Addis Ababa University
College of Health Science
School of Medicine
Department of Anesthesia, Critical Care And Pain Medicine

WORK-RELATED STRESS AND ASSOCIATED FACTORS AMONG ANESTHESIOLOGISTS WORKING IN ETHIOPIA

BY

GOSA TESFAYE

A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCINCE DEPARTMENT OF ANESTHESIA,CRITICAL CARE AND PAIN MEDICINE IN PARTIAL FULFILMENT OF MEDICAL SPECIALITY IN ANESTHESIA,CRITICAL CARE AND PAIN MEDICINE

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Name of investigator	Gosa Tesfaye
Full title of the research project	WORK-RELATED STRESS AND ASSOCIATED FACTORS AMONG ANESTHESIOLOGISTS WORKING IN ETHIOPIA
Duration of the project	One year
Study area	Ethiopia
Address of the investigator	
Cellphone	+251947314667
Email	gosatesfayebt@gmail.com
Name of Advisor	Dr. Mesfin Girma, Assistant professor of Anesthesiology, College of medicine ,Addis Ababa University

Abbreviations

HSE - Health andSafety Executive

UNISON- united nations international superhero oversight network.

APA - American Psychological Association

NIOSH - National Institute for Occupational Safety and Health..

SPSS - Statistical Package for the Social Sciences

FMOH -Federal Ministry Of Health

Abstract

Background and Aims: Work related stress is common among medical caregivers and concerns all preoperative care providers.

Although anesthesiologists are known to experience stress, there is no data in Ethiopia addressing this issue. This survey was Conducted among anesthesiologists working in Ethiopia to determine their awareness about work stress, associated factors and views regarding prevention programs.

Material and Methods: A survey questionnaire was distributed to Anesthesiologist working in Ethiopia. The questionnaire had seven questions on sociodemography, ten on the work pattern, six on work related stress, thirteen on opinion Regarding the need and willingness to participate in stress related programs.

Results: Twenty seven participants responds from a total of twenty nine participant which makes a response rate of 93.11%. Seventy four percent were working in teaching hospital, ninety two percent were working in Addis Ababa and sixty six percent of participant were practicing as anesthesiologist for less than nine years.

Among participant 44.4% rated their stress as large(extreme amount) while 55.6 % rated as moderate.There was a significant correlation between the amount of stress and age of participant(P=0.021), sex of participant ($P < 0.001$),years of practice as anesthesiology(P = 0.036), type of employment (P = 0.047),working pertime in other hospital($p<0.001$),involvement in training of juiners($p=0.032$) and administrative problems in working place($p=0.022$). Only 3.7% was very satisfied and fifty five percent were somewhat satisfied professionally. Ninenty‑six percent of respondents agreed that the questionnaire had made them think about work stress. Forty percent of participant were aware of all details about burnout and eighty five participants were agreed to take part in screening for burnout.

Conclusion: Near half of participants rated their stress as extreme and was higher in female anesthesiologists, anesthesiologists working per time in other hospital, those involved in training of their juiners and those had frequent administrative problems at working place. Most of participants felt the survey made them think about work related stress and expressed their interests to participate in stress management programs.

Acknowledgement

First of all I would like to acknowledge Almighty God, who is the mystery of my life.
I really like to express my appreciation to my advisor, Dr. Mesfin for his constructive idea, comments and encouragement for this Thesis. Also I would like to express my gratitude for Dr.Fetiya for her help during writing this Thesis.

Table of Contents

List of Tables

List of Figures

CHAPTER ONE: INTRODUCTION

1. Background

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. Incidentally, the median emotional exhaustion and depersonalization scores of anesthesiology program directors were among the highest ever-recorded [3]

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]

2.Rationale of the study

Although problem of work stress is universal, given the socioeconomic and cultural differences and the individual and organizational factors that may be associated in Ethiopia, work related stress may be different from those reported in other countries [4]

There is no data on work related stress among anaesthesiologists working in Ethiopia. Anesthesiologist working in Ethiopia are few in numbers and they have work load, hence they are at high risk for work related stress.

3. Statement of the problem

Work related stress is defined by HSE as the "adverse reaction people have to excessive pressures or other types of demand placed on them". This distinguishes between the beneficial effects of reasonable pressure and challenge, which can be stimulating and motivating, and work related stress, which is the natural but distressing reaction to demands or work pressures that an individual perceives they cannot cope with. Although its causes may vary, stress is an issue that affects nearly all workplaces.

The 2014 survey of UNISON safety representatives showed stress to be their number one cause of concern in the workplace. 92% said that stress was among their top five concerns with 42% saying it was their number one concern.

The alarming spike in the incidence of reported stress among employees in recent years and its impact on the bottom line has made the management of stress an urgent business strategy for the American companies.The climbing figures are hard to ignore. Nearly three-quarters of American workers surveyed in 2007 reported experiencing physical symptoms of stress due to work. According to statistics from the APA, two-thirds of Americans say that work is a main source of stress in their lives – up nearly 15 percent from those who ranked work stress at the top just a year before,roughly 30 percent of workers surveyed reported"extreme" stress levels [5]

The faltering economy, shrinking incomes and rampant layoffs are undeniable factors. On-the-job stressors range from unclear job expectations and time pressures to noisy work stations. A significant factor is lack of accommodation for work/life balance, which can add to the stress load. What ever the root causes, stressed workers tend to be fatigued, prone to mistakes and injuries, and are more likely to be absent. And most significantly, they incur healthcare costs twice as high than for other employees. All tolled, the consequences of stress-related illnesses, from depression to heart disease, costs businesses an estimated $200 to $300 billion a year in lost productivity [6] Therefore stress should be managed early. One of stress management technique is Mindfulness Training that involves training the mind to focus attention on the moment. This "mindfulness" technique aims to reduce stress, increase productivity and enhance awareness through relaxation techniques, physical exercises and cognitive behavioral approaches[7]

More employers are recognizing that now is the time for action. Workers who are stressed today can be disabled tomorrow.

4. **Operational definitions**

work related stress= WHO defines as the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope.

Burnout= 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]

Chapter Two: Literature review

Stress, very simply, is a built-in condition. Humans are hard-wired to have a physical and psychological "stress" reaction when facing a perceived threat, whether it is real or not. Specifically, the body reacts with the "fight or flight response" triggered by the sudden release of the cortisol and adrenaline hormones. These hormones keep the body and mind coiled, alert and ready for reaction to the threat. This reaction served as a useful, protective response when faced with primitive threats such as a saber tooth tiger [8]

But even in the modern day work world, being under stress can serve as a useful motivator to perform, If it is in the right degree and does not produce job strain. As far back as 1908, researchers discovered that once stress reaches a mid to high level, productivity drops off remarkably. And when productivity drops off, the bottom line suffers [9]

Some effects of job stress are more easily quantified than others. Here are the many ways that prolonged, unhealthy job stress affect costs: Stress-related distraction or sleepiness account for an estimated 60 to 80 percent of accidents on the job, according to the American Institute of Stress.

An estimated one million workers miss work each day because of stress, costing companies an estimated $602 per employee per year. And absenteeism is to blame for 26 percent of health-related lost productivity in business [10]

As the term used to describe the opposite of absenteeism, "presenteeism" is the phenomenon of employees coming to work yet not functioning up to their capabilities on the job. In one survey, 60 percent of workers reported losing productivity due to stress while at work [11]

Workers who report that they are stressed, incur healthcare costs that are 46 percent higher than for non-stressed employees, according to the National Institute for Occupational Safety and Health (NIOSH). And 60 to 90 percent of doctor visits are attributed to stress-related illnesses and symptoms [12]

Left untreated, prolonged stress can raise the risk for developing chronic—and costly—diseases. Among them: heart disease, diabetes and even some cancers, which can collectively account for a vast amount of all healthcare costs. Diabetes alone cost business $58 billion in 2007 in just indirect medical expenses such as 15 million work days lost to absenteeism and 120 million work days with reduced productivity [11]

Stress can also lower the immune system and play a role in a person's susceptibility to more colds, flu and other infectious diseases. Additionally, people who are stressed are more likely to experience pain-related conditions, and a host of other ailments, from teeth grinding and chest tightness to fatigue [13]

In fact, an APA survey found that 53 percent of workers reported fatigue due to work stress [11]

It is well documented that health professionals experience high levels of job stress when work demands exceed their ability to cope [14]

Many studies in the west have identified stress as a factor in poor job performance, low job satisfaction and personal health problems [15]

According to research done in Jordanon health care professionals, 27% reported high levels of stress. Prevalence was highest among general practitioners (33%), then dentists (30%) and

pharmacists (25%). The lowest stress was among physician specialists (12%). Factors associated with the highest stress were being a general practitioner, being a woman and having long working hours. Dealing with uncooperative patients and heavy workloads were additional stressors. The most frequent problems associated with high stress were irritability (58%), consuming more arousal drinks (e.g. coffee, cola) (56%), difficulty concentrating (51%), headaches (63%), chronic back pain (48%) and common colds (47%) [16]

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 [17]

Surveys on work stress conducted among Indian anaesthesiologists shows 91% of anaesthesiologists' rated their stress as moderate-large. The amount of stress directly correlated to more than 8 h of work, handling high-risk patients,

working on weekends, and carrying work back home. 76% of delegates believed that the questionnaire of this study had brought their attention to the issue of burnout and 84% agreed to the need of having stress management programs [18]

Anesthesiologists are exposed to the stress of being responsible in ensuring the safety of the patient and have to perform in critical conditions [19]

Departmental heads have to take responsibility for things beyond their control and face human resource challenge. Incidentally, the median emotional exhaustion and depersonalization scores of anesthesiology program directors were among the highest ever recorded [20]

Researches done in Poland on senior specialist anesthesiologist, 71.32% of anesthesiologists were satisfied with their current job situation. Respondents declaring general satisfaction with their job were significantly more content with its different aspects, patient care ($P < 0.001$), income-prestige ($P < 0.001$), personal rewards ($P < 0.001$), burden ($P = 0.009$), professional relations ($P = 0.024$), and life in general, than the dissatisfied ones [21]

Research done in Filand on 2004 for on-call stress and its consequence among anaesthetists showed that 69% of specialist anaesthetists did night duty in hospitals. The respondents had been working on call for an average of 18 years (range 5–40;

SD 8.1). The in-hospital work period lasted 14–38 h, 24 h being the average.

The anaesthetists had both hospital (range 1–7) and home (range 0–18) calls three times a month on average.

The average activity for hospital calls was 81% and for home calls 29%. They had on average 13 active on-call hours per week.

Young specialists had more calls per month than their older counterparts. There were no gender differences in the category distribution Stress. 68% of the respondents felt stressed.Perceived stress increased with workload ($p = 0.02$). The main self-reported reasons for stress were: work 64%(79% in category four) and combining work and family in 48% of cases .Health, family, personal relationships and financial issues were mentioned by 17%, 16%, 13% and 12% of the respondents, respectively. The three main factors of worries at work' determined by factor analysis were:

- Time constraints and excessive workload;
- Work-place atmosphere and organisational issues;
- Responsibility and fear of harming patients.

The most stressful individual items of the first factor were combining work with family and being on call. The most frequent Stress symptoms when on call were:

Exhaustion, irritation, yawning, sleep disturbances, feeling cold, memory disturbances and headache [23]

This study classified on-call workload in to four category:

1 not currently on call or having solely home calls,

2 1–2 hospital calls a month,

3 ≥ 3 hospital calls a month with < 80% activity,

4 ≥ 3 hospital calls a month with ≥ 80% activity.

This study shows Exhaustion was reported by 32% in the lowest and 68% in the highest workload category, burnout by 18% and 45%, respectively [23]

In Finland, suicide (17%) and accidents (11%) were over-represented causes of death among anaesthetists in comparison with other physicians and the general population [24]

According to research done on 263 portuguese anesthesiologist; 57.9% experienced emotional exhaustion, 44.8 lack of personal accomplishment and 90.9% depersonalisasion. Lack of personal accomplishment increased with number of children among women but not among men Depersonalisation was more frequent among anaesthesiologists' working in community Hospitals and anesthesiologists with leadership functions experienced less professional stress

Research done on 125 Austrian and Swiss anesthetists for job satisfactions shows ;contro over work shows a strong effect on job satisfaction in anesthetists, for example influence on handling tasks ($p=0.001$),time control($p=0.002$) and participations ($p=0.001$),where as task

demands and task related problems did not have any effect. Anaesthetists in leading positions and specialists in leading positions reported low job satisfactions (p=0.012) than did anaesthetists in non leading positions [26]

According to research done in Addis Ababa ,Ethiopia on nurse anesthetist ; The prevalence of high level of work related stress was 96.1% among participant anesthetists. Moreover, all the participants had low level of job satisfaction and 84.3% had turnover intention. The results of the correlation analysis revealed that Anesthetists work related stress score was positively related to their job satisfaction score (r = .091, p=.527). Hence, as the score of work stress decreases the score of job satisfaction also decreases. The result implies that those participants with high level of stress were also low in their job satisfaction level. This study shows there was no statistically significant difference between the two groups (males and females) in job stress (t = -1.672, df = 49, p=.312). That is the two groups of nurse anesthetists were not experiencing work related stress differently [22]

Chapter Three: Objectives

3.1 General objectives

To assess anaesthesiologists working in Ethiopia awareness about work stress and associated factors and views regarding prevention programs.

3.2 specific objectives

- To understand work stress patterns among this vulnerable group.
- To know prevalence of work stress, job satisfaction.
- To know their willingness to take part in identification and prevention programs for work related stress and
- To identify factors associated with work stress.

Chapter Four: Methodology

4.1 Eligibility criteria and ethical considerations

4.1.1 Inclusion criteria

1. All anesthesiologist working in Ethiopia, both governemt and private hospital and those working outside hospital.

4.1.2 Exclusion criteria

1.Ethiopian anesthesiology working outside Ethiopia

2. Anesthesiology residents.

4.1.3 Ethical considerations

Before the data collection, verbal consent was obtained from each participant.

Any specific participant identity did not included in the data collection tool and that was assured by using code numbers to each data.

4.2 Study setting

The survey questionnaire were distributed to anesthesiologist available on the Annual

conference of the Ethiopian Society of Anaesthesiologists which was held in Addis Ababa, June 2018.

Questionnaires were sent with their e-mail for those didn't available on the conference.

4.3 Study design

Cross-sectional survey was conducted using questioners, which has thirty-six questions.

4.4 Source and study population

The Source and study population includes all anesthesiologigist working in Ethiopia.

4.5 Sample size determination

A total population sampling which is a type of purposive sampling techniques was used because the entire population were included in the study.

4.6 Study variables

4.6.1 Dependent variable

Work stress , job satisfaction, burnout

4.6.2 Independent variables

Working hour, age, sex, Marital status

Working environment

Type of patient

Monthly income

Place of work

4.7 Data collection and management

Data was collected using survey questioners, which had thirty six questions.

The questioners prepared with English. The collected data analyzed using SPSS version 20.

4.8 Dissemination of the result

The study result presented to Addis Ababa University, School of Medicine,Department of Anesthesiology and the documents disseminated to all responsible bodies in the study area, for the hospital where the study was conducted, FMOH and Addis Ababa university school of Medicine.

Chapter five: Result

Twenty nine questionnaires were distributed and Twenty seven (93%) returned the survey. Majority of the participants (74%) were working in teaching hospital, 92% were working in Addis Ababa and 66% of participant were practicing as anesthesiologist for less than nine years. Sixty seven percent of respondents were males and 70% were married. Ninety six percent of participant were Ethiopians.

Sixty six percent of participant were practicing as anesthesiologist for less than nine years.

Socio-demographic Characteristics of Respondents

The subjects involved in this study were 27 anesthesiologists working in Addis Ababa and Jimma. As shown in Table 1 below, out of the total of 27 participants 18 were males and 9 were females. And, most of the age of the respondents ranged between 30 to 39 and above 50 yrs. With respect to the respondent's marital status, majority of the anesthesiologist (70%) were married. Moreover, 17 of the respondents have the responsibility of their children ranging from 1 to 4 including the divorced/separated of single parents.

Also as shown on the table 2 below, 85% of the respondents have a permanent worker at their current organization while 15% were work as contract employee in their organization.

Table 1: Socio-Demographic Characteristic of Respondents

Demographic characteristics		Frequency(N=51)	Percenta
Age	20-29	6	22
	30-39	10	37
	40-49	1	4
	>50	10	37
Gender	Male	18	67
	Female	9	33
	Total	27	100
Nationality	Ethiopia	26	96
	Non Ethiopians	1	4
Marital status	Married	19	70
	Single	6	22
	Divorced	1	4
	No response	1	4
	Total	27	100
Those have childrens	Yes	17	63
	No	10	37
Place of work	Addis Ababa	25	93
	Out of Addis Ababa	2	7
Working hospital	Teaching hospital	20	74
	Community hospital	7	26
Monthly income	<10000	1	4
	10000-30000	20	74
	10000-30000	2	7
	No response	4	15
Responsibility of child	Have child	17	63
	Do not have child	10	37
	total	27	100
Years of practice as anesthesiologist	0-9 yrs	18	67
	10-20 yrs	6	22

	>20 yrs	3	11

Table 2: Working pattern

Working pattern		N;27	percentage	p=value
Per time working in other hospital	Yes	9	33	< .001
	No	18	67	
Type of employment	permanent	23	85	.047
	contract	4	15	
Responsibility	Shared by team	20	74	.151
	Individual accountability	7	26	
Working hour	8hrs	6	22	.329
	<8hrs	3	11	
	>8hrs	18	67	
Working on weekend	yes	22	82	.235
	No	5	18	
Frequency of handling high risk patient	1-2 cases/week	25	93	.253
	1-2 cases/month	2	7	
Involvement in teaching juniors	yes	25	93	.032
	No	2	7	
Have administrative problems at work place	Yes	19	70	.254
	No	8	30	
Frequency of administrative problems at work place	Often (daily)	18	67	.022
	Occationally(monthly basis)	5	18	
	Rarely	4	15	
Involved in research	Yes	17	63	.240
	No	13	67	
Frequency of carrying work back to home	Often (1-2times/weeks)	8	30	.291

	Occasional(1-2times/month)	12	44	
	Rarely	5	19	
	No response	2	7	

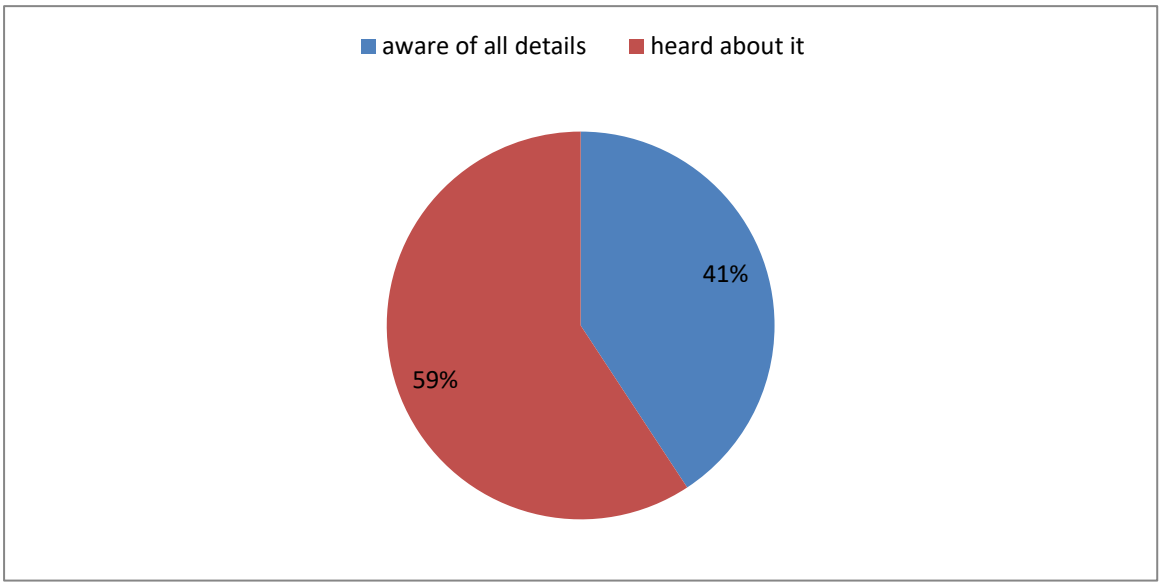

Figure :1 About professional burnout

This figure shows majority of the respondents didn't know details of professional burn out.

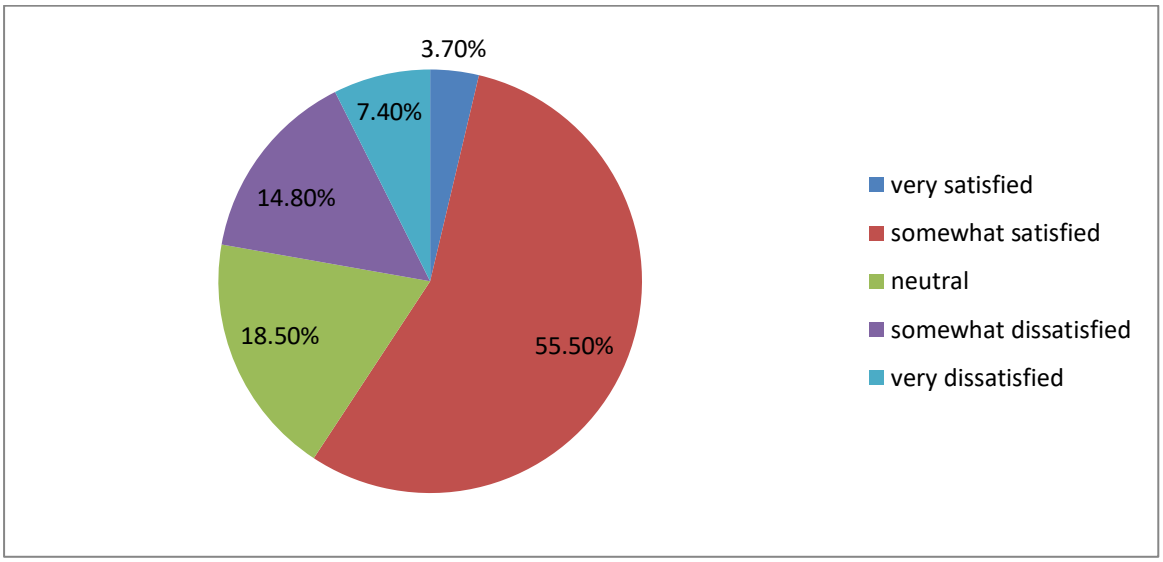

Figure 2: Proportion of responses from participants expressing degree of Satisfaction in their professional life on a scale ranging from very satisfied to very

dissatisfied. Response of participant expressed by percent.

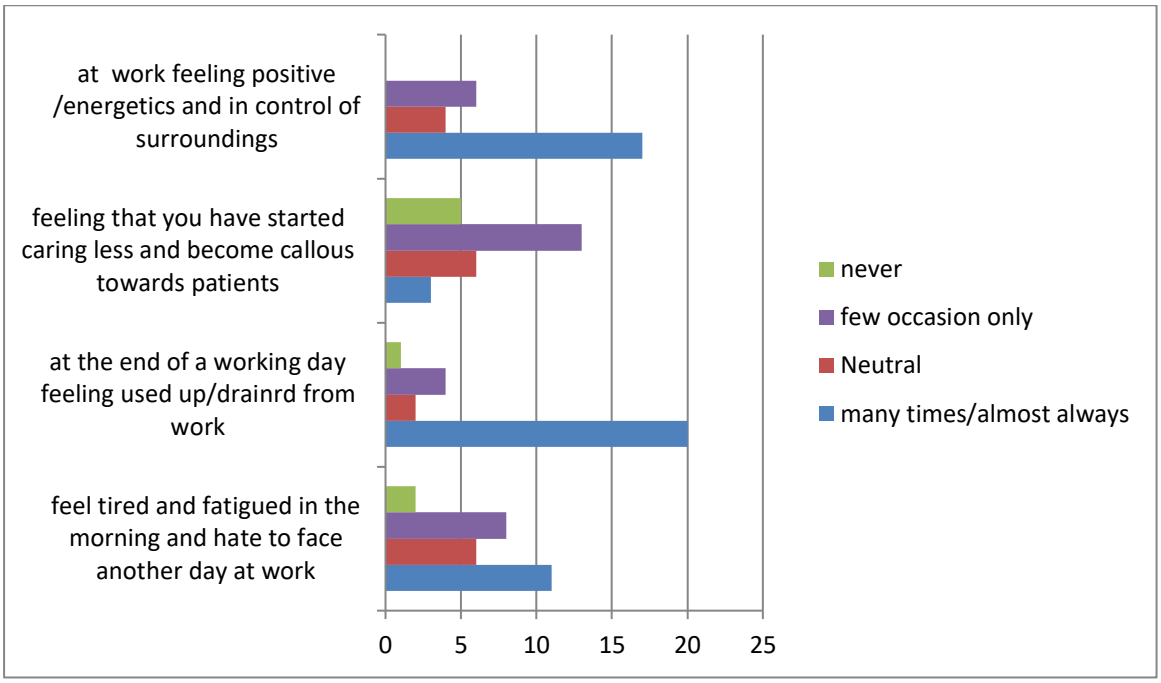

Figure 3: Proportion of responders experiencing selective symptoms related to burnout, Positive responses to item I, II, IV would pose an increase risk of burnout.

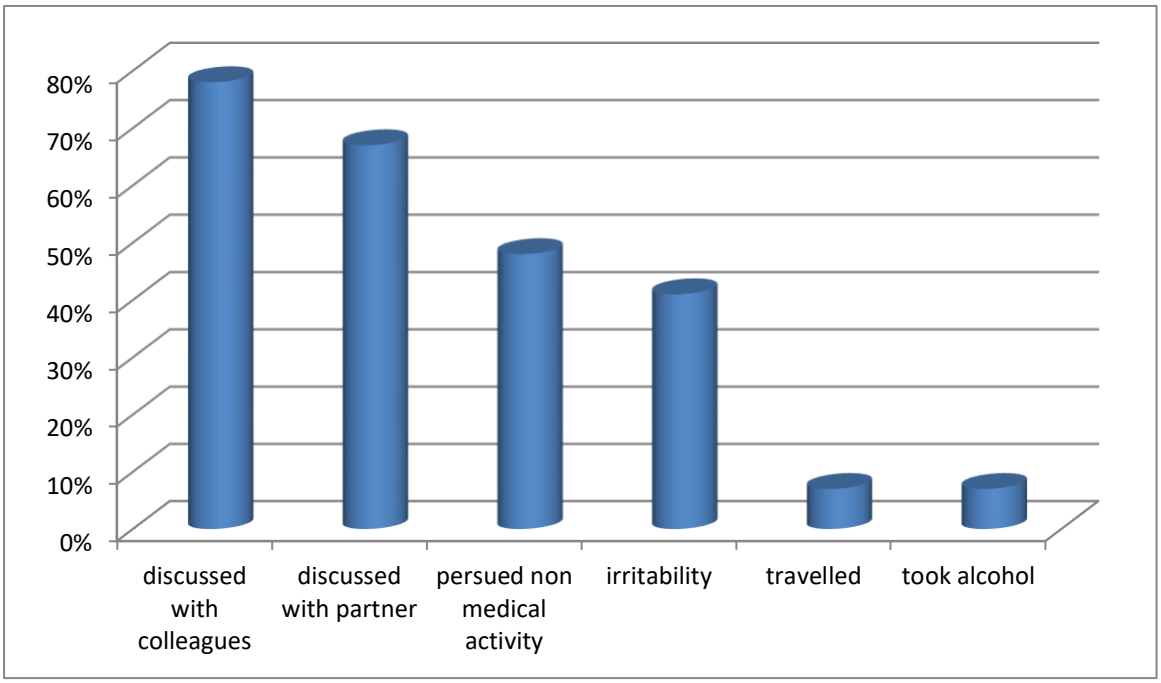

Figure 4:shows reaction of anesthesiologist when stressed.

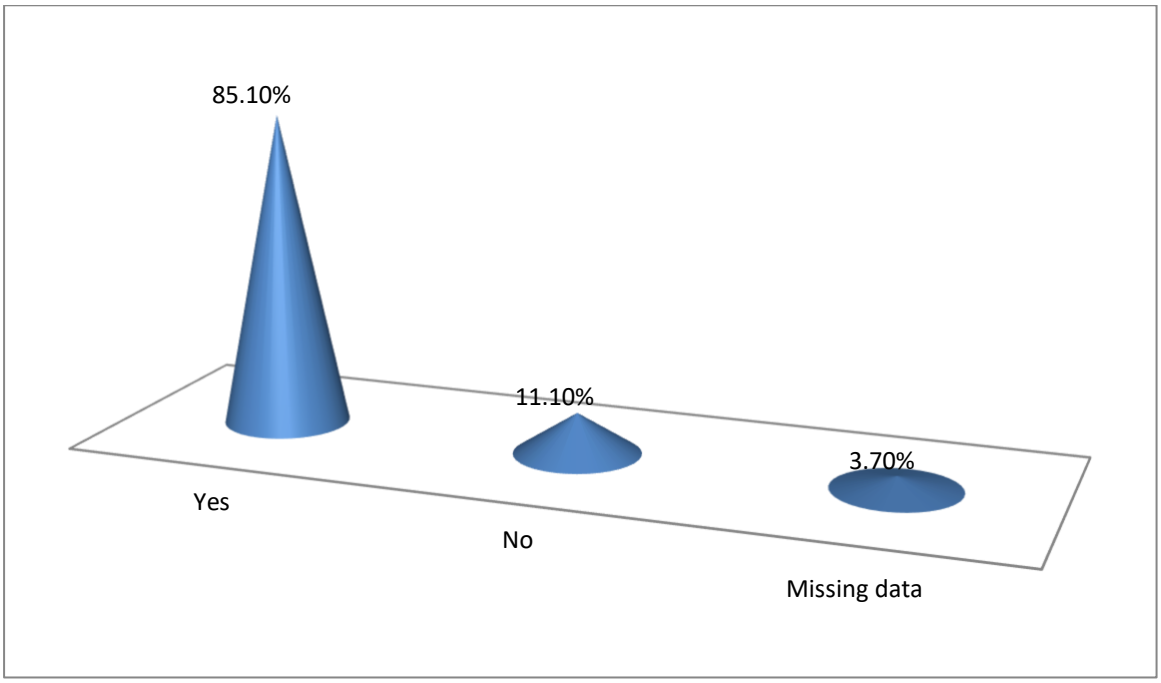

Figure 5:Respondents response for taking part in screening for burnout

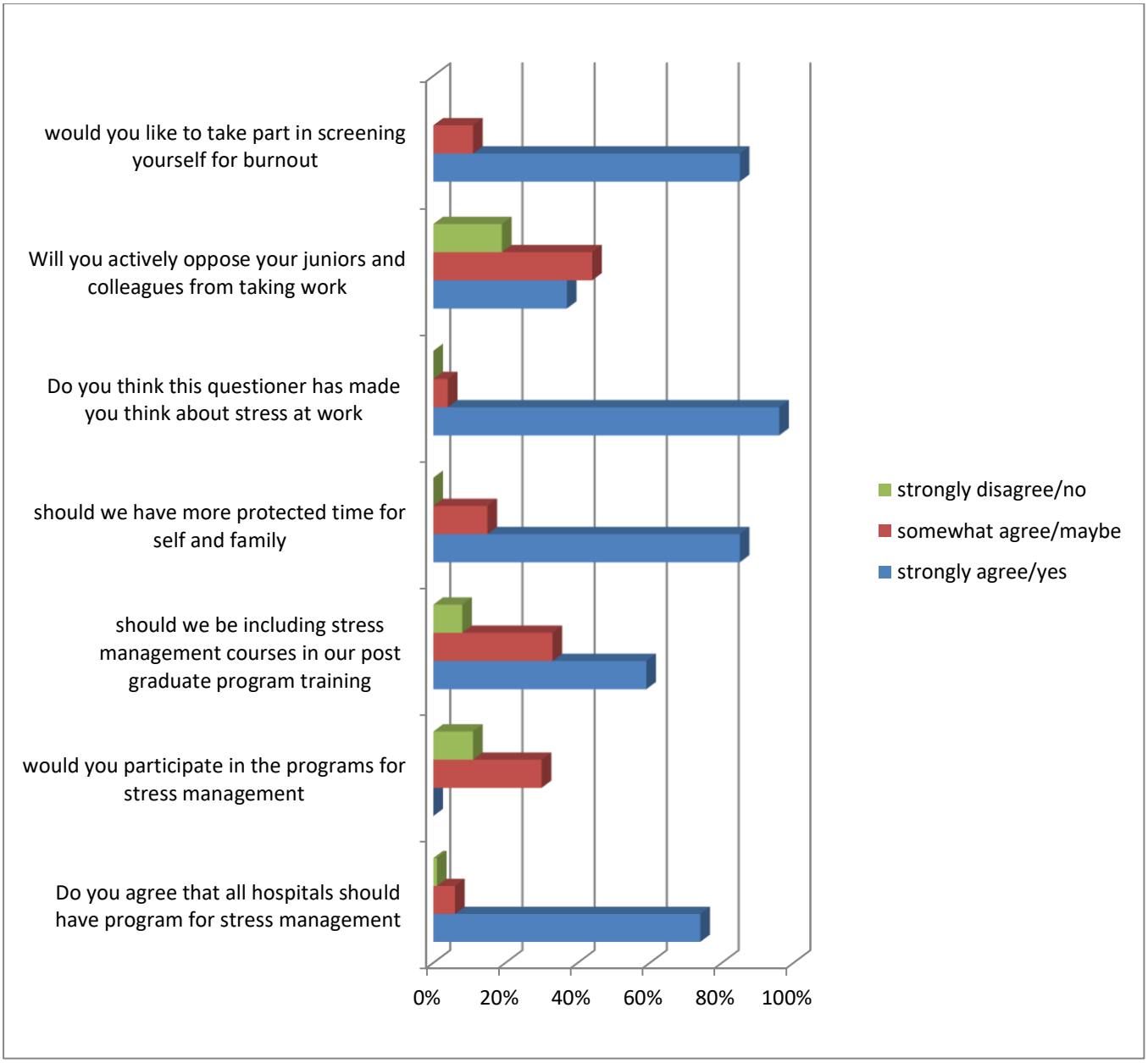

Figure 6: Analysis of view of respondents regarding necessity and willingness to participate in prevention programs.

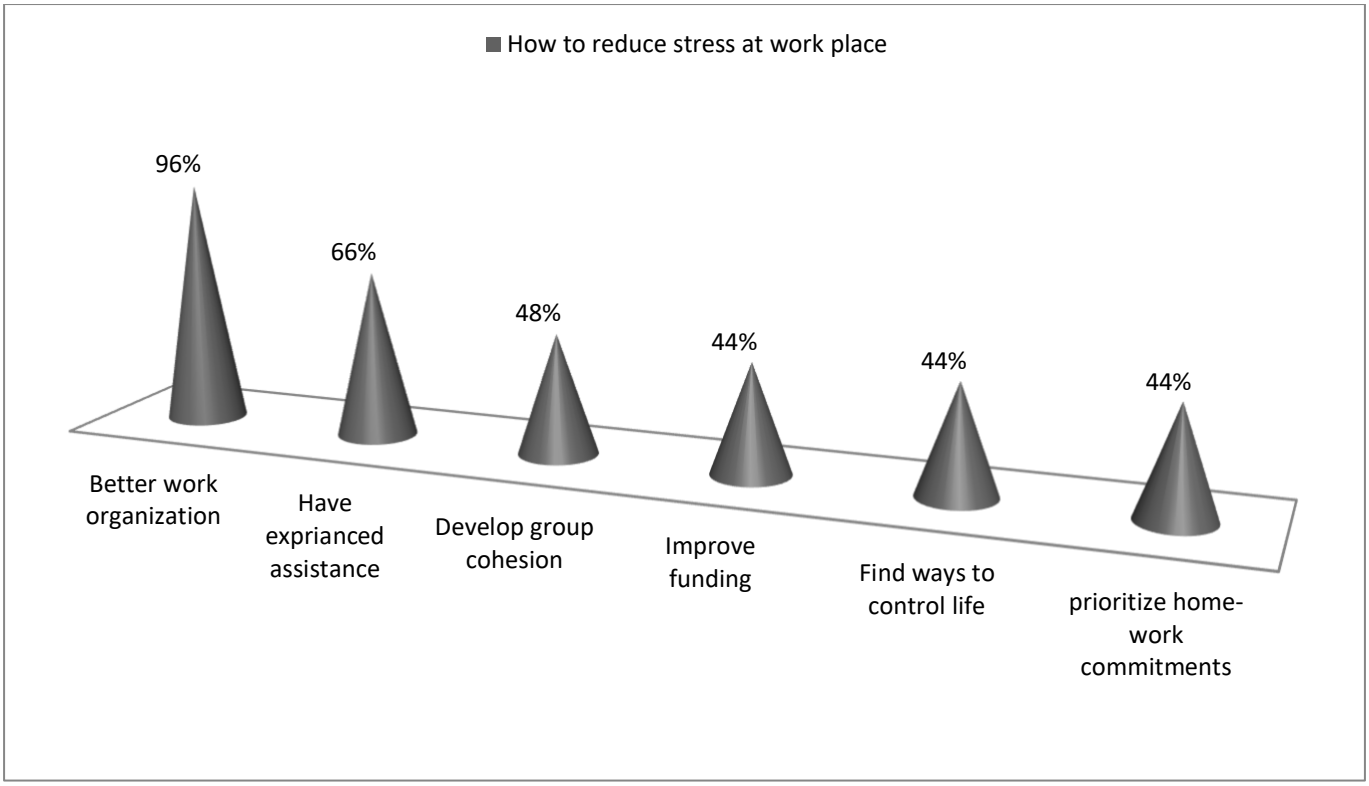

Figure 7:Suggestion of participants to reduce work related stress

This study shows a shocking result regarding the number of anesthesiologist ever planned to change profession (52%) due to different reason. As shown on figure 5;the most common reason for planning to change profession were work related stress(43%),poor working set up(29%) and under payment(29%).

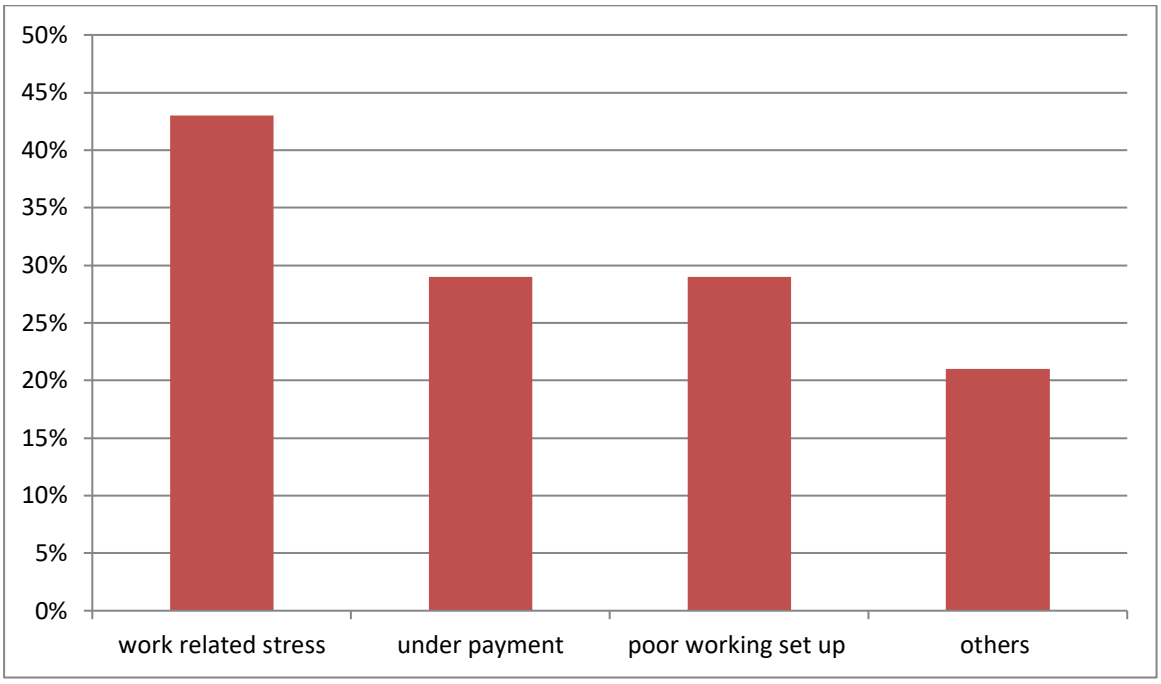

Figure 8:Reasons of anesthesiologists to plan to change their profession

Chapter Six:Discussion

Stress, very simply, is a built-in condition. Humans are hard-wired to have a physical and psychological "stress" reaction when facing a perceived threat, whether it is real or not. Specifically, the body reacts with the "fight or flight response" triggered by the sudden release of the cortisol and adrenaline hormones. These hormones keep the body and mind coiled, alert and ready for reaction to the threat. This reaction served as a useful, protective response when faced with primitive threats such as a saber tooth tiger [8]

But even in the modern day work world, being under stress can serve as a useful motivator to perform, If it is in the right degree and does not produce job strain. As far back as 1908, researchers discovered that once stress reaches a mid to high level, productivity drops off remarkably. And when productivity drops off, the bottom line suffers [9]

People who are stressed are more likely to experience pain-related conditions, and a host of other ailments, from teeth grinding and chest tightness to fatigue [13]
In fact, an APA survey found that 53 percent of workers reported fatigue due to work stress [11]
Current study's also support this data showing that 70 percent of anesthesiologist reported fatigue due to work stress. Relatively high percent of our result may be due to involving anesthesiologist only whose profession is the most stressful.
It is well documented that health professionals experience high levels of job stress when work demands exceed their ability to cope [14]
Many studies in the west have identified stress as a factor in poor job performance, low job satisfaction and personal health problems [15]

This is the first survey on work related stress done on anesthesiologist working in Ethiopia. Fourty four percent of anesthesiologist rated their stress as extreme(large) and fifty six percent rated their stress as moderate. The amount of stress significantly correlated to gender ($p<0.001$), age($p=0.021$), years of practice as anesthesiologist ($p=0.036$),type of employment ($p=0.047$),working per time in another hospital($p<0.001$),training of juniors ($p=0.032$) and administrative problems at working place ($p=0.022$).
Ninenty‑six percent of respondents agreed that the questionnaire had made them think about work stress and 40% of participant were aware of all details about burnout and eighty five participants were agreed to take part in screening for burnout.

According to research done in Jordanon health care professionals, 27% reported high levels of stress. Factors associated with the highest stress were being a general practitioner, being a woman and having long working hours. Dealing with uncooperative patients and heavy workloads were additional stressors. [16] .Compared to this research our study shows high number of anesthesiologist(44%) reported high level of stress .The reason may be shortage of number and high workload. Both studies revealed that being woman is a significant factor associated with work related stress.

According to the above research the most frequent reaction for high stress were irritability (58%), consuming more arousal drinks (e.g. coffee, cola) (56%), difficulty concentrating (51%), headaches (63%), chronic back pain (48%) and common colds (47%) [16] In our study majority of the anesthesiologist reaction for the stress were discussing with colleagues(78%) and discussing with partner(67%) .Others were persuid non medical activities(48%),irritability(41%),travelled(7%) and took alcohol(7%).

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 [17]

In our study all participant rated their stress moderate to large which was closest with the study done in India on Indian anesthesiologist which was 91%.There was no correlation in our study between degree of stress and working more than 8hrs,handling of high risk patient, working on weekend and carrying work back home but these factors had strong correlation with the amount of stress according to research done in India. The same study in India shows 76% of delegates believed that the questionnaire of the study had brought their attention to the issue of burnout and 84% agreed to the need of having stress management programs [18]. Our study also used the same questioner and revealed similar result which was 96 % of respondents agreed that the questionnaire had made them think about work stress and 85% were agreed to take part in screening for burnout.

According to research done in Poland on senior specialist anesthesiologist, 71.32% of anesthesiologists were satisfied with their current job situation[21].In contrast our study shows Only 3.7% was very satisfied and fifty five percent were somewhat satisfied professionally. This large difference may be due to poor salary, poor working setup and so on.

6.1 Strength and limitation of the study

6.1.2 Strength

- The first study done Ethiopia
- Shows the national level data

6.1.3 Limitations

- Small sample size

6.2 Conclusion

Our study revealed that there is a significant work related stress among anesthesiologist working in Ethiopia. Most of respondents agreed that the questionnaire had made them think about work stress but only Forty percent of participants were aware of all details about burnout and eighty five participants were agreed to take part in screening for burnout. There is significant correlation between work related stress and working per time, administrative problems in working place and involvement in training of juniors.

6.3 Recommendation

Based on the result of the study the following recommendations are forwarded:

- The FMOH better to have policy for regular screening and prevention training for work related stress.
- The FMOH should pay Anesthesiologist according to their workload not to change their profession.
- There should be encouragement for postgraduate training to increase the number of Anesthesiologist.
- We recommend to do further research on this area.

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Annex I. Questioners

Survey of stress at work

I request all participants to fill in this questionnaire accurately and honestly. Kindly submit the filled questionnaires back to me.

Age--------- Sex---------- Home city---------- -------nationality----------

1. marital status. married-------single--------divorced------

2. Do you have children? Yes -------No------

If yes ;how many?-------

3. How much is your monthly income?.....

4. Where is your working place? In Addis Abeba---------out of Addis Abeba---------

5. where are you working? Teaching hospital----------community hospital----------

6.Year of practice as aneasthesiologist

0–9 yr---------. 10–19 yr -------- . >20 yr----------.

7. Type employment: Freelancing(contrat)-------- permanent----------

8. Working pattern: Responsibility shared by team------- Individual accountability-----

9. How many hours do you work per day? eight or less hours----- more than eight hours-----

-

10. Do you also work on weekends: Yes--- No----

11,Do you work as per timer in other Hospital? yes----------No-------

12. How often do you handle high risk patients: Often (1-2 cases/week) ------- occasionall (1-2 case/month)-------- rarely-----.

13. Are you involved in training of juniors working with you: Yes----- No----

14. Do you have to handle administration problems at work place: Yes----- No-----.

15. How often do you encounter administrative problems in your place of work:

Often (daily)------ occasionally (monthly basis)----- rarely------

16. Are you involved in research: Yes----- No-----

17. 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-------

18. How would you rank your stress in professional life?

Large (extreme amount)------- moderate amount------- not at all (slight amount)-----

19. How satisfied are you professionally:

Very satisfied-------- somewhat satisfied-------- neutral--------somewhat dissatisfied ----very dissatisfied------

20.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-----

21. At the end of a working day do you feel used up/drained from work

Almost always----- many times----- neutral----- few occasionsonly------- never-----

22. At work do you feel positive/energetic and in control of your surroundings

Almost always------ many times----- neutral------ few occasions only------ never-----

23. Do you feel that you have started caring less and become callous towards your patients?

Almost always----- many times-----neutral------ few occasions only----- never-----

24. Do you agree that all hospitals should have programs for stress management?

Strongly agree----- somewhat agree----- neutral----- somewhat disagree---- strongly disagree----------

25. Would you participate in the program: Yes---- maybe---- No----

26. Should we be including stress management courses in our PG training program?

Yes---- maybe----- No------

27. Should we have more protected time (for self and family): Yes---- maybe---- No---

28. Do you think this questionnaire has made you think about stress at work: Yes---- maybe------ No-------

29. Will you actively oppose your juniors and colleagues from taking work back home:

Yes---- maybe---- No----

30. Are you aware of professional burnout:

Aware of all details------- heard about it------- none at all-------

31. Would you like to take part in screening yourself for burnout? Yes---- No-----

32.what factors do you think makes the job of anesthesiologist stressful (choose one or more)

Time constraints-----

Interference with home life---------

Medicolegal concerns-------

Communication problems--------

Clinical problems------

33.How do you react when become stressed(one or more)

Discussed with colleagues-------

Discussed with partner------

Pursued non-medical activities--------

Used to become irritable------

Travelled--------

Heightened concentration-------

Took to alcohol------

Smoked----

Took drugs-----

34. How can we reduce stress at workplace?

1. Have experienced assistants

2. Better work organization

3. Develop group cohesion

4. Prioritize home-work commitments

5. Find ways to control life

6. Improve funding

35. Have you ever planned to change your profession?

Yes----No------

36. If yes , why----------

Annex II. Declaration

I Gosa Tesfaye, MD, the principal investigator of this study do there by declare that this thesis is original work and that it has not been submitted partially or in full by any other person for an aware of a degree in any other institution.

Principal Investigator_____sign_____ date_____

Advisor name_____sign_____date_____