

Work-related stress: A survey of Indian anesthesiologists

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Abstract

Background and Aims: Work-related stress is common among medical caregivers and concerns all perioperative care providers. Although anesthesiologists are known to experience stress, there are limited Indian data addressing this issue. This survey was conducted among Indian anesthesiologists to determine their awareness about work stress and views regarding prevention programs.

Material and Methods: A survey questionnaire was distributed to delegates visiting the exhibits at the national anesthesiology conference in 2011. The questionnaire had ten questions on the work pattern, five on work-related stress, nine on opinion regarding the need and willingness to participate in stress-related programs.

Results: There were 1178 responders. Forty-three percent were faculty in medical institutions, 26% were residents and 25% were in free-lance practice. Ninety-one percent of participants rated their stress as moderate-extreme. There was a significant correlation between the amount of stress and working for more than 8 h ($P < 0.001$), handling high risk patients ($P = 0.002$), working on weekends ($P = 0.002$), and carrying work back home ($P < 0.001$). Forty-one percent of respondents were very satisfied professionally. Seventy-six percent of doctors agreed that the questionnaire had made them think about work stress. Eighty-four percent of participants felt the need for stress management programs and 69% expressed their willingness to participate in the same.

Conclusion: The majority of participants rated their stress as moderate-extreme and was higher in anesthesiologists working long hours, over the weekend and those handling high-risk patients. A majority of participants felt the survey made them think about work-related stress and expressed their willingness to participate in stress management programs.

Key words: Personal satisfaction, stress psychological, surveys and questionnaires, work

Introduction

Work-related stress among medical caregivers has often been addressed. Professionals in health-care system work under demanding circumstances and are subjected to chronic stress which can be emotionally draining and poses the risk of burnout.^[1]

Anesthesiologists are exposed to the stress of being responsible in ensuring the safety of the patient and have to perform in critical conditions.^[2] Departmental heads

have to take responsibility for things beyond their control and face human resources challenges.^[3] Incidentally, the median emotional exhaustion and depersonalization scores of anesthesiology program directors were among the highest ever recorded.^[3]

Although problem of work stress is universal, given the socioeconomic and cultural differences and the individual and organizational factors that may be associated in India, work-related stress may be different from those reported in other countries.^[4] Current data on work-related stress among Indian anesthesiologists are limited, involving postgraduates only^[5] or smaller groups of anesthesiologists.^[6] There is a need to have more, large Indian data addressing work-related stress^[6]

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and involving the entire spectrum of anesthesiologists-residents to faculty to private practitioners.

Our survey was planned to understand work stress patterns among this vulnerable group and to collect preliminary Indian data with respect to incidence of work stress, job satisfaction, views, and willingness to take part in identification and prevention programs for the same.

Material and Methods

Designing the survey tool

The Delphi survey methodology was used. In the first round of designing, a thorough literature search through web based search engines, i.e., PubMed, Medline, and Google Scholar was carried out. The key words included-work stress, burnout, stress management, and preventive programs. Forty questions were selected. Three principal investigators with a focused interest and expertise in the subject evaluated the questions. The group shortlisted thirty questions on the basis of content. The questionnaire was further evaluated by a group of ten senior anesthesiologists who screened and retained questions relevant to the Indian scenario. After addressing feasibility issues, twenty-four questions were selected to make the final questionnaire.

The survey tool

The questionnaire was in English [Annexure 1]. All questions had multiple-choice answers and the participants were asked to tick the most appropriate option. The questionnaire also included basic data with respect to age, gender, state of residence, and current affiliation. The first ten questions were related to nature of work which included working hours, handling of high-risk cases, need to train residents, research activity, and need to tackle administrative issues. Six questions on work-related stress included the participant's ranking of stress and personal satisfaction in professional life. Work satisfaction was captured on a five point Likert scale-from very satisfied to very dissatisfied. Work stress was captured into three broad categories-extreme, moderate and slight. Four questions (Q13-16) were based on the subscales of the Maslach Burnout Inventory (MBI) and looked at emotional exhaustion, depersonalization and personal accomplishment.^[1] The third part of the survey was based on the participants view on stress management programs, awareness on burnout, and willingness to participate in screening and stress management programs.

Conduct of the survey

The survey questionnaire was distributed to delegates visiting the scientific exhibition area on all days during the Annual conference of the Indian Society of Anaesthesiologists held in

Mumbai, December 2011. The delegates were requested to complete the questionnaire only once. The act of completing and submitting the questionnaire implied consent.

Data analysis

The data analysis was performed using IBM SPSS Statistics for Windows, Version 20.0. (Released 2011, IBM Corporation, Armonk, NY, USA). The participant's gender, state and nature of work, amount of stress, and opinion about stress related programs were expressed as percentages. For convenience of analysis, responses to questions on the burnout scales-were clubbed into three groups-almost always/many times, neutral/few occasions and never. Replies for views on stress management programs were grouped as positive, neutral, and negative replies. Categorical data such as working pattern and amount of stress, professional satisfaction were compared using Persons Chi-square test. $P < 0.05$ was considered as statistically significant.

Results

Fourteen hundred questionnaires were distributed and 1178 delegates (84%) returned the survey. Majority of the delegates (43%) were faculty in medical institutes, 26% were residents and around the same percentage (25%) were anesthesiologists in free-lance practice. Thirty-four percent respondents were females and 47% were anesthesiologist from the state of Maharashtra. Sixty-nine percent of participants rated their stress in professional life as moderate, while 22% rated it as extreme and 9% had minimum amount of stress. We found no correlation between age and work stress ($P = 0.113$). Male respondents had higher stress than female respondents ($P < 0.001$). The amount of stress correlated with the working pattern [Table 1]. We found a significant correlation between amount of stress and working for more than 8 h ($P < 0.001$), handling high-risk patients ($P = 0.002$), working on weekends ($P = 0.002$), and carrying work back home ($P < 0.001$).

When we looked at few symptoms of burnout, at the end of working day, the majority (47%) of doctors felt drained out on many occasions. Twenty-seven percent felt tired and fatigued in the morning [Figure 1]. A small group (14%) felt that they had started caring less and had become callous toward patients. There was a correlation between the symptoms of burnout and the amount of stress rated by delegates, with a significant correlation with the feeling of tiredness and fatigue in the morning ($P < 0.001$), feeling of being used up and drained ($P < 0.001$), feeling of caring less and being callous toward patients ($P < 0.001$).

Forty-one percent of respondents were very professionally satisfied [Figure 2]. There was no correlation between stress

Table 1: Correlation of stress with working pattern (n=1178)

Working pattern	Amount of stress-number of delegates (%)			P
	Large	Moderate	Minimum	
Accountability at work missing data-189 (16)				
Responsibility shared by team	111 (9)	361 (31)	47 (4)	0.899
Individual accountability	99 (8)	334 (28)	37 (4)	
Hours at work missing data-22 (2)				
8 > working h	79 (7)	354 (30)	49 (4)	<0.001*
<8 working h	175 (15)	448 (38)	51 (4)	
Working at weekends missing data-22 (2)				
Yes	230 (20)	664 (56)	79 (7)	0.002*
No	22 (2)	141 (11)	20 (2)	
Handling high risk patients missing data-30 (3)				
Often (1-2 cases/week)	219 (19)	610 (52)	69 (6)	0.002*
Occasionally (1-2 case/month)	30 (3)	168 (14)	27 (2)	
Rarely	4	17 (1)	4	
Training of juniors missing data-20 (2)				
Yes	167 (14)	539 (46)	69 (6)	0.877
No	87 (7)	264 (22)	32 (3)	
Handling administrative problems missing data-19 (2)				
Yes	172 (15)	510 (43)	58 (5)	0.176
No	81 (6)	296 (25)	42 (4)	
Involved in research missing data-26 (2)				
Yes	139 (12)	385 (33)	52 (4)	0.109
No	112 (10)	417 (35)	47 (4)	
Number of times one carries work back home missing data-55 (5)				
Often (daily)	126 (11)	214 (18)	20 (2)	<0.001*
Occasionally (monthly)	80 (7)	333 (28)	36 (3)	
Rarely	45 (4)	228 (19)	41 (3)	

*P<0.05-Significant

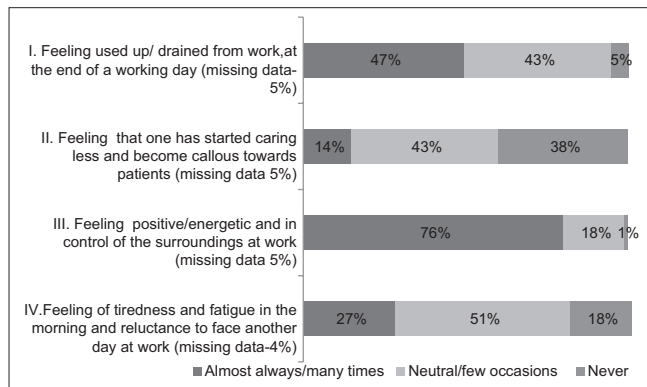


Figure 1: Proportion of responders experiencing selective symptoms related to burnout, clubbed into 3 categories (almost always/many times; neutral/few occasions; never). Positive responses to item I, II, IV would pose an increase risk of burnout

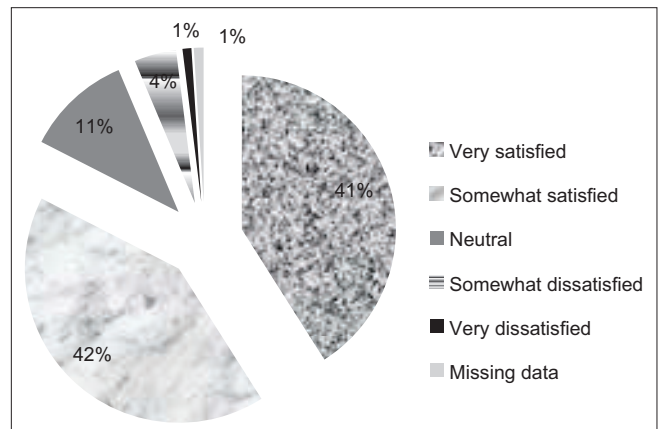


Figure 2: Proportion of responses from participants expressing degree of satisfaction in their professional life on a scale ranging from very satisfied to very dissatisfied. Response of delegates expressed as percentage

and professional affiliation [Figure 3] or job satisfaction. Eighty-four percent of participants strongly felt the need to have programs for stress management [Figure 4]. Seventy-six percent of participants felt that the questionnaire had made them think about the issue of work stress and 69% expressed their willingness to participate in the same.

Discussion

This is one of the largest surveys on work stress conducted among Indian anesthesiologists. Ninety-one percent of anesthesiologists rated their stress as moderate-large. The

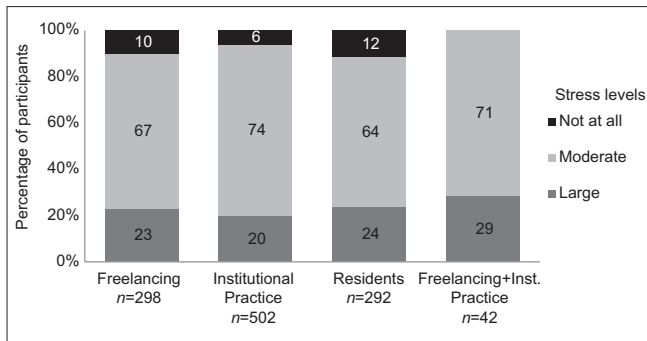


Figure 3: Correlation between nature of practice (on X axis) and proportion of respondents experiencing work stress and its degree (on the Y axis). Most respondents across all categories have large to moderate work stress. Chi-square test between stress and nature of practice, $P = 0.386$

amount of stress directly correlated to more than 8 h of work, handling high-risk patients, working on weekends, and carrying work back home. Seventy-six percent of delegates believed that the questionnaire had brought their attention to the issue of burnout and 84% agreed to the need of having stress management programs.

Shidhaye *et al.* conducted a survey which included 200 anesthesiologists to identify stressors.^[6] Time constraints, interference with home life, medico-legal concerns, and clinical problems were the main reasons attributed to stress. Few other studies look at work stress among Indian doctors at large.^[7-11] Bhutani *et al.* in their study involving clinicians found private practitioners had more compassion and satisfaction than those in government jobs. This was attributed to poor working conditions in government jobs versus availability of better and modern equipment in the private scenario.^[11] In this study, we did not find any difference in nature of practice and stress level. This could be explained by the diverse working conditions for an anesthesiologist in both institutional and private practice.

Burnout is a syndrome of emotional exhaustion, cynicism, dehumanized perception of others (depersonalization) and tendency to evaluate oneself negatively particularly with regard to ones work (personal accomplishments).^[1] Peri-operative clinicians are at risk for burnout given increasing production pressure, staff shortages, and need to work with extreme responsibility.^[12] Lederer *et al.*, in their study on the influence of working condition on burnout on anesthesiologists, found that though the working place conditions are not the sole factors, the anesthesiologists with demanding work conditions are at a greater risk for developing burnout syndrome.^[13] Burnout among residents is substantial due to number of hours spent at work, large body of clinical knowledge to master and the challenges of balancing work and home life.^[14] The younger and less experienced employees due to lack of job experience can have early career burnout.^[15] The seniors often need to

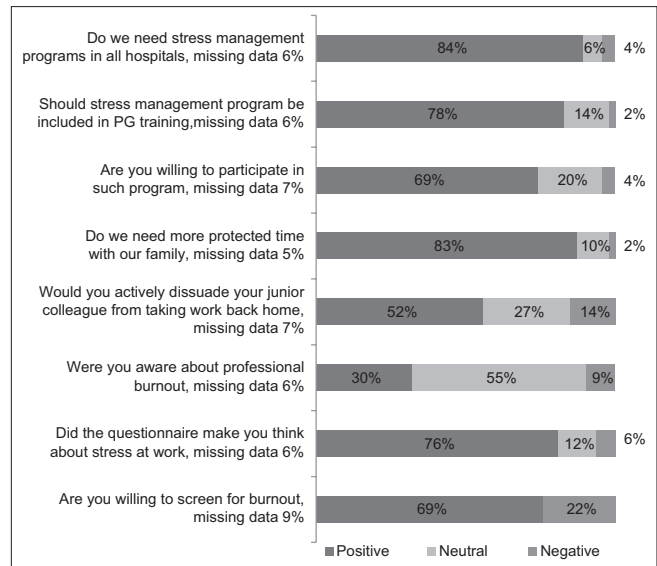


Figure 4: Analysis of view of respondents regarding necessity and willingness to participate in prevention programs

take responsibility for things beyond their control and often experience stress.^[3] The stressors are different at every stage of professional and personal life, this may explain why there was no difference in the overall stress levels based on nature of the profession – residency, freelancing, institutional practice or both, in our study. The MBI has a total of 25 items which includes subscales in emotional exhaustion, depersonalization, and personal accomplishment.^[1] Since answering the entire questionnaire would have been exhaustive and our objective was not to diagnose burnout, but to determine awareness about work stress, and views and willingness to participate in preventive programs, we did not introduce the MBI instead we included few questions from each component of the MBI. A strong correlation between stress rated by delegates and positive response to question related to emotional exhaustion and depersonalization, suggests that the questions did serve as a screening tool.

Canadian survey on job satisfaction revealed that 75% of anesthesiologists were satisfied and three common reasons were good quality of patient care, intellectually stimulating and interaction with patients.^[16] In our survey, 83% of anesthesiologists were satisfied. We did not find a correlation between job satisfaction and work stress, i.e., high professional satisfaction did not mean absence of stress.

Doctor support group, workshop to improve communication skills, self-care intervention including breathing exercises have been tried to address the issue of work stress.^[14] Although we did not capture data with respect to individual stress management practices, it is encouraging to note that a large number of anesthesiologists strongly felt the need to

- Do you work: eight or less hours more than eight hours?
- Do you also work on weekends: Yes No
- How often do you handle high risk patients:
 Often (1-2 cases/week) occasionally (1-2 case/month) rarely
- Are you involved in training of juniors working with you: Yes No
- Do you have to handle administration problems at work place: Yes No
- How often do you encounter administrative problems in your place of work:
• Often (daily) occasionally (monthly basis) rarely
- Are you involved in research: Yes No
- How often do you carry work back home/stay back at work to meet a deadline:
 Often (1-2 times/week) occasionally (1-2 times/month) rarely
- How would you rank your stress in professional life?
- Large (extreme amount) moderate amount not at all (slight amount)
- How satisfied are you professionally:
 Very satisfied somewhat satisfied neutral somewhat dissatisfied very dissatisfied
- Do you feel tired and fatigued in the morning and hate to face another day at work.
 Almost always many times neutral few occasions only never
- At the end of a working day do you feel used up/drained from work
 Almost always many times neutral few occasions only never
- At work do you feel positive/energetic and in control of your surroundings
 Almost always many times neutral few occasions only never
- Do you feel that you have started caring less and become callous towards your patients?
 Almost always many times neutral few occasions only never
- Do you agree that all hospitals should have programs for stress management?
Strongly agree somewhat agree neutral somewhat disagree strongly disagree.
- Would you participate in the program: Yes maybe No
- Should we be including stress management courses in our PG training program?
 Yes maybe No
- Should we have more protected time (for self and family): Yes maybe No
- Do you think this questionnaire has made you think about stress at work: Yes maybe No
- Will you actively dissuade your juniors and colleagues from taking work back home:
Yes maybe No
- Are you aware of professional burnout:
• Aware of all details heard about it none at all
- Would you like to take part in screening yourself for burnout Yes No

If yes please provide your e-mail id _____

Any comments:

Thank you for filling the questionnaire

NOTE: The information from the survey could be used for medical writing, however the identity of individuals will not be revealed.