careers of surgeons if untreated.

The goals of this review are to (1) increase awareness of the symptoms, causes, and consequences of surgeon distress and burnout, (2) encourage surgeons to be proactive in their personal health habits, (3) how to avoid burnout?

Methods (Evidence Review):

An electronic search encompassing MEDLINE, Hinari, PsycInfo, and EMBASE was completed using the following MeSH search terms: *Surgeons' burnout, adverse consequences, and preventative strategies*. The search criteria incorporated relevant full articles published in English from January 1, 1990, to December 31, 2022 that evaluated surgical specialists were included. Review articles and evaluations that included medical students or nonsurgical health care professionals were excluded. Of 41 titles, 26 articles met these criteria. The standardized methodological principles for reporting reviews guided were analyzed. Primary end points are causes of surgeons' burnout, adverse consequences, and preventative strategies. Secondary outcomes included recommended number of tools that are available to both decrease and reverse surgeons' burnout data are reported.

INCIDENCE OF BURNOUT AMONG SURGEONS:

As the prevalence of burnout has increased, most surgeons now report some degree of burnout and the problem cuts across all demographic lines within the profession. In a large General Surgeons study, 582 surgeons who trained at the University of Michigan–Ann Arbor, 32% showed high levels of emotional exhaustion, 13% showed high levels of depersonalization, and 4% showed evidence of a low sense of personal accomplishment. Notably, younger surgeons were more susceptible to burnout than their older colleagues ($P < .01$).¹²

An Australian study of 126 surgeons indicated that burnout levels were significantly higher for surgeons than for the normative population, with 47.6% of the sample reporting high burnout levels. Younger surgeons reported significantly higher burnout levels, regardless of career stage.¹³ In the published survey of 549 members of the Society of Surgical Oncology, 28% of respondents met the criteria for burnout.¹⁴ In addition, Bertges and colleagues conducted a survey of 209 actively practicing transplantation surgeons. Burnout was present in 38% of respondents.¹⁵

Johnson and colleagues (1993) conducted a survey of 395 members of the American Society of Head and Neck Surgery and the Society of Head and Neck Surgeons. A total of 34% who responded believed they were burned out.¹⁶ Another study of 501 colorectal and vascular surgeons in the United Kingdom showed that 32% had high burnout on at least 1 subscale of the Maslach Burnout Inventory.¹⁷

DEMOGRAPHIC PREDICTORS OF BURNOUT

- Younger age (under 50 y)
- Hours worked per week
- Female gender 60% more likely than men to report burnout
- Higher emotional exhaustion, lower depersonalization
- Odds increased 12-15% for each additional 5 hours worked over 40 hrs./wk.

PHYSIOLOGY OF BURNOUT:

Persistent clinical burnout is associated with a reduction in the volume of gray matter of the anterior cingulate cortex and dorsolateral prefrontal cortex as well as in the volume of the caudate and putamen structures, with reduced dendritic arborization and number of dendritic spines and reduced synaptic density.

TYPES OF BURNOUTS

Gillespie distinguished two types of Burn out

Active Burn out

- Characterized by the maintenance of assertive behaviour
- It relates to the factor's organizations or external elements to the profession

Passive Burn out

- Dominated by feelings of withdrawal and apathy.
- It has to do with internal psychosocial factors.

DEGREES OF BURNOUT:

1. First degree - failure to keep up and gradual loss of reality.
2. Second degree - accelerated physical and emotional deterioration.
3. Third degree - major physical and psychological breakdown.

3 STAGE TRANSACTIONAL MODEL OF BURNOUT:

STAGE 1: demands exceeding emotional resources.

STAGE 2: attempts to balance between demands and resources.

STAGE 3: maladaptive coping mechanisms develop.

- Maladaptive coping mechanisms: Responses - 1) Physical, & 2) Emotional
- Adaptive coping mechanisms: - 1) balance restored, 2) responses resolved.

WHAT CAUSES SURGEONS' BURNOUT?

Surgeons' burnout is largely attributed to organizational / work and personal and family-related factors.

Work-related factors

1. **Extensive** length of training and delayed gratification increases burnout.
2. **Long working hours and enormous workload**- Are you working too many hours? Working too many hours increases the chances that you burn out.
3. **Taking night or weekend call** increases your odds of burnout by 3 to 9 percent for each additional night or weekend you spend on call.
4. **Inefficient & / or hostile workplace environment.**
5. Are you taking work home with you? **Performing work-related tasks at home** increases your odds of burning out by 2 percent for each additional hour you work at home per week.
6. **Having a work-home conflict** increases burnout odds by 200 to 250 percent.
7. **Organizational issues** like excessive bureaucracy, poor communication among healthcare professionals, and limited control over the hospital medical services increase burnout.
8. Practicing in certain specialties, such as orthopedics, general surgery, neurosurgery,

Urology, obstetrics and gynecology increases odds of becoming burned out.

9. **Unrealistic expectations of patients** increase burned out.
10. **Working in a private practice increases** your odds of burnout by about 20 percent no matter what your specialty or work hours.
11. **Financial issues** (salary, budgets, mode of payments etc.) - Receiving FFS or incentive pay increases your burnout odds by 130 percent when compared to surgeons who are paid under other salary models.
12. Being a midcareer surgeon an **ongoing pressure on continuous learning** increases your burnout odds, with burnout 25 percent more likely among these surgeons than those early or late in their career.¹⁸
13. **Imbalance between career and family**- having a career that doesn't fit what you find most personally meaningful increases the odds of your becoming burned out.
14. Grief and guilt feeling about patient death or unsatisfactory outcome increases burnout odds.
15. **Using computerized physician order entry or enduring** other clerical burdens drives burnout.
16. **Insufficient protected research time and funding** increases burnout odds.

Personal and Family-related factors

1. Age- younger age more vulnerable.
2. Sex - Female > Male.
3. Sleep habits changed.
4. Using food, drugs or alcohol to feel better or to simply not feel.
5. Feeling isolated or loss of time to connect with family members, colleagues, and friends.
6. Setting unrealistic goals or having them imposed on self.
7. Become cynical or critical.
8. Troubled by unexplained headaches, depression, bipolar disorder, stomach or bowel problems, cardiac problems, or other physical complaints.
9. Become irritable or impatient with family members, co-workers, patients or clients

10. Lack of satisfaction from achievements.
11. Lack of control- an inability to influence decisions that affect your job – such as your schedule, assignments or workload – could lead to job burnout.
12. Surgeons continued to have a higher **divorce** rate (relative risk of 1.7 compared with internal medicine physicians) on multivariate analysis controlling for other factors.¹⁹

SYMPTOMS & SIGNS OF BURNOUT

Physical Exhaustion/Fatigue

Emotional Exhaustion/Fatigue

Headaches

GI Disturbances

Weight Loss

Sleeplessness

Frequent Illness

Boredom

Frustration

Depression

General Lack of Interest & Commitment to Work

Irritability With Coworkers, Friends and Family

Low Morale

Impaired Job Performance

Decreased Empathy

Psychologically detaching from work and becoming apathetic, cynical, and rigid.²⁰

CONSEQUENCES OF SURGEON BURNOUT

Burnout has many potential adverse consequences including 1) professional consequences and 2) personal consequences.²¹

1) Professional Consequences - Burnout can adversely affect-

- Job dissatisfaction - affect surgeons' satisfaction with their work.
- Adversely affect the quality of surgical care they provide.²²
- Affect patient safety and quality of patient care,
- Increased medical errors
- Decreased patient satisfaction with medical care.²³
- Surgeons who are less satisfied tend to be less productive, and

- Eventually may decide to quit for a different practice opportunity or take early retirement.¹²
 - Increase the threat of malpractice litigation.
 - Poses substantial risk to the economic well-being of health care organizations.²⁴
- 2) Personal Consequences - Surgeons' Burnout can spill over into personal life -
- Increased rates of depression.
 - Broken relationships.
 - Disengaged from co-workers and others.
 - Excessive stress
 - Headaches
 - Anxiety
 - Sleep disturbances
 - Hypertension
 - Alcoholism or Increased rates of substance abuse.
 - High blood pressure
 - Myocardial infarction or heart diseases
 - Type 2 diabetes
 - Vulnerability to illnesses, and
 - Absenteeism – Abuse of sick-leave.
 - Increased rates of early retirement.

TREATMENT AND PREVENTION

Management Approaches for Burnout

A) Psychotherapy

B) Pharmacotherapy + Psychotherapy

A) Psychotherapy

1) Person or Organisational Approaches

1.1) Person Directed,

1.2) Organisational Approaches

2) Psychotherapeutic Approaches

2.1) Etiological Interventions

2.2) Symptomatic Interventions

3) Coping Strategies

1. Active Cognitive Coping

2. Active Behavioural Coping

3. Coping by Avoidance Psychotherapy

The personal and organizational costs of burnout have led to proposals for various intervention strategies. Some try to treat burnout after it has occurred. Intervention may occur on the level of the individual, workgroup, or an entire organization.

1) Person or Organizational Approaches

1.1) Person Directed,

1.2) Organizational Approaches

1.3) Combined

1.1) Person Directed

- Psychotherapy
- Counselling
- Adaptive Skill Training
- Communicative Skill Training
- Social Support
- Exercises for Relaxation

1.2) Organisational Approaches

- Training Supervisors and Managers
- Changing Organisational Practices
- Training For Better Coping and Stress Management Techniques
- Change Shift Work System and Introducing Vacations
- Counselling And Exercises

2) Psychotherapeutic Approaches

- Experimental group therapy
- Group analytic therapy

2.1) Etiological Interventions

- Cognitive restructuring
- Self-control training
- Training of active coping
- Rational training for frustration

2.2) Symptomatic Interventions

- Proper medications
- Physical relaxation techniques for fatigue
- Behavioral training for frustration
- Social support
- Identifying interesting areas and motivating

3) Coping Strategies

Objectives

- Coping oriented to problem
- Coping oriented to emotion

1. Active Cognitive Coping

(Management by assessing potential stressful events)

2. Active Behavioural Coping

(Observable efforts managing stressful conditions)

3. Coping by Avoidance Psychotherapy

(Avoiding stressful conditions and problematic situations)

B) Pharmacotherapy (+ Psychotherapy):

1. FDA Approves Drug to Treat Medical Burnout

– Idongivafumab (Peaceaudi)- targets and inhibits C-suite peptides- for the treatment of medical burnout.

2. Support your mood and energy levels with a healthy diet

a. **Minimize sugar and refined carbs** - High-carbohydrate foods quickly lead to a crash in mood and energy.

b. Eat more **Omega-3 fatty acids** to give your mood a boost.

c. **Avoid Smoking** (nicotine), Alcohol, caffeine, unhealthy fats, and foods with chemical preservatives or hormones.

DISCUSSION

Burnout defines as an erosion of the soul caused by deterioration of one's values, dignity, and spirit. For many years, burnout has been recognized as an occupational hazard for various people oriented professions, such as human services, education, and health care.⁸ Clinical burnout was originally defined by three pillars of symptomatology: emotional exhaustion, depersonalization, and low sense of personal accomplishment. This study reviewed the prevalence, causes, and consequences of reported burnout in surgeons.

The experience of burnout has been the focus of much research during the past few decades. Burnout also occurs in depression. These include extreme exhaustion, feeling low, and reduced performance. Some characteristics of burnout are very different from those of depression. These include alienation, especially from work. In depression, negative thoughts and feelings are not only about work, but about all areas of life. Other typical symptoms of depression are-lack of self-esteem, hopelessness, and suicidal tendencies. These are not regarded as typical symptoms of burnout. So not every case of burnout will have depression at its root. But burnout symptoms may increase the risk of someone getting depression.

Burnout among surgeons remain unclear on the development, consequences, and interventions for burnout in surgeons. The implications of burnout go beyond the individual. Risk factors associated with increased reporting of surgeon's burnout include female gender, community affiliated teaching

hospitals, and increased work hours.⁷ Although surgeons are often better compensated than non-surgical physicians, the drawback is that surgical specialties undoubtedly also work longer hours or perform more stressful or taxing tasks. Female and younger surgeons are at higher risk of burnout. Burnout is manifest in many ways. Suicide rates of surgeons aged above 45 were 1.5–3.0 times more likely than the age matched population.⁷ Those experiencing burnout can also present with alcohol or substance abuse. Surgeons also face the most conflict at home with high divorce rates (33%).²¹ Increased incidence of medical errors and sub-optimal care were reported to be associated with longer work hours and burnout.^{25, 26}

Burnout crisis threatens surgical profession. The recovery from surgeon's burnout can take months or longer, therefore it's important to try to avoid it in the first place through preventative strategies. Prevention is always better than cure so we focus on how to prevent burnout by promoting engagement.

HOW TO AVOID BURNOUT AS A SURGEON

Although recovery from burnout is possible, prevention is a better strategy. Surgeons who actively nurture and protect their personal and professional well-being on all levels—physical, emotional, psychological, and spiritual—are more likely to prevent burnout.

1. Surgeon's well-being, such as

- a) Notice self-burnout and realistic recognition
- b) Providing healthy snack options in break rooms.
- c) Ensure adequate sleep, exercise, and nutrition
- d) Strive to achieve balance between personal and professional life

2. Professional well-being, including

- a) Identify professional values and priorities
- b) Supportive help and talking with others about issues and stressors
- c) Professional resources
- d) Forming firm Boundaries so to avoid increased stress and problems
- e) Using Humor and Laughter
- f) Mentoring programs, leadership opportunities
- g) Identify areas of work that are most meaningful to surgeons (patient care, patient education,

medical education, participation in clinical trials, research)

3. Social well-being, including

- a) Nurture religion and spirituality practices
- b) Develop hobbies and use vacations to pursue nonmedical interests
- c) Based on priorities, determine how conflicts should be managed

4. Psychological well-being, such as

- a) Providing free-time activities like hiking, movies, restaurants, pubs, and museums.
- b) Using Humor and Laughter
- c) Forming firm Boundaries so to avoid increased stress and problems
- d) Group counseling sessions with psychologists.

In fact, burnout is a reversible condition and a number of tools are available to both decrease and reverse burnout:

- 1) Promoting a culture of remedy that values work-life balance,
- 2) Surgeons having access to online self-assessment tools to identify levels of stress and burnout,
- 3) Promote the “just culture” paradigm during training and not tolerating shaming and humiliation,
- 4) Defining our psycho-social-spiritual support system and accessing it readily and frequently,
- 5) Identify our power vs. powerlessness over people, places, things and situations,
- 6) Identify connection vs. disconnection,
- 7) Identify self-knowledge vs. self-awareness,
- 8) Developing educational programs that promote supportive environments,
- 9) Most importantly, give ourselves permission to be sick and to accept good surgical care.

CONCLUSION:

Burnout among surgeons is associated with work-to-family conflict, unrealistic expectations of patients, an ongoing pressure on continuous learning, long working hours, excessive bureaucracy, organizational issues, poor communication among healthcare professionals, and personal issues. Surgeons are at high risk for burnout with resulting slow destruction, depression, and suicidal ideation. The solution to

burnout must be addressed at individual, institutional, and national levels. Further research into the factors leading to surgeon burnout and enactment of effective strategies to mitigate burnout must be pursued. Finally, effective research on preventing and alleviating aspects of Burnout among Surgeons requires giving the issue a high priority within the profession.

Authors' contributions: Alam MS undertook all duties of authorship.

Funding: None.

Competing interests: None declared.

Ethics approval: Not required.

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