

The Impact of COVID-19 on the Clinical Practices, Working Environment, and Social Life of Intensivists in Non-COVID ICU

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ABSTRACT

Purpose: Enlightening the changes in the usual clinical practices, working environment, and social life of Intensivists working in noncoronavirus disease intensive care units (non-COVID ICU) during the COVID pandemic.

Materials and methods: Observational cross-sectional study for Indian intensivists working in non-COVID ICUs conducted between July and September 2021. A 16-question online survey consisting of the work and social profile of the participating intensivists, changes in the usual clinical practices, working environment, and impact on their social life was administered. For the last three sections, intensivists were asked to compare pandemic times to prepandemic times (pre-mid-March 2020).

Results: The number of invasive interventions performed by intensivists working in the private sector with lesser clinical experience (<12 years) were significantly less as compared to the government sector ($p = 0.07$) and clinically experienced ($p = 0.07$). Intensivists without comorbidities performed significantly lesser number of patient examinations ($p = 0.03$). The cooperation from healthcare workers (HCWs) decreased significantly with lesser experienced intensivists ($p = 0.05$). Leaves were significantly reduced in case of private sector intensivists ($p = 0.06$). Lesser experienced intensivists ($p = 0.06$) and intensivists working in the private sector ($p = 0.06$) spent significantly lesser time with family.

Conclusion: Coronavirus disease-2019 (COVID-19) affected the non-COVID ICUs as well. Young and private sector intensivists were affected due to less leaves and family time. HCWs need proper training for better cooperation during the pandemic time.

Keywords: Clinical practices, COVID-19, Intensive care unit, Intensivists, Social life, Working environment.

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HIGHLIGHTS

Coronavirus disease-2019 (COVID-19) affected the non-COVID areas of the hospital as well as non-COVID ICUs. Young and private sector intensivists were affected with less leaves and less family time. HCWs working in ICUs as well as ward need proper training for better cooperation and coordination during the pandemic time.

INTRODUCTION

Intensivists faced a challenging task during the COVID-19 pandemic, maintaining colossal workload, superlative standard of care with limited infrastructure amid uncertainty, and fear of contracting the infection to self and dependents.¹⁻⁴ As COVID created a big healthcare emergency around the world, non-COVID healthcare was also affected directly or indirectly.⁵ The high rate of conversion of the non-COVID patients to COVID was also a threat to the intensivists. The non-COVID emergency department reported a change of practices related to airway emergencies during the pandemic.⁶ But no data were available about the changes in clinical practice, working environment, or socio-personal life of intensivists working in non-COVID ICUs during this pandemic. Therefore, this study was formulated to determine the professional and personal impact of the pandemic on intensivists in non-COVID ICUs in India.

This study aimed:

- To evaluate the impact of the COVID-19 pandemic on the clinical practices, working environment, and socio-personal life of intensivists working in non-COVID ICUs.

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Conflict of interest: None

- To compare the changes concerning intensivists working in different sectors (Government vs private), years of experience, comorbidities, and working status of spouses.

MATERIALS AND METHODS

Study Design

This observational cross-sectional study was conducted during the late second COVID-19 wave in our country, i.e., July 2021 to September 2021 after an institutional ethical committee approval (IEC Code 2021-144-IP-EXP-39).

Survey Content

The writing group finalized the 16 questions for the online survey with an expected completion time of approximately 5 minutes. The questionnaire began with an introduction section stating details of the study and consent for participation. The initial 10 questions were related to the work and social profile of responding intensivists. It was followed by six questions (three closed with subheadings and three open) to assess the impact of COVID-19 on the changes in clinical practices, working environment, and social/personal life.

The survey questionnaire collected data over four broad categories, viz.

- Working sector, age of intensivists, clinical experience, comorbidities, working status of spouse, and dependent family members.
- Changes in the usual clinical practices in non-COVID ICU due to the impact of the pandemic.
- Changes in the working environment in the non-COVID ICU due to the impact of the pandemic.
- Impact of the pandemic on the social/personal life of the intensivists.

For the last three sections, intensivists were asked to compare pandemic conditions (mid-March 2020 through the date of doing the survey) to prepandemic conditions (pre-mid-March 2020).

The surveyweb link (link: <https://forms.gle/ifnvVEmSZpRfr6ay5>) was distributed via e-mail and social media platforms to intensivists of both government and private sectors in India to collect real-time data soliciting their participation. Individual opinions (anonymous data) were collected automatically after the completion of the survey.

Sample Size

The sample size was estimated based on the assumption that 50% of the intensivists were satisfied with the current clinical and social aspects. The margin of error was assumed as 10 from the true proportion with 95% confidence; the given formula calculates the sample size.

$$n = (z_{\alpha/2})^2 p(1-p)/d^2$$

$$\text{i.e., } = (1.960)^2 0.50(1-0.50)/(0.10)^2 = 97$$

As simple random sampling was not done, adjusting for a design effect of 1.5, the sample size to provide adequate power was calculated to be $97 \times 1.5 = 145.5 \sim 150$.

Statistical Analysis

The collected data were processed and cleaned for data analysis using Excel and R software. Descriptive statistics of the demographic, clinical, environmental, and social/personal life of the intensivists were calculated. Categorical data were presented in proportion, and continuous data were in median (Quartile 1, Quartile 3). Chi-square statistics were used for categorical data to find the association between several factors. Text data collected from open-ended questions were also analyzed and presented. The crude odds ratio was computed with 95% confidence intervals (CIs). Since it is a cross-sectional questionnaire based study, hence the significant level is increased to 10%. Thus, p -value of <0.10 was considered statistically significant to see the association of the independent variables with outcomes.

Table 1: Descriptive personal and practice characteristics of responses

Sl. No.	Variables	Intensivists (n = 162)
1	Age in years	40 (36.45)*
2	Clinical experience (years)	12 (7.18)*
3	Infected by COVID	
	Yes	46 (28.4)
	No	116 (71.6)
4	Sector working	
	Government	94 (58.0)
	Private	68 (42.0)
5	Dependent family member (yes)	137 (84.6)
6	Spouse working (yes)	114 (70.4)
7	Comorbidity (yes)	38 (23.5)

*Median (Quartile 1, Quartile 3)

RESULTS

The web links of the questionnaire were sent to 205 intensivists through e-mails. The response rate was 80.76%, signifying the simplicity of the questionnaire.

Demographic parameters of intensivists have been shown in Table 1. The median age was 40 years (36–45), with a median of 12 years (7–18) of clinical experience. Of the intensivists, 58% worked in the government sector and 42% in the private sector. 23.5% of the intensivists had comorbidities, 70% of their spouses were working, and 84.6% of them had dependent family members.

Changes in Usual Clinical Practice

Clinical practice changes during COVID-19 were assessed on six parameters such as clinical round duration and frequency, history evaluation, patient examination, airway maneuver, and invasive intervention by self and any changes in duty hours in the non-COVID ICUs.

Intensivists reported more than 40–50% decrease in clinical practice parameters like self-history evaluation, clinical round duration and frequency, airway maneuver, patient examination, and invasive intervention. Intensivists stated that ICU duty hours were increased by 23% (Fig. 1).

Intensivists reported that invasive interventions were decreased significantly in the private sector as compared to the government sector ($p = 0.07$). Intensivists without comorbidities performed significantly fewer patient examinations by self ($p = 0.03$). Less experienced intensivists (<12 years) performed significantly fewer invasive interventions than experienced ($p = 0.07$) (Table 2).

Changes in Working Environment

We assessed changes in the working environment during COVID-19 using five parameters: cooperation by authority, HCWs and colleague's, burnout at the workplace and leaves.

Intensivists reported that burnout at the workplace was increased (42%) and leaves decreased by 65%. Cooperation among colleagues was better than cooperation received from authority (heads and administration) and HCWs (staff, ward boys, technician, etc.) (Fig. 1).

Intensivists reported that leaves were significantly decreased in the private sector as compared to the government sector ($p = 0.06$). Intensivists reported that HCW cooperation decreased

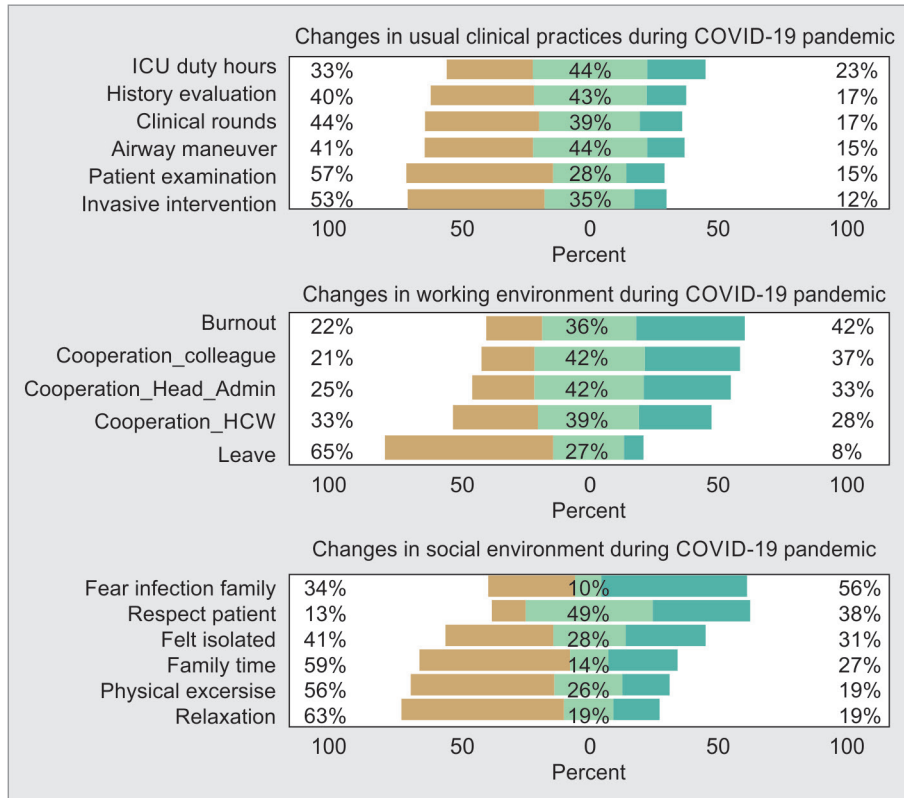


Fig. 1: Likert scale responses of changes in "Clinical practice," "Working environment," "Social environment" during COVID-19 pandemic

significantly with less experienced intensivists (<12 years) ($p = 0.05$) (Table 2).

Changes in Intensivists' Social/Personal Life

Fear of spreading infection to family, family time, physical exercise, and relaxation time felt isolated or not, and respect from patients were the parameters we assessed for reporting changes in social/personal life during the pandemic.

According to the Likert scale, three parameters such as family time, physical exercise, and relaxation time displayed a decrease in more than 40% responses. Intensivists felt isolated in more than 40% of responses. Intensivists had increased fear of spreading the infection to their own family in 56% of the responses. Whereas patients' respect toward doctors increased by 33% according to intensivists (Fig. 1).

While comparing among working sectors, the intensivists reported that family time was substantially decreased with intensivists working in the private sector as compared to the government sector ($p = 0.06$) and with less experienced intensivists ($p = 0.06$). Intensivists responded that fear of infection to the family was significantly increased in working compared to the not working status of spouse ($p = 0.004$) (Table 2).

Open-ended Questions

There were three open-ended questions in the questionnaire; "How do you keep yourself motivated during COVID?"; "Your opinion on the impact of COVID on social environment/Family/Society?"; and "Your opinion on the impact of COVID on working environment and clinical practice?" R software was used with Tidytext, quanteda, textplots, and topic models packages to analyze the text data.

Text Modeling for How You Keep Yourself Motivated

The text is dominated by a few common words like "Time," "Music," "Friends," and "Exercise." Terms used in the topic modeling suggest that meditation, watching web series, reading books, listening to music, and regular exercise/yoga are the usual methods to keep mentally fit and motivated during the pandemic. Spending time with family, reconnecting with friends, taking care of patients, and positive thinking keep them motivated (Fig. 2).

Text Modeling for an Opinion on the Impact of COVID on the Clinical Environment

The text is dominated by a few common words like "COVID," "Fear," "Touch," and "Patients," etc. The top terms of the topic modeling plot further gave an insight that there is a significant decrease in touching patients, burden, stress, and negative thoughts have increased (Fig. 3).

Text Modeling for an Opinion on the Impact of COVID on the Social Environment

The text is dominated by a few common words like "Family," "Social," "Bonding," and "Mental," etc. The top terms of the topic modeling plot further revealed that social life was also impacted due to decreased interaction among people. This pandemic taught us how to live simple. Fear has affected the mental strength. The economic loss has also been impactful (Fig. 4).

DISCUSSION

This web-based survey to evaluate the impact of the COVID-19 pandemic on clinical practice, working environment, and socio-

Table 2: Likert scale responses showing changes in "Clinical practice," "Working Environment," "Social Environment" during COVID-19 pandemic

Question	Levels	Working sector			Spouse working			Comorbidities			Clinical experience		
		Government	Private	p-value	No	Yes	p-value	No	Yes	p-value	<12	>12	p-value
Clinical rounds	Decrease	26 (38.2)	46 (48.9)	0.38	11 (44.0)	61 (44.5)	0.12	57 (46.0)	15 (39.5)	0.69	41 (47.7)	31 (40.8)	0.35
	No change	30 (44.1)	33 (35.1)		13 (52.0)	50 (36.5)		46 (37.1)	17 (44.7)		29 (33.7)	34 (44.7)	
	Increase	12 (17.6)	15 (16.0)		1 (4.0)	26 (19.0)		21 (16.9)	6 (15.8)		16 (18.6)	11 (14.5)	
History evaluation	Decrease	23 (33.8)	42 (44.7)	0.37	10 (40.0)	55 (40.1)	0.03*	56 (45.2)	9 (23.7)	0.03*	35 (40.7)	30 (39.5)	0.44
	No change	33 (48.5)	37 (39.4)		15 (60.0)	55 (40.1)		47 (37.9)	23 (60.5)		34 (39.5)	36 (47.4)	
	Increase	12 (17.6)	15 (16.0)		0 (0.0)	27 (19.7)		21 (16.9)	6 (15.8)		17 (19.8)	10 (13.2)	
Patient examination	Decrease	36 (52.9)	56 (59.6)	0.70	11 (44.0)	81 (59.1)	0.01*	73 (58.9)	19 (50.0)	0.59	50 (58.1)	42 (55.3)	0.38
	No change	21 (30.9)	25 (26.6)		13 (52.0)	33 (24.1)		33 (26.6)	13 (34.2)		21 (24.4)	25 (32.9)	
	Increase	11 (16.2)	13 (13.8)	0.07*	1 (4.0)	23 (16.8)		18 (14.5)	6 (15.8)		15 (17.4)	9 (11.8)	
Invasive intervention	Decrease	29 (42.6)	57 (60.6)	0.07*	14 (56.0)	72 (52.6)	0.37	67 (54.0)	19 (50.0)	0.75	50 (58.1)	36 (47.4)	0.07*
	No change	28 (41.2)	28 (29.8)		10 (40.0)	46 (33.6)		41 (33.1)	15 (39.5)		23 (26.7)	33 (43.4)	
	Increase	11 (16.2)	9 (9.6)		1 (4.0)	19 (13.9)		16 (12.9)	4 (10.5)		13 (15.1)	7 (9.2)	
Airway maneuver	Decrease	28 (41.2)	39 (41.5)	0.66	9 (36.0)	58 (42.3)	0.6	52 (41.9)	15 (39.5)	0.96	39 (45.3)	28 (36.8)	0.33
	No change	28 (41.2)	43 (45.7)		13 (52.0)	58 (42.3)		54 (43.5)	17 (44.7)		33 (38.4)	38 (50)	
	Increase	12 (17.6)	12 (12.8)		3 (12.0)	21 (15.3)		18 (14.5)	6 (15.8)		14 (16.3)	10 (13.2)	
ICU duty hours	Decrease	18 (26.5)	36 (38.3)	0.28	9 (36.0)	45 (32.8)	0.67	43 (34.7)	11 (28.9)	0.57	29 (33.7)	25 (32.9)	0.19
	No change	33 (48.5)	38 (40.4)		12 (48.0)	59 (43.1)		55 (44.4)	16 (42.1)		33 (38.4)	38 (50)	
	Increase	17 (25.0)	20 (21.3)		4 (16.0)	33 (24.1)		26 (21.0)	11 (28.9)		24 (27.9)	13 (17.1)	
Cooperation head admin	Decrease	18 (26.5)	22 (23.4)	0.46	8 (32.0)	32 (23.4)	0.13	32 (25.8)	8 (21.1)	0.83	21 (24.4)	19 (25)	0.21
	No change	31 (45.6)	37 (39.4)		13 (52.0)	55 (40.1)		51 (41.1)	17 (44.7)		41 (47.7)	27 (35.5)	
	Increase	19 (27.9)	35 (37.2)		4 (16.0)	50 (36.5)		41 (33.1)	13 (34.2)		24 (27.9)	30 (39.5)	
Cooperation HCW	Decrease	21 (30.9)	33 (35.1)	0.31	14 (56.0)	40 (29.2)	0.005*	41 (33.1)	13 (34.2)	0.76	36 (41.9)	18 (23.7)	0.05*
	No change	31 (45.6)	32 (34.0)		10 (40.0)	53 (38.7)		50 (40.3)	13 (34.2)		29 (33.7)	34 (44.7)	
	Increase	16 (23.5)	29 (30.9)		1 (4.0)	44 (32.1)		33 (26.6)	12 (31.6)		21 (24.4)	24 (31.6)	
Cooperation colleague	Decrease	17 (25.0)	17 (18.1)	0.44	9 (36.0)	25 (18.2)	0.13	26 (21.0)	8 (21.1)	0.92	19 (22.1)	15 (19.7)	0.15
	No change	29 (42.6)	39 (41.5)		9 (36.0)	59 (43.1)		53 (42.7)	15 (39.5)		41 (47.7)	27 (35.5)	
	Increase	22 (32.4)	38 (40.4)		7 (28.0)	53 (38.7)		45 (36.3)	15 (39.5)		26 (30.2)	34 (44.7)	
Leave	Decrease	38 (55.9)	67 (71.3)	0.06*	17 (68.0)	88 (64.2)	0.26	80 (64.5)	25 (65.8)	0.98	61 (70.9)	44 (57.9)	0.20
	No change	25 (36.8)	19 (20.2)		8 (32.0)	36 (26.3)		34 (27.4)	10 (26.3)		20 (23.3)	24 (31.6)	
	Increase	5 (7.4)	8 (8.5)		0 (0.0)	13 (9.5)		10 (8.1)	3 (7.9)		5 (5.8)	8 (10.5)	
Burnout	Decrease	10 (14.7)	25 (26.6)	0.11	5 (20.0)	30 (21.9)	0.51	28 (22.6)	7 (18.4)	0.51	17 (19.8)	18 (23.7)	0.77
	No change	24 (35.3)	35 (37.2)		7 (28.0)	52 (38.0)		47 (37.9)	12 (31.6)		31 (36)	28 (36.8)	
	Increase	34 (50.0)	34 (36.2)		13 (52.0)	55 (40.1)		49 (39.5)	19 (50.0)		38 (44.2)	30 (39.5)	
Family time	Decrease	38 (55.9)	57 (60.6)	0.06*	15 (60.0)	80 (58.4)	0.18	75 (60.5)	20 (52.6)	0.61	57 (66.3)	38 (50)	0.06*
	No change	6 (8.8)	17 (18.1)		6 (24.0)	17 (12.4)		16 (12.9)	7 (18.4)		12 (14)	11 (14.5)	
	Increase	24 (35.3)	20 (21.3)		4 (16.0)	40 (29.2)		33 (26.6)	11 (28.9)		17 (19.8)	27 (35.5)	

(Contd...)

Table 2: (Contd...)

Question	Working sector			Spouse working		Comorbidities			Clinical experience		
	Levels	Government	Private	p-value	Yes	No	Yes	No	p-value	p-value	
		40 (58.8)	62 (66.0)								15 (60.0)
Relaxation	Decrease	11 (16.2)	19 (20.2)	0.19	22 (16.1)	8 (32.0)	87 (63.5)	0.09	27 (71.1)	0.33	45 (59.2)
	No change	17 (25.0)	13 (13.8)		28 (20.4)	2 (8.0)	22 (16.1)		4 (10.5)		12 (15.8)
	Increase	35 (51.5)	55 (58.5)	0.67	78 (56.9)	12 (48.0)	34 (24.8)	0.68	23 (18.5)	0.48	19 (25)
Physical exercise	Decrease	19 (27.9)	23 (24.5)		34 (24.8)	8 (32.0)	78 (56.9)		7 (18.4)		44 (57.9)
	No change	14 (20.6)	16 (17.0)		25 (18.2)	5 (20.0)	35 (28.2)		8 (21.1)		16 (21.1)
	Increase	24 (35.3)	43 (45.7)	0.41	57 (41.6)	10 (40.0)	51 (41.1)	0.87	16 (42.1)	0.78	31 (40.8)
Felt isolated	Decrease	21 (30.9)	24 (25.5)		37 (27.0)	8 (32.0)	57 (41.6)		9 (23.7)		20 (26.3)
	No change	23 (33.8)	27 (28.7)		43 (31.4)	7 (28.0)	37 (29.8)		13 (34.2)		25 (32.9)
	Increase	19 (27.9)	36 (38.3)	0.17	48 (35.0)	7 (28.0)	45 (36.3)	0.004*	10 (26.3)	0.19	23 (30.3)
Fear infection family	Decrease	5 (7.4)	11 (11.7)		9 (6.6)	7 (28.0)	9 (6.6)		2 (5.3)		7 (9.2)
	No change	44 (64.7)	47 (50.0)		80 (58.4)	11 (44.0)	65 (52.4)		26 (68.4)		46 (60.5)
	Increase	8 (11.8)	13 (13.8)	0.83	18 (13.1)	3 (12.0)	14 (11.3)	0.44	7 (18.4)	0.11	8 (10.5)
Respect patient	Decrease	35 (51.5)	44 (46.8)		64 (46.7)	15 (60.0)	64 (46.7)		13 (34.2)		36 (47.4)
	No change	25 (36.8)	37 (39.4)		55 (40.1)	7 (28.0)	44 (35.5)		18 (47.4)		32 (42.1)
	Increase										

personal life of intensivists working in non-COVID ICUs is the first of its kind. We did a web-based survey so as to least disturb the work schedule or family time of the intensivists.

Demographic parameters of intensivists showed the comparability among intensivists.

Changes in Usual Clinical Practice

Intensivists reported reduction in history evaluation, clinical round duration and frequency, patient examination, airway maneuver, and invasive intervention by themselves in the ICU. Hence, appropriate level of care and intervention in non-COVID ICUs were either delayed or deficient. Increased risk of exposure, either due to poor implementation or compliance of strict COVID-ICU protocols or improper triaging, may have led to the spread of COVID within these ICUs. Under these circumstances, self-preservation and family's best-interest may have resulted in alteration of ICU practices.

Fewer interventions in the private sector may have been due to lesser number of non-COVID ICU patient admissions, as majority centers were COVID care. Furthermore, major interventions may already have been performed prior to transfer to non-COVID ICUs from COVID-ICUs. Less-experienced (<12 years) intensivists performed fewer interventions as they were overworked and cited exposure risk during close contact.

Several published articles report that HCWs struggled with longer duty hours in COVID-ICUs, higher workload, and rapidly changing environment.^{7,8} Increase in duty hours in non-COVID ICUs in our study may have been due to limited trained manpower or additional responsibilities trusted upon them over and above their usual routine.

Changes in Working Environment

Leaves were decreased during the COVID-19 pandemic (more in private vs government sector) most probably due to scarcity of staff, which must be more in the private sector than the government sector.

Intensivists reported that HCWs cooperation decreased significantly specially with less experienced intensivists. Myths and miscommunication among lower level HCWs about COVID, heightened exposure risk due to greater, and longer contact exposure times with patients, poor pay, and higher risk could all be plausible explanations.

In our study, intensivists reporting burnout at the workplace (non-COVID ICU) increased considerably (42%) than during the pre-COVID times. Even in the pre-COVID era, severe burnout was reported in up to 45% of intensivists, affecting usual working conditions.⁹ In COVID times, several researchers have reported burnout among HCWs working in COVID set-up.¹⁰⁻¹² The institutional support system, newer challenges, individual stress level, cooperation among HCWs, and to some extent personal support systems are all directly related to this burnout. Probably a grievance redressal mechanism and better communication between the administrator and intensivists could have created more harmony in the working environment. Of course, better remuneration could have resulted in more cooperation at all ends.

Changes in Intensivists' Social/Personal Life

Family time significantly decreased with intensivists working in the private sector and who were less experienced. This may have been due to higher work pressure in the private sector to perform at par with pre-COVID period and frontline activity of less experienced



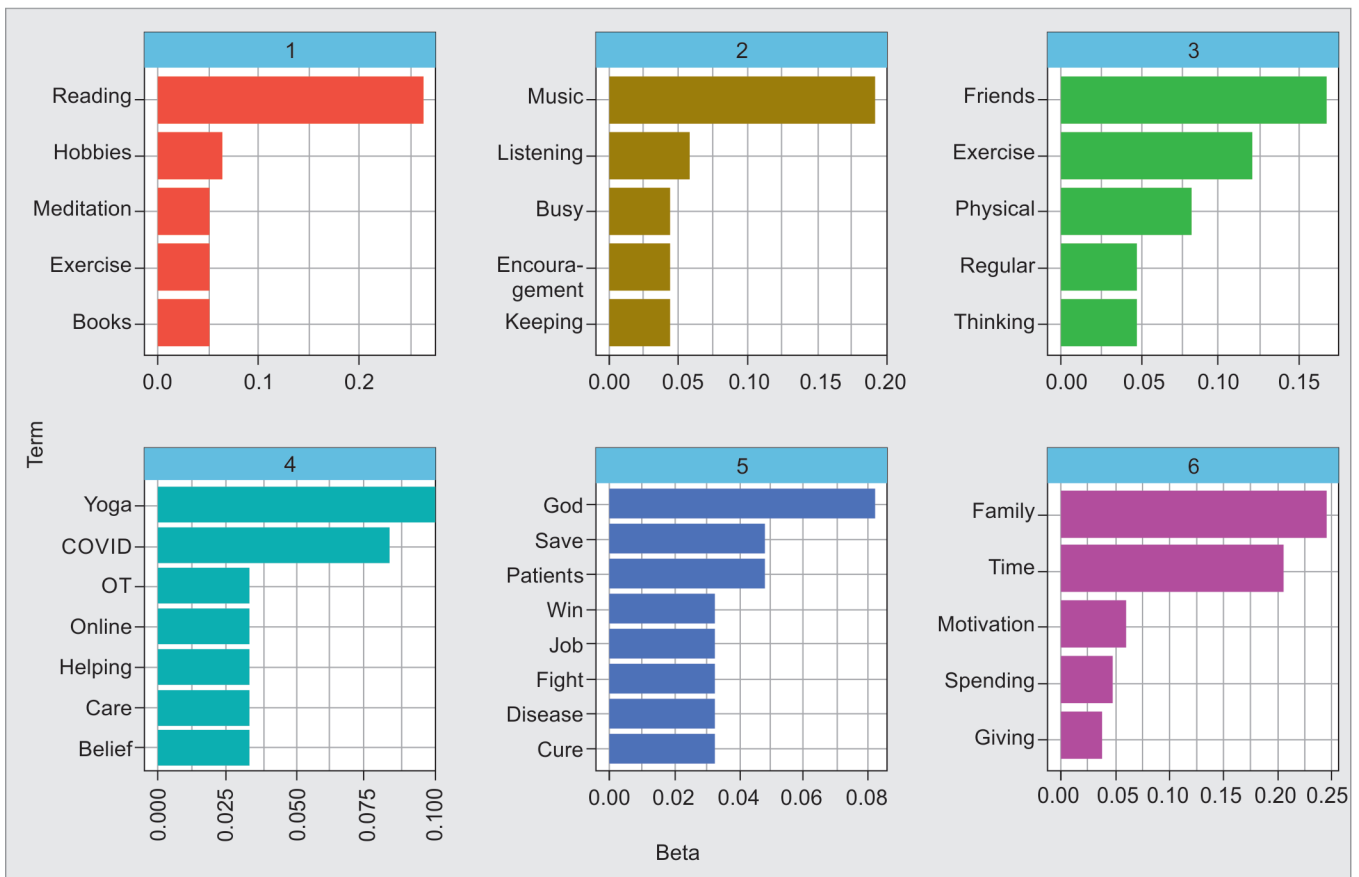
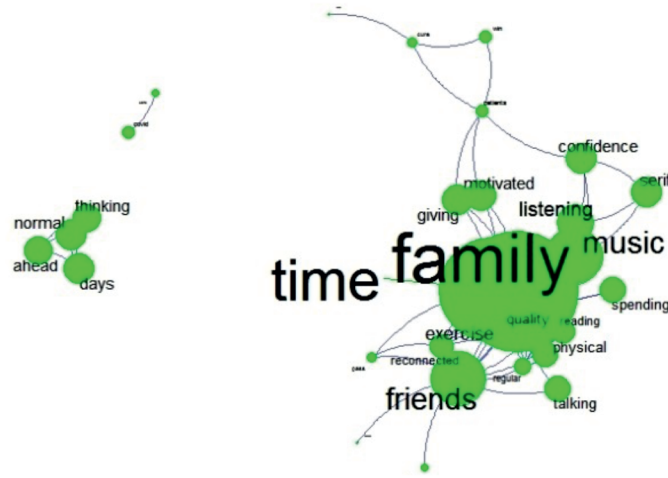


Fig. 2: Plot of term correlation network and top terms in the topic modeling of response on how you keep yourself motivated

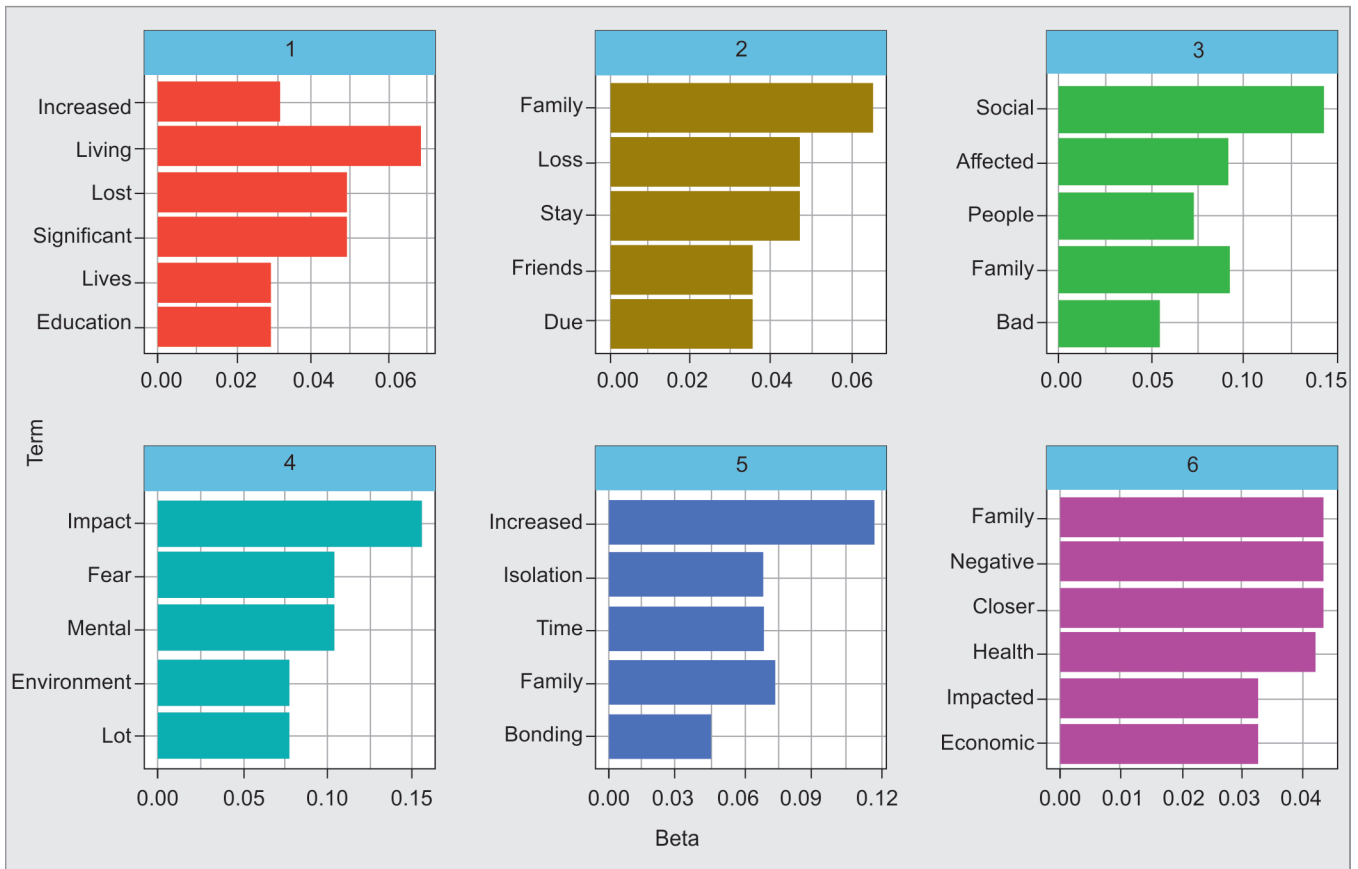
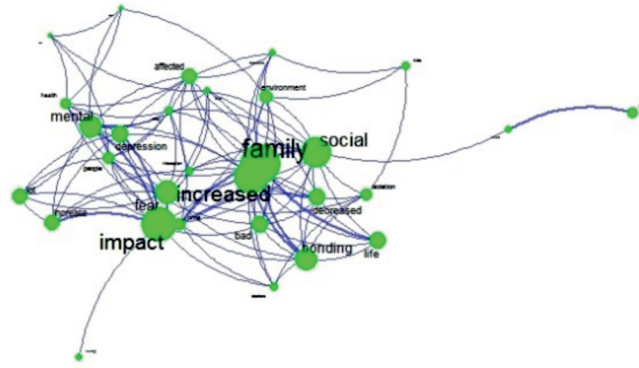


Fig. 4: Plot of term correlation network and top terms in the topic modeling of response on opinion on the impact of COVID-19 on social life

young intensivists. Furthermore, in the Government sector, balance was maintained between COVID and non-COVID duties with more structured off-duty periods.

Intensivists had increased fear of spreading the infection to dependents despite working inside the non-COVID ICUs. A false sense of security and lowering of guard in non-COVID ICUs by other workers might be the cause for this. Fear of self-exposure and spreading the infection to one's family played on the minds of intensivists, interfering in deliverance of ICU care at most centers. Stigma of acquiring and spreading infection might also be a factor to fear. One Indian study even reported that HCWs were forced to conceal their identities to save their families from social ostracization.⁸ These areas need further evaluation and clarifying guidelines in terms of professional obligations of intensivists in a pandemic situation vs professional rights.^{13,14}

Limitations

We penned a new and naive questionnaire that needs further validation. We could not include intensivists who were not well versed with modern communication gadgets. Intensivists had to recall pre-COVID conditions, so there may be recall bias working in our study.

During initiation of our study, we could have used the abbreviated Maslach burnout inventory for burnout measurement.¹⁵

CONCLUSION

Coronavirus disease-2019 (COVID-19) bared the lacunas and flaws of the healthcare system as well as the non-COVID ICUs. Having no previous similar experience in past is probably the most important reason behind this. Intensivists working in the private sector and with lesser experience were affected most to the tunes of significantly lesser family time during pandemic, significantly lesser leaves and less HCW cooperation.

We wish to recommend that grievance redressal mechanism, a counseling system, better infection control inside ICU, and better triage system may help to address the issues.

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REFERENCES

1. Jagiasi BG, Chanchalani G, Nasa P, Tekwani S. Impact of COVID-19 pandemic on the emotional well-being of healthcare workers:

- a multinational cross-sectional survey. *Indian J Crit Care Med* 2021;25(5):499–506. DOI: 10.5005/jp-journals-10071-23806.
2. Greenberg N, Weston D, Hall C, Caulfield T, Williamson V, Fong K. Mental health of staff working in intensive care during Covid-19. *Occup Med (Lond)* 2021;71(2):62–67. DOI: 10.1093/occmed/kqaa220.
3. Arabi YM, Azoulay E, Al-Dorzi HM, Phua J, Salluh J, Binnie A, et al. How the COVID-19 pandemic will change the future of critical care. *Intensive Care Med* 2021;47(3):282–291. DOI: 10.1007/s00134-021-06352-y.
4. Azoulay E, Cariou A, Bruneel F, Demoule A, Kouatchet A, Reuter D, et al. Symptoms of anxiety, depression, and peritraumatic dissociation in critical care clinicians managing patients with COVID-19. A cross-sectional study. *Am J Respir Crit Care Med* 2020;202(10):1388–1398. DOI: 10.1164/rccm.202006-2568OC.
5. Rosenbaum L. The untold toll—the pandemic's effects on patients without Covid-19. *N Engl J Med* 2020;382:2368–2371. DOI: 10.1056/NEJMms2009984.
6. Ruangsomboon O, Boonmee P, Nimmannit A. The COVID-19 pandemic: the effect on airway management in non-COVID emergency patients. *BMC Emerg Med* 2021;21(1):1. DOI: 10.1186/s12873-021-00491-7.
7. Johnson SB, Butcher F. Doctors during the COVID-19 pandemic: what are their duties and what is owed to them? *J Med Ethics* 2021;47:12–15. DOI: 10.1136/medethics-2020-106266.
8. Chakma T, Thomas BE, Kohli S, Moral R, Menon GR, Periyasamy M, et al. Psychosocial impact of COVID-19 pandemic on healthcare workers in India & their perceptions on the way forward—a qualitative study. *Indian J Med Res* 2021;153(5-6):637–648. DOI: 10.4103/ijmr.ijmr_2204_21.
9. Moss M, Good VS, Gozal D, Kleinpell R, Sessler CN. A critical care societies collaborative statement: burnout syndrome in critical care healthcare professionals. A call for action. *Am J Respir Crit Care Med* 2016;194:106–113. DOI: 10.1164/rccm.201604-0708ST.
10. Misra A. Doctors and healthcare workers at frontline of COVID-19 epidemic: admiration, a pat on the back, and need for extreme caution. *Diabetes Metab Syndr* 2020;14(2):255–256. DOI: 10.1016/j.dsx.2020.03.006.
11. Khasne RW, Dhakulkar BS, Mahajan HC, Kulkarni AP. Burnout among Healthcare Workers during COVID-19 Pandemic in India: Results of a Questionnaire-based Survey. *Indian J Crit Care Med* 2020;24(8):664–671. DOI: 10.5005/jp-journals-10071-23518.
12. Pappa S, Ntella V, Giannakas T, Giannakoulis VG, Papoutsis E, Katsaounou P. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: a systematic review and meta-analysis. *Brain Behav Immun* 2020;88:901–907. DOI: 10.1016/j.bbi.2020.05.026.
13. Schwartz AR. Doubtful duty: physicians' legal obligation to treat during an epidemic. *Stanford Law Rev* 2007;60(2):657–694. PMID: 18357657.
14. Ruderman C, Tracy CS, Bensimon CM, Bernstein M, Hawryluck L, Shaul RZ, et al. On pandemics and the duty to care: whose duty? Who cares? *BMC Med Ethics* 2006;7:E5. DOI: 10.1186/1472-6939-7-5.
15. Loera B, Converso D, Viotti S. Evaluating the psychometric properties of the Maslach Burnout Inventory-Human Services Survey (MBI-HSS) among Italian nurses: how many factors must a researcher consider? *PLoS One* 2014;9(12):e114987. DOI: 10.1371/journal.pone.0114987.