Influence of working conditions on job satisfaction in Indian anesthesiologists: a cross sectional survey

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ABSTRACT

Background: Studies related to job satisfaction in Indian anesthesiologists are very limited which prompted us to design this study to quantify the level of job satisfaction among Indian anesthesiologists and to identify the factors responsible for satisfaction/dissatisfaction.

Study Type and Design: Cross-sectional study based upon a confidential survey.

Location: Pravara Institute of Medical Sciences, Loni (India).

Duration: One year.

Methods: A set of questions was handed over personally to the anesthesiologists at National and state level anesthesiaology conferences and CMEs, and filled proformas were collected. Confidentiality and anonymity of the participants was maintained. Main outcome measures were demographics, anesthesia practice, overall job satisfaction, anaesthetic assistance, surgeons' perceived attitude, attitude towards other colleague anesthesiologists, and patients' perceived attitude towards them.

Results: Response rate was 96%. Seventy eighty percent respondents reported full satisfaction. Female anesthesiologists and male anesthesiologists working in teaching hospitals were more satisfied. (P < 0.01). Forty nine percent respondents were satisfied with the assistance in operating rooms; 51% felt they were duly respected by the surgeons; and 50% expressed satisfaction with recognition of their services by patients. Two main factors for the dissatisfaction were lack of resources/equipment and low recognition of anesthesia services by the patients.

Conclusions: Although job satisfaction level in Indian anesthesiologists is quite high, still there is a need to set the standards related to number of working hours, number of night call duties per week, enforcing proper assistance, raising the profile of anesthesiologists among general public, improving funding and resources for OT, which would help reduce occupational stress and further improve efficiency and job satisfaction among anesthesiologists.

Keywords: Indian anesthesiologists; job satisfaction; working conditions.

INTRODUCTION

The scope of work of anesthesiologists in hospital practice has expanded in the past few decades. Anesthesiologists work as specialists in emergency care, in intensive care medicine and in the management of acute and chronic pain. Some anesthesiologists have taken up research, teaching or administrative responsibilities in addition. Yet these accomplishments have not necessarily resulted in an improved recognition of their important role in healthcare system. Low recognition is perhaps not only limited to the general public and the media, but surgical and nursing colleagues have also been involved. Previous studies have shown that recognition of the anesthesiologist as a medical doctor by the patient varies from 65 to 82%. but very few know their precise role in the hospital. Anesthesiologists are overworked due to a huge gap between demand and supply. Conflicting demand is regarded as a risk factor for overwork. Government of India has indicated a shortage of nearly 6000 anesthesiologists and has reported that only 30% of the population has satisfactory access to proper anesthesia services of which 80% are urban beneficiaries. It is essential to know whether those who are already practicing the specialty are fully satisfied with the job and if not, then why so? Job satisfaction is one of the central variables in work and organizational psychology and is seen as an important indicator of working life quality. Satisfied employees tend to be more productive and creative. Studies have shown a direct correlation between physician satisfaction and patient satisfaction.

Several studies have been conducted to find out job satisfaction and quantify effects of stressors among anesthesiologists from different regions of different countries. Studies related to job satisfaction in Indian anesthesiologists are very limited, which prompted us to design this study to quantify the level of job satisfaction and to identify the factors responsible for satisfaction/dissatisfaction.

METHODOLOGY

Approval from the institutional ethics committee was obtained and a questionnaire was distributed to the anesthesiologists at national and state level anesthesia conferences and CMEs to be filled in. The confidentiality and anonymity were maintained. Questionnaire used by Jenkins K et al 11 for a survey of professional satisfaction among Canadian anesthesiologists was used with few modifications. National conferences are attended by residents and senior anesthesiologists from teaching as well as community hospitals from all over India. State level conference and CMEs were also selected because many anesthesiologists from private sector, nonteaching hospitals attend it. Thus, we assume that our sample is representative of all groups of anesthesiologists from India.

We distributed 200 proformas based on previous similar studies.

Main Outcome Measures: Demographics, type of and standing in anesthesia practice, overall job satisfaction, nature of anesthesia assistance available, surgeons' attitude, attitude of colleague anesthesiologists, and patients' perceived attitude.

Anesthesiologists having more than 8 years of practice were grouped as seniors and those having less than 8 years of practice as juniors. Professors and associate professors were included in the senior group where as residents, and lecturers were included in the junior group.

Overall job satisfaction and satisfaction with available OR assistance was recorded on a five-point Likert scale. Anesthesiologists were asked to indicate the factors which contributed to job satisfaction and dissatisfaction from the list handed over to them. The breadth of clinical responsibilities was examined looking at site commitments in OR, in intensive care unit (ICU), in acute and chronic pain management, in consultation clinic and in offsite work like in private clinics, in radiology or in other areas. Involvement in research, teaching and administration was also noted. Assistance available in the OR was looked at in areas, e.g. transfer of patients, application of monitors, insertion of venous and arterial catheters, induction and emergence, and obtaining drugs and equipment. Response was sought regarding perception of the surgeons' attitudes towards anesthesiologists, and the public's attitude toward anesthesia, as perceived by the anesthesiologist. Anesthesiologists were asked if they explained their intraoperative role to the patients preoperatively, whether patients knew that they were medical doctors and whether they talked to the lay public about the role of anesthesia during an operative procedure. A five-point scale was used for questions of satisfaction, dissatisfaction and perceived attitudes. All five-point scales were also recategorized into binary variables where 1, 2, 3 represented one group and 4, 5 the other.

The statistical analysis was performed by Stata 10 software. Comparison of categoric variables among and between groups and subgroups were performed using Chi squared analyses. A p-value of <0.05 was considered statistically significant.
RESULTS

Out of 200 questionnaires distributed, 192 were received back (96% response rate). This high response rate was due to the fact that questionnaires were distributed and then collected personally. All figures of percentage are expressed in whole numbers ignoring fractions for simplicity in the discussion to follow. Out of 192 respondents, 104 (54%) were males and 88 (46%) were females. Total number of juniors was 146 (76%) in which male to female ratio was 79:67. Total number of seniors was 46 (24%) which had a male to female ratio of 25:21. A majority of respondents (70%) were in the age group between 25 to 34 years. 124 (65%) respondents worked in teaching hospitals and 68 (35%) in nonteaching hospitals (Table 1). 38% of anesthesiologists worked for less than 50 hours per week.

Regarding clinical responsibilities shared by anesthesiologists, all 192 (100%) respondents worked in operating rooms; 154 (80%) had also worked in ICU including looking after patients on mechanical ventilation; 132 (69%) respondents were members of acute pain control team, 63 (33%) in chronic pain service; 69 (36%) conduct consultations in consult clinic, 75 (39%) have participation in research, 96 (50%) were involved in teaching, 75 (39%) had a role in administrative work while 67 (35%) did offsite services (including private clinics 35%, Radiology 28% and others 37%).

The assistance available to anesthesiologists in their routine jobs is given in Table 2.

Table 2: The assistance available to anesthesiologists

<table>
<thead>
<tr>
<th>Type of assistance</th>
<th>Assistants</th>
<th>Nurses</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall assistance in OR's</td>
<td>84</td>
<td>80</td>
<td>12</td>
</tr>
<tr>
<td>Help in bringing patients from holding area into operating rooms</td>
<td>95</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Applying standard monitors</td>
<td>78</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Assistance with intravenous lines</td>
<td>79</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Assistance with arterial line/Central Venous line</td>
<td>65</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Assistance with induction/emergence</td>
<td>81</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Obtaining drugs/equipment</td>
<td>83</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

Regarding satisfaction with the assistance available, 18 (9%) respondents were highly dissatisfied, 31 (16%) were dissatisfied, 50 (26%) were satisfied, 38 (20%) were much satisfied and 55 (29%) were highly satisfied with the assistance provided to them in the operating rooms. Help from qualified nurses was available to less than 50% respondents in all procedures.

Table 3 describes surgeons' attitudes and public perception about the role of anesthesiologists. A total of 90 (47%) respondents stated that they received a word of thanks from surgical colleagues at the end of each case. Only 67 (35%) respondents got recognition from their patients as anesthesiologists. Nine% of them never explained their intraoperative role to patients during preoperative visits.
Role of an anesthesiologist in the healthcare system was described as a 'P erioperative physician' by 105 (55%) respondents, as 'part of a multidisciplinary surgical team' by 77 (40%) and as 'providing a service to the surgeon' by 10 (5%). No respondent chose the option of 'mainly as a technician' or 'just a job'.

Overall job satisfaction was rated as 1 (totally dissatisfied) by 4 (2%) respondents, 2 by 2 (1%), 3 by 37 (19%), 4 by 111 (58%) and 5 (totally satisfied) by 38 (20%) respondents.

The commonest reasons given for job satisfaction were:
1. Good quality of patient care; 44 (23%)
2. Intellectual stimulation; 25 (13%)
3. Interaction with anesthesia colleagues; 25 (13%)
4. The magic about anesthesia; 25 (13%)

Figure 1 depicts the aspects of practice bringing the most dissatisfaction. Lack of recognition by patients (49%) and Lack of resources/equipment (46%) are the two most common reasons given by the respondents for dissatisfaction.

Comparison of job satisfaction on the basis of gender, seniority and place of work is shown in Table 4. Females were more fully satisfied than males (79:70) (p < 0.01).
Table 4: Comparison of job satisfaction on the basis of gender, seniority and place of work. [N(%)]

<table>
<thead>
<tr>
<th>Comparison in relation to gender</th>
<th>Males N=104</th>
<th>Females N=88</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction, fully satisfied</td>
<td>70(67.3)</td>
<td>79(89.8)</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Consider lack of resources as a reason for dissatisfaction.</td>
<td>37(35.6)</td>
<td>51(57.9)</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Consider inability to keep up-to-date with recent advances as a reason for dissatisfaction.</td>
<td>7(6.7)</td>
<td>2(2.3)</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Do not get due recognition from patients.</td>
<td>63(60.6)</td>
<td>31(35.2)</td>
<td>p&lt;0.01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparison in relation to seniority</th>
<th>Juniors N=146</th>
<th>Seniors N=46</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction, fully satisfied</td>
<td>111(76)</td>
<td>38(82.6)</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Do not get due recognition from patients</td>
<td>67(45.9)</td>
<td>27(58.7)</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Get respect from surgeons</td>
<td>72(49.3)</td>
<td>26(56.5)</td>
<td>p&lt;0.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparison in relation to place of work</th>
<th>Teaching hospitals N=124</th>
<th>Community hospitals N=68</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction, fully satisfied</td>
<td>102(82.3)</td>
<td>47(69.1)</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Job satisfaction, fully satisfied male respondents</td>
<td>51(41.1)</td>
<td>19(27.9)</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Consider lack of resources as a reason for dissatisfaction.</td>
<td>61(49.2)</td>
<td>27(39.7)</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Female respondents who consider lack of resources as a reason for dissatisfaction</td>
<td>40(32.3)</td>
<td>11(16.2)</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Fully satisfied from OR assistance</td>
<td>74(59.7)</td>
<td>19(27.9)</td>
<td>p&lt;0.01</td>
</tr>
</tbody>
</table>

More females (51:37) consider lack of resources as a reason for dissatisfaction, (p<0.01) and out of them more are from teaching hospitals than community hospitals.(40:11) (p<0.01). Male anesthesiologists are less recognized than female anesthesiologists by patients (63:31) (p<0.01). More number of fully satisfied male respondents are from teaching hospitals than from community hospitals.(51:19) (p<0.01). More number of fully satisfied respondents from OR assistance are from teaching hospitals than from community hospitals (74:19) (p<0.01). High job satisfaction was expressed by teachers as compared to non-teachers (102:47) (p<0.05).

**DISCUSSION**

The specialty of anesthesiology is full of stress and chances of getting burnout are great for anesthesiologists. Job satisfaction can act as protective factor against burnout.10 Ramirez AJ et al.14 showed that, although surgeons had the highest level of stress, they also demonstrated a high level of job satisfaction, thus possibly protecting them from burnout. Enhancing job satisfaction is essential to protect anesthesiologists from burnout.

**Overall satisfaction:**

Overall job satisfaction was found to be high in Indian Anesthesiologists; 78% of the respondents reported full satisfaction (grades 4 and 5). The female anesthesiologists outnumbered their male colleagues (P<0.01) in this respect. Hawton et al15 noted that there was a higher rate of suicide in female doctors than males and that, anesthesiologists along with psychiatrists, general practitioners and community health doctors, had higher suicide rates than other hospital specialties. There was no difference regarding job satisfaction when junior anesthesiologists were compared to their senior colleagues (P>0.05). Anesthesiologists working in community hospitals have greater number of working hours and in addition have to perform their duties with minimal OR assistance. Most of them are attached to more than one hospitals and have to work in different working atmospheres. Anesthesiologists working in teaching hospitals have better working atmospheres and have more O.R. assistance. They work in a better academic environment, which is reflected in their overall better job satisfaction (P<0.05). This specificity was especially observed in males (P<0.01). In conformity with our findings of overall job satisfaction, greater than 75% anesthesiologists in Canadian11 and Belgium8 studies have reported high job satisfaction. But J F Kinzl et al13 found only 50% Austrian and Swiss anesthetists fully satisfied with their jobs.

**Satisfaction with OR assistance:**

The Australian Anaesthetic Incident Monitoring Study (AIMS) has shown that quality of anaesthetic assistance is associated with both the development and resolution of critical incidents16. From 5837 reports, inadequate assistance contributed in 187 cases whilst skilled assistance in 808 cases minimized the incident. Adequately trained anesthesia assistants are considered essential for the safe conduct of anesthesia in Australia. Only 49% respondents in our study were satisfied with the assistance available. In a Canadian study11 those working in smaller community hospitals reported greater satisfaction. Where as in our study, significantly greater number of anesthesiologists working in teaching hospitals have reported greater satisfaction with OR assistance than their counterparts working in community hospitals (P<0.01). This may be due to the fact that less importance is given in small private hospitals in India towards appointment of qualified assistants due to financial reasons. Less or even unqualified assistants are appointed

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on lower pay scales. Most of the teaching hospitals run nursing schools, which conduct nursing courses as well as paramedical certificate courses like OR assistants course; thus nursing students are available to work in ORs. More number of fully satisfied anesthesiologists working in teaching hospitals than their counterparts in community hospitals where OR assistance is inadequate, points out that there is a close association between quality and type of OR assistance a valuable and better job satisfaction.

**Perceived public attitude:**

One of the aspects of practice bringing the most dissatisfaction is lack of recognition by patients. It is expected that recognition of an individual doctor increases with the seniority in practice, which is more or less true with doctors from other clinical specialties; but in case of anesthesiologists, seniority makes minimal difference as they always play their role behind the curtain. Results from our study are comparable with other studies in this aspect. No significant difference was found between senior and junior anesthesiologists when compared, in respect of recognition from patients (P>0.05). Male anesthesiologists are less recognized by their patients than female anesthesiologists (P<0.01). The reason might be that anesthesiologists are themselves responsible for poor recognition by patients as they maintain a low profile. Only 28% anesthesiologists give talks to the lay public about anesthesia; and 9% of them do not even explain their intraoperative role to patients on the preoperative visits. It is possible to raise awareness among patients by laying more emphasis on pre-anesthetic meetings and also by providing an information sheet preoperatively to outpatients. This may help in improving patients understanding of the role of the anesthesiologists. This was also reflected in Presidential address delivered at ISACON-2006, Mysore, (Karnataka) on 27 December 2006 in which it was mentioned that—"public awareness of anesthesia services and anesthesiologists is far from satisfactory even now. This is basically due to our fault in marking eting ourselves. We have to constantly try to make the public aware of the importance of our work by establishing pre anesthesia clinics, patient counseling, pain clinics, trauma and critical care areas as well as promote paramedical courses to train anesthesiologists technicians or assistants. These steps will enhance our public image and create a favorable public opinion. Moreover, we have to utilize the services of 'information and technology science' in publishing about anesthesia, anesthesia related problems and in giving instruction in the management of disasters.”

**Perceived surgeons’ attitudes:**

A good relationship with the surgeon is of fundamental importance in anesthesiologist’s practice. Poor interpersonal relationships may lead to considerable stress. Anesthesiologists may feel unable to change or control situations in an environment, where the surgeon is commonly perceived to be in charge. Younger physicians tend to find interpersonal relationships more stressful than their older colleagues do. Jenkins K et al found that the senior Canadian respondents got higher regard from the surgeons in comparison to the younger respondents. However, we did not observe such difference (P>0.05); in our study, 51% respondents felt highly regarded by the surgeons (graded 4 or 5 on the Likert scale). In a study of Californian anesthesiologists, 96% indicated they often or always had a good working relationship with the surgeons but slightly over half did not believe that surgeons understood the risks of anesthesia. Surgeons pressurized anesthesiologists to proceed with cases instead of postponing the cases in spite of high risks and to hasten anaesthetic procedures. This conflict of interests is a source of disharmony in OR. Forty-nine percent of our respondents said that they were usually consulted for difficult medical problems. Though most surgeons accepted the anesthesiologists’ choice of anesthetic technique (89%) only 58% respected their decision to postpone cases. Nineteen percent of the anesthesiologists felt frequently pressurized for time in assessing patients and inducing anesthesia. All these factors definitely affect job satisfaction.

**Factors affecting job satisfaction/dissatisfaction:**

The environment in which individuals work has a tremendous effect on the level of 'pride' in themselves and the work they do. A job that is interesting and that permits one to contribute one’s skills and ideas is very important in respect of anesthesiologists. As long as sufficient resources are at their disposal, anesthesiologists are able to manage their high demanding tasks and task-related stressors very efficiently. An interesting job as the sole factor would not suffice for adequate job satisfaction. Improving working conditions and providing adequate resources would definitely help in enhancing job satisfaction. Two main factors causing dissatisfaction are lack of resources/equipment and lack of recognition by patients. It is felt that hospital administrators are reluctant in sanctioning and releasing funds for purchasing equipments and drugs related to anesthesiology. Equipment necessary for safe monitoring and improving quality of anesthesia
service will not be purchased unless statutory bodies lay down minimum standards of monitoring care. Budgetary constraints are faced by anesthesiologists in teaching as well as in community hospitals, which is reflected in resources being equally limited to both of them (P>0.05). More female anesthesiologists, especially those working in teaching hospitals, considered lack of resources as a reason for dissatisfaction (P<0.05). Other factors indicated for bringing dissatisfaction were long/unpredictable working hours, being unduly blamed for complications, lack of recognition by surgeons, inadequate financial compensation, unrealistic expectations of the clientele, hospital politics, and not being able to remain abreast with the latest knowledge/technical applications. At present it is the responsibility of each individual anesthesiologist to keep him/her informed of newer developments, but unless there is statutory compulsion e.g. compulsory CME activity, this fact will not be viewed seriously.

Overall, 78% anesthesiologists were satisfied by their professional work. Yet, it is felt that this number may be increased by improving on factors identified in the present study. Increasing intellectual stimulation, allowing better quality of care, improving interaction with patients and providing adequate OR assistance should be seriously considered. Departmental funding should be increased so as to meet the requirements of newer drugs, monitors, and equipment to perform newer techniques. Statutory bodies like University Grants Commission, Medical Council of India, Indian Society of Anesthesiologists etc. must lay down regulations requiring local administrations and authorities to follow minimum monitoring standards and provide anesthesia equipments like modern anesthesia work stations to improve standard of care as well improve job satisfaction. Better communication and team work by the entire surgical team would enhance professional satisfaction of anesthesiologists. Raising the profile of anesthesiologist, both in the eyes of the public and fellow health professionals should be taken on a priority basis. Patient education is an important method to raise the anesthesiologists’ image amongst the public.

LIMITATIONS

Our sample size is relatively small and may not be representative of all anesthesiologists from India, as it does not include a large number of practicing anesthesiologists, who never attend any conference or CME or workshop; it is not yet mandatory in India to earn CME points for renewal of registration and license to practice.

CONCLUSION

Although job satisfaction level in Indian anesthesiologists is quite high, still there is a need to set the, which would help reduce occupational stress and further improve efficiency and job satisfaction among anesthesiologists. Authorities, e.g. Indian Society of Anesthesiologists may urge large scale multicentre studies to lay down standards related to number of working hours per day and per week, number of night call duties per week, making proper assistance mandatory, preparing standard protocols and guidelines for anaesthetic management of different clinical cases, providing medicolegal protection etc.

REFERENCES


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