

Emotional Exhaustion in Cancer Clinicians: A Mixed Methods Exploration

Abstract

Objectives: The aim of the current study was to explore the associations of emotional exhaustion in oncology clinicians and perceptions of doctors about their work–life balance in a developing country. **Methods:** The current study used quantitative semi-structured interviews and qualitative in-depth interviews to explore emotional exhaustion and burnout in doctors in a tertiary care cancer center. Sociodemographic details, Maslach Burnout Inventory, and Patient Health Questionnaire were used for the quantitative analysis. **Results:** Increased work pressure (adjusted odds ratio [AOR]: 5.39, 95% confidence interval [CI]: 2.01–14.47, $P < 0.01$), reduced job-related satisfaction (AOR: 3.56, 95% CI: 1.37–9.25, $P < 0.01$), being a woman (AOR: 3.4, 95% CI: 1.2–9.5, $P < 0.01$), and having higher anxiety and depression scores (AOR: 2.89, 95% CI: 1.11–7.46, $P = 0.03$) were independently associated with higher levels of emotional exhaustion. In the qualitative interviews, many doctors felt working in oncology a satisfying as well as stressful experience. Dealing with palliative and end-of-life situations and counseling patients and their family members about various treatment options contributed to the stress. Male and female clinicians viewed work–life balance differently. Female doctors charted a larger area of influence for which they felt responsible in work and life. **Conclusion:** Increased work pressure, reduced job satisfaction, and increased affective symptoms contribute to emotional exhaustion in oncology clinicians, and the risk increases especially in female doctors. Having gender-sensitive and employee-friendly policies will likely help in having a nurturing work environment.

Keywords: Burnout, cancer, depression, emotional exhaustion, oncology, work-life balance

Introduction

Burnout of medical practitioners in oncology is a worldwide phenomenon.^[1–4] Among hospital-based consultants in the United Kingdom, decrease in job satisfaction went hand in hand with increase in job-related stress. The same study compared different specialties over time, and the authors concluded that clinical and surgical oncologists were at an increased risk of burnout.^[5] This could be because of a plethora of reasons such as having to tackle difficult-to-treat diseases, poor outcome of cancer in many instances,^[6] frequent dealings with palliation and end-of-life scenarios,^[4] and lack of training in handling emotional aspects of medical care.^[7] Most of the studies on burnout of medical practitioners have been carried out in the West. Few of the publications on burnout and work–life balance of doctors from Asia are more from affluent countries such as Singapore^[4] and Japan.^[8] Very little literature exists on burnout in oncologists from the developing

countries, which ironically grapples with the twin problem of larger cancer burden and lower doctor–patient ratio.

Depression and anxiety have been studied along with burnout in some studies. A study found the prevalence of psychiatric morbidity to be 27% among doctors.^[1] A nationwide retrospective cohort study from the United Kingdom covering the period between 1979 and 1995 found that female medical practitioners had higher suicide rate than the general population. Male doctors, on the other hand, had lower suicide rate than the general population.^[9] Burnout and psychiatric morbidity in doctors and more specifically those working in the field of oncology need exploration in the context of gender and work–life balance.

India records more than a million new cancer patients every year.^[10] To the best of our knowledge, none of the studies on burnout from India^[11–13] have focused on oncology clinicians. Of the studies on oncology clinicians conducted in other parts of the world, none has followed mixed methods approach of investigation

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Access this article online

Website: www.ijmpo.org

DOI: 10.4103/ijmpo.ijmpo_168_17

Quick Response Code:



How to cite this article: Daruvala R, Ghosh M, Fratazzi F, Norzan SA, Laha A, Ahmed R, *et al.* Emotional exhaustion in cancer clinicians: A mixed methods exploration. *Indian J Med Paediatr Oncol* 2019;40:111-20.

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where qualitative findings are juxtaposed with quantitative findings to get an insider's perspective.

Methods

We studied burnout and its associations using mixed methods of inquiry intertwining qualitative and quantitative research methodology in a developing country setting. The study was conducted after obtaining approval from the institutional ethics committee (EC/TMC/49/15). Written informed consent was obtained from all participants.

Research team

The core research team consisted of a consultant psycho-oncologist, two psycho-oncology fellows, a staff health physician, a consultant surgical oncologist, an epidemiologist with specific expertise in qualitative research, and two visiting social science interns. All members of the research team had previously undergone communication skills training. Two senior members of the team (SSD and SP) had independently led and published qualitative and mixed methods research while all the other members had undergone training in research methods.

Setting

The subspecialties of oncology including surgery, radiotherapy, medical oncology, clinical hematology, nuclear medicine, radiodiagnosis, palliative medicine as well as laboratory-based departments such as hematology, biochemistry, histopathology, radiodiagnosis, and clinical microbiology of a tertiary care hospital comprised the study setting. The researchers who undertook quantitative and qualitative interviews were not part of any of the clinical teams or the hospital where the study was conducted. This made them particularly suitable as interviewers, as most doctors could open up easily to them.

Eligibility criteria

Doctors who had been employed in the hospital for at least 1 month were eligible to participate in the study. The cutoff of 1 month was chosen based on the assumption that, in the 1st month of a new job, the doctors may not be exposed adequately to work-related stresses. The only exclusion criterion was that of a participant who the researcher felt extremely vulnerable to be interviewed. None of the respondents approached for participation in the study met the exclusion criteria.

Recruitment method

A comprehensive list of all doctors employed by the study hospital was obtained from the department of human resources. The researchers approached potential participants individually. A record of the specialties of doctors who refused to participate was maintained without personal identifiers so that any systematic refusal could be investigated.

Data collection method

The qualitative part of the study adhered to the COREC guidelines for research.^[14] Participants were interviewed privately in their own offices, at their convenience, so as to make them comfortable in discussing sensitive issues related to well-being, work–life balance, and burnout. Following a sequential mixed methods design, a subsample of respondents was purposively chosen for qualitative interviews from those who completed the quantitative structured interview. All qualitative interviews were recorded and transcribed verbatim by the researchers. Measures were taken to maintain confidentiality of participants and around the responses obtained.

Data collection instruments

Quantitative data

A predesigned structured questionnaire capturing demographic and occupational information was used. Other sections in the questionnaire had items to quantify burnout and to screen for affective symptoms. The outcome variable of interest was emotional exhaustion, and the instrument used to quantify this was Maslach Burnout Inventory (MBI).

The MBI is a 22-item self-administered inventory used for measuring burnout and has been used globally to quantify burnout in staff across various settings.^[15] Following scoring, the questionnaire generates three subscales, namely emotional exhaustion, depersonalization, and professional accomplishment. All the three subscale scores were divided into low, moderate, and high based on predetermined cutoff scores provided by the authors. Emotional exhaustion was kept at the focus of the current exploration as sufficient number of respondents was available for analysis following classification on intensity score.

While sociodemographic variables generated information on factors that could be associated with emotional exhaustion, Patient Health Questionnaire-4 (PHQ-4) score was another area of exploration. The PHQ-4 is a 4-item ultrabrief screening questionnaire validated for detecting depression and anxiety in a population who do not already have a psychiatric diagnosis.^[16] Authors of the PHQ-4 have proposed that a score of 0–2 correspond to possible noncases and those who score 3 or more as possible cases. In the current study, same cutoff for defining a case (respondents scoring 3 or more on the PHQ-4) was used.

Qualitative data

The interviewers followed a predetermined series of cues and prompts while conducting in-depth interviews. The cues were related to what was perceived to be stressful while working as a doctor in general and working specifically in a cancer hospital and how doctors maintained a work–life balance. Qualitative data analysis and data collection went on concurrently to incorporate newly emerging themes from earlier interviews until data saturation was achieved.

Data analysis

The subscale scores on the MBI were converted to categorical variables based on internationally accepted cutoffs as suggested by the authors of the MBI. Following tests of normality of distribution of associated factors, nonparametric statistical tests were used. Univariate analysis was conducted to explore the association of variables across the two groups of doctors reporting different levels of emotional exhaustion. Multivariate logistic regression was conducted with emotional exhaustion as the dependent variable. Factors which were significantly associated ($P < 0.05$) with emotional exhaustion in univariate analysis were entered as independent variables in the multivariate regression model.

Qualitative in-depth interviews were transcribed verbatim, and transcripts were anonymized. All interviews were coded by two independent researchers in the team. A senior researcher along with the two coders reviewed the codes and helped to sort out any differences as qualitative analysis progressed. The various steps of qualitative data analysis involved (a) generating codes using the principles of thematic analysis, (b) charting the data, (c) data synthesis, (d) formulation of basic themes, and (e) developing global themes. Basic and global themes were generated by the method of thematic analysis as described by Braun and Clarke.^[17]

Results

Respondent profile

One hundred and thirty-one of the 150 doctors (87.3%) employed in the hospital were eligible to be recruited in our study and were invited to participate. Of those approached, 114 doctors (114/131; 87%) consented for participation. Those who refused (17/131; 13%) to participate were evenly distributed across specialties (clinical/medical oncology 9, surgical oncology 5, and laboratory/diagnostic specialties 3). The median age of the doctors recruited was 34.5 years (interquartile range [IQR] 31–40; minimum 28 years and maximum 60 years). The median number of years that the study participants had practiced as a doctor and as an oncologist was, respectively, 12 years (IQR 7.75–15, minimum of 0.25 year to a maximum of 38 years) and 4 years (IQR 2–6.25, minimum of 1 year to a maximum of 33 years). Only 6 (6/114, 5%) doctors had worked < 6 months in the field of oncology. This is because, being a newly built hospital, many doctors who joined at middle and senior levels already had several years of experience in the field of oncology. The detailed characteristics of the study participants are described in Table 1. Twenty-eight doctors across specialties and belonging to different age groups were purposively selected for qualitative in-depth interviews.

Depression and anxiety in doctors as assessed on the Patient Health Questionnaire-4

Majority of the doctors did not qualify as a PHQ case, and the data were positively skewed. A total of 45 (45/114;

Table 1: Respondent characteristics (n=114)

Attributes	n (%)
Age (years)	
25-29	13 (11)
30-34	44 (39)
35-39	24 (21)
40-44	13 (11)
45-49	8 (7)
≥50	12 (11)
Gender	
Female	38 (31.4)
Male	76 (66.67)
Specialties	
Surgical oncology-related specialties	47 (41.2)
Medical/radiation oncology-related specialties	37 (32.5)
Diagnostics and laboratory-based specialties	30 (26.3)
Marital status	
Single	18 (15.8)
Married/in a relationship	96 (84.2)
Life partner's professional status	
Partner is a doctor	62 (54.4)
Partner is a nondoctor	34 (29.8)
Currently not a having partner	18 (15.8)
Having children	
Yes	62 (54.4)
No	52 (45.6)

Table 2: Maslach Burnout Inventory subscale scores

	Median (IQR)	Range
MBI (emotional exhaustion)	15.5 (1.75, 23.25)	0-50
MBI (depersonalization)	4 (2, 7)	0-21
MBI (personal accomplishment)	36 (30, 42)	0-48

MBI – Maslach Burnout Inventory; IQR – Interquartile range

39.5%) doctors qualified as cases (for anxiety or depression combined) and 69 (69/114; 60.5%) were noncases as per the PHQ-4 cutoff described in methodology.

Quantitative results on burnout of doctors

The subscale scores of the MBI were calculated for the study participants. The distribution of subscale scores on MBI, namely emotional exhaustion, depersonalization, and sense of personal accomplishment, is shown in Table 2.

Factors associated with emotional exhaustion

Many doctors experienced high levels of emotional exhaustion (45/114; 39.4%), and factors associated with it are illustrated in Table 3. The doctors who participated in some form of sports had lower levels of emotional exhaustion. Emotional exhaustion was associated with perceptions of the job being demanding and a sense of having less time than what is available to do justice to the job. Increased emotional exhaustion was also associated with various symptoms of reduced sleep, reduced appetite, increased fatigue, headache, and mental exhaustion.

Table 3: Association of emotional exhaustion: Univariate analysis

Variable	Emotional exhaustion		P	OR	95% CI of OR
	Low (n=49; 60.5%)	Intermediate/High (n=45; 39.5%)			
Age					
≤34 years	29	28	0.04	2.27	1.05-4.9
>34 years	40	17			
Gender					
Male	51	25	0.04	2.27	1.02-5.03
Female	18	20			
Marital status					
Single	8	10	0.13	2.18	0.79-6.03
Married/in a relationship	61	35			
Children (n=92)					
Married with children	18	13	0.39	1.48	0.61-3.6
Married without children	41	20			
Frequency of participation in sports					
None	36	32	0.02	0.59	0.38-0.92
Occasional	5	5			
More than once a week	28	8			
Number of years of experience as a doctor (n=113)					
<12 years	28	27	0.04	2.12	1.02-4.72
≥12 years	41	17			
Number of years of experience as an oncologist (n=113)					
<4 years	28	27	0.04	2.12	1.02-4.72
≥4 years	41	17			
Number of years of experience in the specialty (n=111)					
<6 years	26	29	0.01	3	1.37-6.54
≥6 years	41	15			
Job satisfaction					
8-10	44	13	<0.001	4.33	1.9-9.7
0-7	24	32			
Work pressure					
8-10	15	25	<0.001	4.5	1.98-10.22
0-7	54	20			
Activities I perform demand more time than I have in a work day					
I feel this less than once in a week	28	4	0.001	6.99	2.25-21.7
I feel this more than or at least once a week	41	41			
I feel I can control over procedures and care that I am assigned to at work					
I feel this less than once in a week	61	40	0.94	0.95	0.29-3.12
I feel this more than or at least once a week	8	5			
The place where I work rewards and acknowledges accurate diagnosis, care, and procedures performed by employees					
I feel this less than once in a week	44	19	0.25	2.41	1.12-5.19
I feel this more than or at least once a week	25	26			
I notice that the place I work is sensitive to employees, valuing and acknowledging the work developed. It invests in career and encourages professional development					

Contd...

Table 3: Contd...

Variable	Emotional exhaustion		P	OR	95% CI of OR
	Low (n=49; 60.5%)	Intermediate/High (n=45; 39.5%)			
I feel this less than once in a week	35	13	0.02	2.53	1.14-5.63
I feel this more than or at least once a week	34	32			
I clearly see that there is respect in the relationships (among work teams and coordinators) in my work place			0.04	2.38	1.03-5.53
I feel this less than once in a week	55	28			
I feel this more than or at least once a week	14	17			
In my work, I can perform tasks that I consider important			0.01	4.14	1.33-12.89
I feel this less than once in a week	64	34			
I feel this more than or at least once a week	5	11			
Frequency of headaches			0.004	4.74	1.66-13.53
Less than once in a week	63	31			
More than or at least once a week	6	14			
Changes in appetite (less/excess)			0.004	5.2	1.7-15.86
I feel this less than once in a week	64	32			
I feel this more than or at least once a week	5	13			
Frequency of sleep difficulties			0.05	3.2	0.996-10.28
Less than once in a week	64	36			
More than or at least once a week	5	9			
Mental exhaustion			<0.001	7.81	3.31-18.42
I feel this less than once in a week	56	16			
I feel this more than or at least once a week	13	29			
Time available for self			0.005	3.40	1.46-7.93
I feel this less than once in a week	34	10			
I feel this more than or at least once a week	35	35			
Fatigue			<0.001	4.14	1.87-9.19
< A week	48	16			
≥ A week	21	29			
Increased substance use			0.18	4.85	0.49-48.06
I feel this less than once in a week	68	42			
I feel this more than or at least once a week	1	3			
Difficulties in memory and concentration			0.03	3.40	1.15-9.99
I feel this less than once in a week	63	34			
I feel this more than or at least once a week	6	11			
I think I have lost my sense of humor			0.003	4.43	1.63-12.01
I feel this less than once in a week	62	30			
I feel this more than or at least once a week	7	15			
PHQ anxiety			0.3	1.67	0.61-4.6
Case	9	9			
Noncase	60	36			

Contd...

Table 3: Contd...

Variable	Emotional exhaustion		P	OR	95% CI of OR
	Low (n=49; 60.5%)	Intermediate/High (n=45; 39.5%)			
PHQ depression					
Case	5	8	0.09	2.7	0.84-9.1
Noncase	64	37			
PHQ total					
Case	18	27	<0.001	4.2	1.9-9.5
Noncase	51	18			

PHQ – Patient Health Questionnaire; OR – Odds ratio; CI – Confidence interval

Doctors with high levels of emotional exhaustion perceived that their work environment was less sensitive toward employees, felt that they were not respected in their role, and were more likely to be depressed. Being a female was associated with higher levels of emotional exhaustion as compared to their male counterparts in univariate analysis. Younger age, lesser number of years being a doctor, and lesser number of years in the field of oncology were other factors associated with emotional exhaustion.

While conducting multivariate analysis, we selected only six variables for adjustment in the model including age, gender, frequency of participation in sports, job satisfaction, work pressure, and total PHQ score. The variables on symptoms such as having headaches, having less or excessive appetite, difficulties with sleep, mental exhaustion, having reduced time for self, increased fatigue, increased substance use, difficulties in memory and concentration, and decreased sense of humor were not included in the model as we felt that they were manifestations of emotional exhaustion itself. In the multivariate model, we found that being female, being a doctor who perceived high levels of work pressure, a doctor who had reduced sense of job satisfaction, and those who qualified as a case as per the PHQ-4 were independently associated with high levels of emotional exhaustion [Table 4].

Perceptions of cancer clinicians about their job

Workplace conditions and stress

Almost all the participants, irrespective of gender, acknowledged that working as a cancer clinician could be stressful. Other sources of stress consisted of “long working hours” and “inadequate leave at workplace.” The following verbatim quotes capture such aspects:

“I think work is the main stress” (Male, 32 years).

“If you know that you will have to do 3 emergency duties in a week for three consecutive weeks, you get only 2 days free in that whole period. That affects your work–life balance” (Male, 45 years).

“Not having adequate leaves puts me under a lot of stress” (Female, 32 years).

One doctor mentioned that worries about future career prospects contributed to the stress:

“My job is not permanent. This is not hampering our day-to-day work but it is stressful when we think of the future” (Male, 40 years).

Patient condition, outcome, and stress

The participants highlighted various factors as the sources of stress. These included “exhausting physical conditions of patients,” “not being able to cure many patients,” and “difficulties in engaging in end-of-life discussion with patients.”

“Sometimes we need to treat people with difficult conditions. That can be stressful” (Male, 37 years).

“We do not have regular patients with minor ailments who get admitted to this hospital. As a result, we do not do surgeries like appendectomy. All of our patients are already metabolically exhausted. They are fighting a long battle. They are physiologically very weak. And then, they have to undergo long surgeries. We have to prepare the patient for that and keep the patient in good shape throughout the surgery” (Male, 36 years).

“I think it is most difficult to counsel a fellow man that he is going to die”(Male, 38 years).

Social and psychological challenges

A few doctors indicated that counseling patients about expensive treatment options in oncology could be emotionally draining, especially when patients had limited financial means and the clinician knew that the impact of funding the treatment could affect the entire family for a foreseeable future. One of the doctors went on to clarify that this could pose a moral dilemma to the clinician.

“Suppose we give some medications for next 3 months that costs around 5 lakh rupees (\$7467). That may give the patient an additional life of 3 months. Some people sell their homes (to get the money). They also express their difficulties when they go through this. Yet they sell it in the hope that the person will live for another 3 months. This sort of situation is very special to oncology. This does not happen in most other branches of medicine” (Male, 38 years).

One doctor even said that he sometimes identified with patient:

Table 4: Associations of emotional exhaustion: Multivariate analysis

Variable	Emotional exhaustion		p	AOR	95% CI
	Low (n=49, 60.5%)	Intermediate/High (n=45, 39.5%)			
Age					
≤34 years	29	28	0.08	2.33	0.9-6.06
>34 years	40	17			
Gender					
Male	51	25	0.002	3.4	1.2-9.5
Female	18	20			
Frequency of participation in sports					
None	36	32	0.3	0.75	0.43-1.3
Occasional	5	5			
Once a week or more	28	8			
Job satisfaction					
8-10	44	13	0.009	3.56	1.37-9.25
0-7	24	32			
Work pressure					
8-10	15	25	0.001	5.39	2.01-14.47
0-7	54	20			
PHQ total					
Case	18	27	0.03	2.89	1.11-7.46
Noncase	51	18			

AOR – Adjusted odds ratio; CI – Confidence interval

“I put myself there and I think to myself that this person has got the disease without any risk factor. So I can also get this same disease” (Male, 38 years).

Job satisfaction

Stress was not the only theme emerging from the responses of the doctors. Both male and female respondents highlighted the issue of satisfaction derived from the work they were engaged in. Some male doctors perceived their role as challenging and at the same time satisfying. Despite the stress and difficulties, one of the respondents articulated a strong sense of professional accomplishment, and a senior clinician described the fulfillment of working in a team comprising of junior doctors.

“I like my job. To be honest, I struggled a lot to reach this place that I am in now. Earlier I had felt that I would never make it” (Male, 29 years).

“You get the chance to interact with young fellows and students and the opportunity to “learn from the younger generation” (Male, 49 years).

“Honestly, I have never understood why anybody should be stressed. If you think that the work that you

do is more fun, then it’s like looking after yourself. You know there is some part of you which is quite happy doing that work” (Female, 54 years).

Work-life balance vis-a-vis gender

One male surgeon summarized how work in the hospital could intertwine with home life at a very practical level. There was a clear gender division around how work-life balance was perceived by doctors although both genders found it difficult to balance responsibilities to the family with those of being a doctor.

“A surgeon’s life revolves around patients, complications, and operations. So if I do a good operation and patient is doing well in the ward I feel very good. However, if the patient is not doing well then I carry this thought with me when I return home. The thought stays in my mind and I worry that I may get called in at night. So my family life is hampered a little bit in some way. My wife tells me that you’re still in the hospital” (Male, 40 years).

“Frankly, if you ask me, I don’t have a work-life balance” (Male, 32 years).

“I can’t say 100% but 50%–60%? When it comes to my personal life, there is a lot of sacrifice” (Female, 32 years).

Several male doctors pointed out that they were heavily dependent on their partners to take care of the family while they worked in the hospital:

“I take responsibility for my patients and for my home I am little careless, my wife does everything” (Male, 32 years).

Only one female doctor specifically mentioned that her husband was supportive and actually helped her out in domestic responsibilities. Female doctors, on the other hand, had to juggle home and work:

“My husband shares a lot of work with me” (Female, 32 years)

“Yeah at home I have responsibilities. I have to be a mother, a wife, and I am a homemaker also” (Female, 52 years).

Female participants discussed the impact of work much beyond work. Women perceived a much larger field of responsibility beyond work and as a result, felt guilty and stressed:

“I appreciate the fact that I come to work but if I had to rank my priorities, my kid is still above work” (Female, 42 years).

“I would say it’s just the time that you have to give (to family). You have to take out time from your work. That gets a little tricky. I try to do that on a Friday sometime” (Female, 38 years).

“It’s difficult because I give a lot of time to my son for his studies. A growing child needs his mom which can get difficult for me” (Female, 32 years).

“After work, I have to work at home to raise a 13 year old! To be an independent adult is not easy” (Female, 42 years)

There was a difference how clinicians of different genders perceived division of time available all through the week differently. Male respondents often demarcated weekdays from weekends, but women tried to balance the totality of their existence with a smoother blend of home with work.

“Weekends are there for the family. The weekdays are not there for the family” (Male, 40 years).

“I realized even if I am working excessive hours, it’s that (gestures to indicate a large amount) amount of work that is left behind (at work) at the end of the day, so24 months ago, one evening I decided I would go home on time every day” (Female, 42 years).

“I try not to take my work home. When I leave, I won’t say I switch off but I turn the volume down.” (Female, 51 years).

Juxtaposition of qualitative and quantitative results

In the following section, we present juxtaposed quantitative and qualitative results along with the proposed areas of interventions. The innermost circle of the diagram [Figure 1] represents the quantitative results highlighting the association of emotional exhaustion with increased work pressure, reduced job satisfaction, being female, and having increased anxiety and depressive symptoms. The qualitative interviews brought out views (middle circle) of doctors on three of the four above associations. While many clinicians spoke about the job-related stresses, several of them found

working in oncology to be a deeply satisfying experience and parts of the job being unsatisfactory. Both genders spoke about difficulties in maintaining work–life balance, but there were some special aspects how women viewed the issue of stress and work–life balance. The outermost circle captures some of the probable areas of interventions. We suggest that hospitals have employee-friendly policies that promote psychological well-being and a healthy work–life balance. Reduced working hours and flexible working hours may help some staff. Cancer clinicians should be provided with opportunities to learn communication skills to handle bad news situations so that these interactions are not a source of undue stress for the patient or the clinician. Access to confidential occupational mental health services to treat depression and other psychiatric conditions in staff may help to identify and address problems early.

Discussion

Our study on the well-being and emotional exhaustion of oncology clinicians found that being female, being a doctor who perceived high levels of work pressure, having reduced sense of job satisfaction, and increased anxiety and/or depression scores on PHQ were independently associated ($P < 0.05$) with higher levels of emotional exhaustion. However, qualitative investigational approach helped us in obtaining clarity around the sources of stress and resulting exhaustion. We further found that the stresses of working as an oncology clinician could be related to the work pattern, unique patient characteristics in oncology, and social and psychological processes at play during clinical contacts.

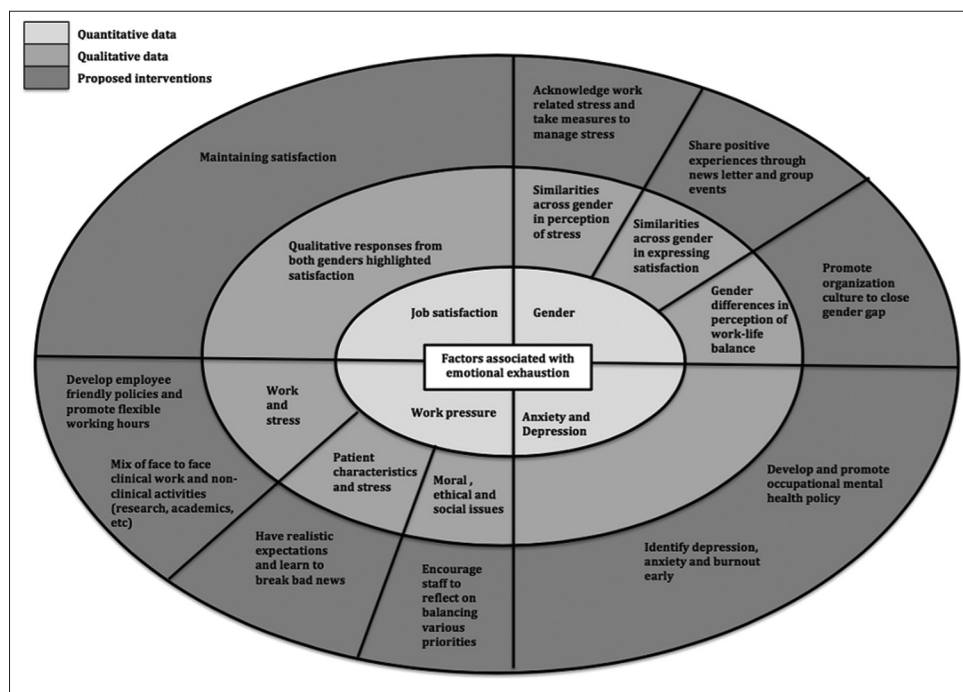


Figure 1: Diagram of juxtaposed findings of quantitative and qualitative data on emotional exhaustion of doctors working in a oncology hospital and proposed areas of interventions

In oncology, as opposed to other branches of medicine, doctors often deal with life-limiting conditions and difficult-to-treat ailments. We found that 39.5% of the doctors perceived intermediate-to-high levels of emotional exhaustion, but we did not find a statistically significant association of emotional exhaustion with the levels of seniority or number of years working in the field of oncology. A longitudinal multicenter study from Brazil found that emotional exhaustion and depersonalization increased over time as doctors progressed through their oncology residency program.^[18] Because ours is a cross-sectional study, it is not possible for us to comment on the progression of symptoms of emotional exhaustion over time.

Although working in oncology was felt to be deeply satisfying by many clinicians, there was a clear gender difference in the way work–life balance was perceived by respondents in our study; women often charting out a larger field of responsibility for themselves at home and work that blended seamlessly. This perceived larger field of responsibility may result in dissatisfaction experienced among woman cancer clinicians. Similarly, other studies have found that female doctors face more burnout in spite of having more women in positions of leadership in health.^[19,20]

The current study has several strengths. A mixed methods design not only helped to identify factors associated with higher levels of emotional exhaustion, but also to shed light on some of the possible explanations for such associations. Interviewers were all nonmedical and not part of the hospital staff, allowing the study respondents to speak more freely. The doctors who participated in the qualitative and quantitative parts of the study had varying degrees of experience and represented both genders and mostly oncology specialties. The other strength was that the study was conducted at a cancer center that had a dedicated full-time psycho-oncology team for occupational mental health service, and this had likely played a role in destigmatizing mental health among hospital staff, which was reflected in high participation (87%) from the doctors approached for the study.

The weakness of our study was that it is of single-center design where stressors and sources of support could be influenced by the particular organizational culture. Furthermore, the cross-sectional nature of our investigation precluded taking any inference on change in outcome variables over time and firmly establishing temporal relationship of explanatory variables with the measured outcome. Having a cutoff of only 1 month of working in the hospital, as an inclusion criteria, potentially could have recruited participants who were not exposed to the stresses of working in a cancer hospital long enough to face burnout or emotional exhaustion. However, most doctors finally recruited had worked for a number of years in oncology.

We propose some areas of interventions that may help staff in cancer centers to prevent and combat emotional

exhaustion. Having employee-friendly policies that allow flexible working pattern, reduction in long working hours, and access to training in communication skills to break bad news and develop emotional resources to handle stress may have an impact on the job satisfaction. Intervention development based on robust occupational mental health policies and programs is indicated. Early identification and management of affective disorders in oncology clinicians nurtured in an open organizational culture will likely play a role in reducing emotional exhaustion.

Conclusion

In the current study, we explored the emotional exhaustion and psychological stress in cancer clinicians using a mixed methods design. Although working in oncology is often a deeply satisfying experience, it can be, at times, stressful for the cancer clinicians. Recognizing work-related burnout and emotional exhaustion may help in achieving a healthy sustainable workforce for any organization. Employee-friendly policies are likely to contribute significantly to the future of cancer care in a country like India.

Acknowledgment

The authors thank the Newcastle Business School, University of Newcastle, for supporting the visiting interns (FF and SAN) through the Global Experience Opportunity Programme.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Ramirez AJ, Graham J, Richards MA, Cull A, Gregory WM. Mental health of hospital consultants: The effects of stress and satisfaction at work. *Lancet* 1996;347:724-8.
2. Shanafelt T, Dyrbye L. Oncologist burnout: Causes, consequences, and responses. *J Clin Oncol* 2012;30:1235-41.
3. Leung J, Rioseco P, Munro P. Stress, satisfaction and burnout amongst Australian and New Zealand radiation oncologists. *J Med Imaging Radiat Oncol* 2015;59:115-24.
4. Koh MY, Chong PH, Neo PS, Ong YJ, Yong WC, Ong WY, *et al.* Burnout, psychological morbidity and use of coping mechanisms among palliative care practitioners: A multi-centre cross-sectional study. *Palliat Med* 2015;29:633-42.
5. Taylor C, Graham J, Potts HW, Richards MA, Ramirez AJ. Changes in mental health of UK hospital consultants since the mid-1990s. *Lancet* 2005;366:742-4.
6. Buckman R. The invisible effects of therapeutic failure. *Oncologist* 2010;15:1370-2.
7. Lyckholm L. Dealing with stress, burnout, and grief in the practice of oncology. *Lancet Oncol* 2001;2:750-5.
8. Chatani Y, Nomura K, Ishiguro A, Jagsi R. Factors associated with attainment of specialty board qualifications and doctor of medical science degrees among Japanese female doctors. *Acad Med* 2016;91:1173-80.

9. Hawton K, Clements A, Sakarovitch C, Simkin S, Deeks JJ. Suicide in doctors: A study of risk according to gender, seniority and specialty in medical practitioners in England and Wales, 1979-1995. *J Epidemiol Community Health* 2001;55:296-300.
10. Mallath MK, Taylor DG, Badwe RA, Rath GK, Shanta V, Pramesh CS, *et al.* The growing burden of cancer in India: Epidemiology and social context. *Lancet Oncol* 2014;15:e205-12.
11. Jugale PV, Mallaiah P, Krishnamurthy A, Sangha R. Burnout and work engagement among dental practitioners in Bangalore city: A cross-sectional study. *J Clin Diagn Res* 2016;10:ZC63-7.
12. Pandey J, Singh M. Donning the mask: Effects of emotional labour strategies on burnout and job satisfaction in community healthcare. *Health Policy Plan* 2016;31:551-62.
13. Ratnakaran B, Prabhakaran A, Karunakaran V. Prevalence of burnout and its correlates among residents in a tertiary medical center in Kerala, India: A cross-sectional study. *J Postgrad Med* 2016;62:157-61.
14. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349-57.
15. Maslach C, Jackson SE. *Maslach Burnout Inventory*. Palo Alto, California: Consulting Psychologist's Press; 1986.
16. Kroenke K, Spitzer RL, Williams JB, Löwe B. An ultra-brief screening scale for anxiety and depression: The PHQ-4. *Psychosomatics* 2009;50:613-21.
17. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77-101.
18. Cubero DI, Fumis RR, de Sá TH, Dettino A, Costa FO, Van Eyll BM, *et al.* Burnout in medical oncology fellows: A prospective multicenter cohort study in Brazilian institutions. *J Cancer Educ* 2016;31:582-7.
19. Györfy Z, Dweik D, Girasek E. Reproductive health and burn-out among female physicians: Nationwide, representative study from Hungary. *BMC Womens Health* 2014;14:121.
20. Downs JA, Reif LK, Hokororo A, Fitzgerald DW. Increasing women in leadership in global health. *Acad Med* 2014;89:1103-7.