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RESEARCH ARTICLE

CARING FOR THE CAREGIVERS: A CROSS-SECTIONAL STUDY TO ASSESS LONELINESS IN DOCTORS OF WESTERN MAHARASHTRA

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ABSTRACT

Background: Loneliness has been found to be connected with burnout and other types of emotional distress in physicians. Doctors often neglect their own mental health while caring for everyone else. The purpose of this study is to measure the prevalence of loneliness and associated socio-demographic factors among a subset of doctors practicing in various hospitals of Western Maharashtra. ***Methods:*** UCLA Loneliness Scale ver 3 was used to assess the prevalence of loneliness in doctors. The scale consists of 20 questions to be answered on a Likert Scale. Data was collected through a questionnaire administered online comprising of the scale and questions regarding socio-demographic factors. Score between 40-60 is considered moderately lonely and those with score between 60-80 as very lonely. ***Results:*** In this study, 423 doctors of Western Maharashtra participated. Prevalence of loneliness was 63%. 15% doctors were found to be very lonely (score 60-80) and 48% had moderate loneliness (score 40-60). ***Conclusion:*** Loneliness and isolation represent profound risks to our health and well-being. By adopting simple measures to strengthen our relationships, and by supporting community efforts to build social ties in medical professionals, we can go up to meet this moment together.

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INTRODUCTION

Medicine, as a journey, can be long and lonely. Rise in isolation and loneliness trends among physicians carry many risks. Loneliness may be defined as "the discrepancy between an individual's desired and achieved levels of social relationships." [1] An internal, disturbing, subjective experience that begins when an individual's social network undergoes a qualitative or quantitative loss. Loneliness is not the same as being alone or staying alone. A person may undergo the emotion of loneliness even in the presence of people around him. On the converse, an individual may live alone but does not feel the emotion of being lonely.[2] US Surgeon General Vivek Murthy mentioned in an opinion column in the New York Times "Loneliness is more than just a bad feeling. When people are socially disconnected, their probability of anxiety and depression may increase. So does their risk of heart disease (29%), dementia (50%) and stroke (32%). The increased risk of premature death associated with social disconnection is comparable to smoking 15 cigarettes daily."[3] Health workers face constant high-pressure situations, and the ongoing need to provide emotional support to patients and their families undoubtedly takes its toll.[4]

Loneliness is not a new concept, but it does seem to be gaining attention as a social and health concern. Countries like the UK and Japan appointed ministers of loneliness in 2018 and 2021, respectively. Alarmingly, recent studies show that up to a quarter of physicians regularly feel isolated in their professional lives, and that this "moral injury" to medical professionals has associated consequences such as depression and suicide.[5] There is not much empirical evidence on the prevalence of loneliness in India. While majority of the studies and surveys reporting the burden of loneliness were conducted in the industrialized nations, similar challenges are emerging in low- and middle- income countries (LMICs).[1] What is required is to identify loneliness as a product of how societies and the world around us are constructed: what Xiaoqi Feng and Thomas Astell-Burt term *"lonelygenic environments"*.[6] Loneliness should be an indispensable part of general health surveillance with broader geographical and age coverage, using standardised and validated measurement instruments.[7] Large gaps remain in our estimation of loneliness, its levels and driving factors in different populations.[8] Additionally, there have been no studies which could evaluate the burden of being lonely in doctors.

Our clinical training consumes a significant amount of time that distances us from the social activities and life experiences of our friends and colleagues which can further heighten our social isolation.[9] Medical professionals have unique challenges. A culture of self-containment and the avoidance of help-seeking behaviour forces them to limit opportunities and abilities to speak about the issues or seek assistance for them.[10] The primary objective of this study was to assess the magnitude of problem of loneliness in practicing physicians of Western Maharashtra. Secondarily, we aimed to evaluate the socio-demographic factors and conditions associated with loneliness in them.

MATERIALS AND METHODS

Study Participants: The present descriptive study was conducted in doctors practicing in multiple hospitals of Pune, Maharashtra during the period July – Aug 2023. Residents and trainees were not included in the study. The required sample size was estimated using Cochrane formula of $n = Z^2pq/d^2$ where Z = 1.96, p = 43% (p being prevalence of loneliness taken from findings of previous study)[11], q = 57%, precision (d) = 0.05. The minimum sample size required to assess prevalence of loneliness among doctors was calculated to be 377. Taking non-response rate as 10%, total sample size was worked out to be 415.

Collection of data: A questionnaire of 27 items in 2 parts was developed. The first part consisted of socio-demographic details while maintaining the anonymity of the participants. The level of loneliness was assessed in the second part which had questions from the University of California and Los Angeles (UCLA) Loneliness Scale ver 3, a reliable and validated screening tool. The UCLA Loneliness Scale has 20 questions out of which 9 are reverse scored. Participants recorded their responses as 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often. The Cronbach's alpha coefficient for the internal reliability score of the scale is 0.96.[12] The questionnaire was administered through Google Forms by sharing the link electronically, doctors were contacted telephonically and briefed regarding the study prior to forwarding the Google Form. The collected data was recorded in a computerized spreadsheet (Microsoft ® Excel) and analyzed using SPSS software (version 26). Descriptive statistics used include frequencies, percentages, percentiles and measures of central tendency. The study was approved by the Institutional Ethics Committee and Informed Consent was taken from the participants while filling the online questionnaire. All guidelines as per declaration of Helsinki and good clinical practice guidelines were followed.

STATISTICAL ANALYSIS

RESULTS

Characteristics of Study Subjects: 500 doctors practicing in multiple hospitals of Pune were contacted and 423 doctors responded to the Google Form. The mean loneliness score of the participants was 46.29 (SD = 12.88). The prevalence of loneliness in doctors was found to be 63%. 204 (48%) doctors had moderate (score 40-60) and 65 (15%) doctors had high loneliness (score 60-80) (Fig 1).

The distribution of participants as per their socio-demographic profile and loneliness is depicted in Table-1.

Table 1. Socio demographic profile of responding physicians

CHARACTERISTICS	RESPONDERS (%) (N=423)
GENDER	
Male	302 (71.39)
Female	121 (28.60)
AGE IN YEARS	
25-34	142 (33.56)
35-44	159 (37.58)
45-54	95 (22.45)
>/=55	27 (6.38)
YEARS IN PRACTICE	
1-9	133 (31.44)
10-19	161 (38.06)
20-29	100 (23.64)
>/=30	29 (6.85)
RELATIONSHIP STATUS	
Single	47 (11.11)
Married	343 (81.08)
In a relationship	21 (4.96)
Separated	12 (2.80)
STAYING	
Single	159 (37.58)
With family	264 (62.41)
WORKING HOURS PER WEEK	
<40	40 (9.45)
40-49	150 (35.46)
50-59	111 (26.24)
60-69	49 (11.58)
70-79	37 (8.74)
>80	36 (8.51)
SPECIALITY	
Clinical	333 (78.72)
Para-clinical	50 (11.82)
Non-clinical	40 (9.45)

Majority of the participants identified as male (n=302). 184 (60.92%) male doctors and 85 (70.24%) female doctors were found to have moderate to high loneliness. Maximum participants (159) were in the age group 35-44 years, however, highest prevalence of loneliness 112 (78.87%) was observed among young doctors of the age group 25-34 yrs. As per working hours per week, maximum doctors were working for > 80 hours per week (36), and 28 out of them (77.77%) were lonely. 21 doctors were 'in a relationship' and out of them 19 (90.47%) were found to have loneliness. 159 doctors were staying away from family and 117 (73.58%) of them reported feeling of loneliness. On analysis of loneliness as per years of practice, maximum loneliness was found in doctors with 1-9 years of practice. 98 (73.68%) doctors had moderate and high loneliness out of 133 doctors. Association between loneliness and various socio-demographic factors have been assessed using Chi- Square test and *p value* have been ascertained, as represented in Table-2.

DISCUSSION

The magnitude of loneliness that emerged from this study is sobering. Through a comprehensive review of literature and empirical studies, we have identified various factors contributing to loneliness, including demanding work environments, long working hours, social isolation, service exigencies and superficial relationships. Frequent shifting from one city to another and house moves, long intervals of separation from family and friends and the challenges of serving in difficult areas are just a few of the factors that raise the risks. To our knowledge, our study is the first to report the prevalence of loneliness among Indian doctors.

Table 2. Association of loneliness with physicians' socio-demographic data

CHARACTERISTICS	RESPONDERS (%) (N=423)	RESPONDERS FOUND LONELY (n=269)
GENDER		*p value 0.17* $\chi2 = 3.45$
Male	302 (71.39)	184 (60.92)
Female	121 (28.60)	85 (70.24)
AGE IN YEARS		*p value 0.0002* $\chi2 = 21.24$
25-34	142 (33.56)	112 (78.87)
35-44	159 (37.58)	90 (56.60)
45-54	95 (22.45)	52 (54.73)
>/=55	27 (6.38)	15 (55.55)
YEARS IN PRACTICE		*p value 0.008* $\chi2 = 11.58$
1-9	133 (31.44)	98 (73.68)
10-19	161 (38.06)	102 (63.35)
20-29	100 (23.64)	53 (53)
>/=30	29 (6.85)	16 (55.17)
RELATIONSHIP STATUS		*p value 0.0004* $\chi2 = 9.34$
Single	47 (11.11)	39 (82.97)
Married	343 (81.08)	202 (58.89)
In a relationship	21 (4.96)	19 (90.47)
Separated	12 (2.80)	9 (75)
STAYING		*p value 0.0009* $\chi2 = 10.98$
Single	159 (37.58)	117 (73.58)
With family	264 (62.41)	152 (57.57)
WORKING HOURS PER WEEK		*p value 0.0001* $\chi2 = 23.46$
<40	40 (9.45)	34 (85)
40-49	150 (35.46)	81 (54)
50-59	111 (26.24)	61 (54.95)
60-69	49 (11.58)	39 (79.59)
70-79	37 (8.74)	26 (70.27)
>80	36 (8.51)	28 (77.77)
SPECIALITY		*p value 0.11* $\chi2 = 4.2$
Clinical	333 (78.72)	220 (66.06)
Para-clinical	50 (11.82)	28 (56)
Non-clinical	40 (9.45)	21 (52.5)

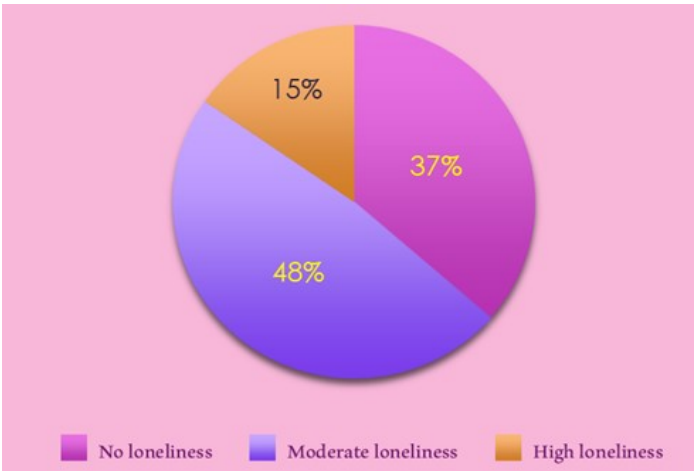

Fig. 1. Prevalence of Loneliness in Physicians

The findings of this exploratory study illustrated the prevalence of loneliness to be 63%. A study conducted at Kansas School of Medicine found the overall prevalence of loneliness in physicians to be 43%.[11] Higher levels of loneliness are not surprising given that professionals with degrees, such as law and medicine, have been found to be the loneliest among all professional workers according to a survey published in the *Harvard Business Review*.[13] A 2018 annotation in the Canadian Medical Association Journal allude to a famous video, *"The Loneliness of Medicine"* by Christopher Thompson, saying that after years of clinical training, "physicians tend to have little in common with anyone except their medical colleagues."[13] We observed in this study that female physicians were found lonelier, though this finding was not statistically significant.

This gender disparity in loneliness rates may be related to female physicians facing distinctive challenges as they are expected to balance between a demanding career and family commitments. In this study we found that physicians between age group of 25-34 years and in the initial years of practice (1-9 years) were the most lonely (78.87%). This is not surprising as the younger generation is finding solace in superficial social connections but disconnected in real world. Also, senior doctors may be more acclimatized to the healthcare environment and skilled in achieving work-life integration. Loneliness prevalence was surprisingly highest among physicians who claimed to be 'in a relationship' (90.47%) but lower in married doctors (58.89%). This finding suggests that despite of the relationship status as *'In a relationship'*, the depth and essence of these '*relationships'* is questionable and

requires deeper inter-personal understanding. In the context of doctors, long distance relationships and longer durations of separation from family due to professional pressures are the major reasons leading to this type of finding. When we analyzed the association between loneliness in doctors and their working hours per week, we observed that doctors on both the extremes scored more on loneliness. Physicians with < 40 working hours per week were the most lonely (85%) followed by those with > 60 working hours per week. This makes it mandatory to note the significance of work-life balance. These are the times when societies are moving towards individualism, focussing on independence rather than inter-dependence, which eventually becomes a cause of lonesomeness.[14] Physicians in clinical specialties were found with higher prevalence of loneliness as busier specialities give physicians lesser time to interact with friends and family, thus leading to more isolation. A study done by Keiner *et al* (2022) at a large US academic medical centre revealed loneliness in 20.9% medical students, 24.2% residents and fellows and 9.4% faculty physicians. They also found that loneliness was high in women and younger age physicians.[15]

In a study by Kolcz *et al*, 48% physicians reported feeling lonely. Isolation was ascribed to exhaustion from clinical work (36.1%) and being too busy (39.6%). Females and physicians working in procedure areas were found to be more lonely.[16] In 2018, the Royal British Legion took a mixed methods approach to investigate loneliness and social isolation within the Armed Forces. 50% of respondents reported that frequent transitions to a new area made them to feel lonely and/or socially isolated. Almost 70% of survey respondents agreed that loneliness and social isolation are big concerns in the Armed Forces community as 1 in 4 indicated that they feel lonely and socially isolated 'always' or 'often'.[10] In a population-based cohort study in the UK, among adults aged 50 years, higher loneliness scores at baseline were coupled with higher depression symptom severity scores in 12 years of follow-up. It was suggested that 11–18% of cases of depression could potentially be thwarted if loneliness were eliminated.[17] In a mixed-method systematic review and meta-analysis by Bryan *et al*, pooled results indicate that workplace loneliness was associated with lower job performance (r = −0.35, 95% CI −0.49, −0.21), reduced job satisfaction (r = −0.34, 95% CI −0.44, −0.24), worse worker–manager relationship (r = −0.31, 95% CI −0.38, −0.24) and elevated burnout (r = 0.39, 95% CI 0.25, 0.51). Qualitative analysis indicated links between loneliness and inadequate workplace social interactions and mental health problems.[18]

RECOMMENDATIONS AND CONCLUSION

This study moves the field forward by suggesting that social connection amongst doctors needs to be more explicitly studied in terms of context, which is still in infancy. In all of the current handwringing, there are measures to mitigate loneliness among physicians. Establishing mentorship programs can provide junior doctors with guidance and support from more experienced colleagues. The authors claim with aplomb that being connected is an antidote to exhaustion. Virtual meetings with friends, family and professional networks, are a substantial measure to combat isolation especially when deployed in remote locations. Doctors' dining rooms and casual lunches are considered by health systems as being non-productive time but they need to be put into practice to promote social connections.

What gets measured gets done. The authors advocate for tailored strategies that support work-life balance, mental health and social connections among Indian medical professionals. It's important to note that loneliness is a complex issue, and there is no one-size-fits-all solution. There is not a 'quick fix' to loneliness, but learnt practices and behaviour should be built into one's lifestyle to achieve longevity of reduction in loneliness and thus, shifting our dialogue from connecting individuals to creating socially connected societies.[19 20]

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