

ORIGINAL ARTICLE

Professional Quality of Life and Mental Health among Doctors in Tamil Nadu during COVID19 Pandemic

MC Vasantha Mallika¹, AR Glannie², Pretty Venis³

¹Professor & Head, Department of Community Medicine, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Tamil Nadu; ²MD Student, Department of Community Medicine, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Tamil Nadu; ³MD student, Department of Community Medicine, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Tamil Nadu

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Corresponding Author

Dr. Glannie A R, 11g, Shanmugam Street, North Sarguna Veedhi, Nagercoil, Kanyakumari, Tamil Nadu-629001
E Mail ID: glanniar@gmail.com



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Abstract

Background: The pandemic COVID19, a serious global threat has led to elevated levels of pressure on medical professionals. The research shows that occupational stressors has been significantly associated with the pandemic. **Objective:** To estimate the professional quality of life of doctors in Tamil Nadu and their mental health during the COVID19 pandemic. **Settings and Design:** Cross-sectional study in Tamil Nadu, South India. **Method:** Among 318 doctors from both private and government sectors in Tamil Nadu, South India during April 9th - May 10th 2021, the study was conducted to estimate the professional quality of life [Compassion Satisfaction (CS), Secondary Traumatization (ST) and burnout] using ProQOL-5 scale. Depression and Anxiety were estimated using PHQ-9 and GAD-7 scales respectively. **Statistical analysis used:** Association between the variables was found using Chi-square test. **Results:** Among the 318 respondents (170 males and 148 females), CS and ST levels were high in 77(24.2%), and 10(3.1%) respondents respectively. Severe depression and anxiety were among 36(11.3%) and 109(34.3%) respectively. Statistically significant association was found for Burnout ($\chi^2=55.671$; OR=15.135; 95% CI=6.361-36.013 and $\chi^2=57.518$; OR=18.014; 95% CI=7.054-46.007) and ST ($\chi^2=56.701$; OR=15.432; 95% CI=6.486-36.717 and $\chi^2=26.281$; OR=4.558; 95% CI=2.476-8.390) with both depression and anxiety ($p<0.05$). **Conclusions:** Doctors of Tamil Nadu, South India are challenged with adverse mental health outcomes during the COVID-19 pandemic with a significant association between the quality of life at work and psychological distress.

Keywords

COVID-19; Compassion Satisfaction; Secondary Traumatization; Mental health

Introduction

Considerable job pressures has been linked to COVID19 pandemic, which could put medical professionals under much strain. Doctors from all specialities have faced unprecedented problems in patient care, and self-protection causing psychological suffering. Delay in early testing and a lack of personal protective equipment may endanger doctors by contracting COVID19. This pandemic has resulted in considerable mental health issues in doctors, including the possibility of transmission.(1) Medical professionals are more likely to have psychological symptoms and mental health concerns

during COVID19, according to studies. They are directly responsible for the care of COVID19-infected patients and must deal with risk factors like PPE depletion, a lack of specific standards, and feelings of being under-supported. Changes in doctors' working environments have occurred as a result of the pandemic, and these changes appear to have both positive and negative effects on their psychological well-being and professional quality of life.(2)

In order to develop control measures, it is necessary to examine professional quality of life and its impact on medical professionals' mental health.

Aims & Objectives

1. Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatization were used to assess doctors' professional quality of life during the COVID-19 pandemic (ST).
2. To investigate the link between specific mental health outcomes, such as anxiety and depression, and the professional quality of life of the research population.

Material & Methods

Operational Definitions

Compassion Satisfaction: The joy you get from being able to execute your work successfully is compassion satisfaction. For example, you can have a favourable attitude concerning your co-workers or your ability to contribute to the team or even society. Higher scores on this scale suggest that you are more confident in your ability to provide effective care at work.

Burnout: According to the literature, one of the elements of Compassion Fatigue is burnout. It's linked to emotions of helplessness as well as difficulty managing work or functioning successfully at your job. These bad feelings usually come on gradually. They can reflect a sense of futility, or they can be linked to a heavy workload or an unsupportive work environment. Burnout is more likely if your score on this scale is greater.

Secondary Traumatization (STS): STS is about your job-related secondary exposure to significantly or traumatically stressful situations. Although acquiring problems as a result of being exposed to other people's trauma is rare, it does happen to many people who care for people who have gone through extremely or traumatically stressful situations. You may, for example, frequently hear stories about other people's traumatic experiences, a condition called as Vicarious Traumatization. Secondary exposure happens when your job, such as a therapist or an emergency responder, exposes you to other people's traumatic events. STS symptoms develop spontaneously and are frequently tied to a specific event. Fear, insomnia, visions of the traumatic event flashing through your mind, or avoiding items that remind you of it are all possible symptoms.(3)

Depression: Depression is a common and dangerous medical condition that affects your emotions, thoughts, and behaviour. Unhappiness and/or a loss of interest in previously enjoyed activities are symptoms of depression. It can lead to a variety of mental and physical problems, as well as a decrease in your ability to function at work and at home.(4)

Anxiety: Anxiety is marked by muscle tension and avoidance behaviour in anticipation of a future worry. Anxiety disorder sufferers may strive to avoid circumstances that trigger or intensify their symptoms. Job performance, academic work, and personal relationships can all suffer as a result of this.(5)

Study setting and population: A cross-sectional study among 318 Allopathy doctors in Tamil Nadu, South India, between April 9 and May 10, 2021 was conducted following STROBE guidelines. The healthcare institutions were actively involved in the care of COVID19 patients during the research period. Participants in the study comprised clinicians from various departments in the public and private sectors who have treated COVID19 patients. The information was gathered using the convenience sampling method. Participants were informed about all major components of the study and were given the option to refuse to participate or withdraw their consent at any time. The participants' understanding of the instructions and consent to participate in the study were validated. The Institutional Human Ethics Committee gave its approval to the project (SMIMS/IHEC No: 1/Protocol No:31/2021).

Sample size calculation

Sample size (n) = $Z_{1-\alpha}/22pq/d^2$

$Z_{\alpha} = 1.96$; $Z_{\alpha/2} = 3.84$

$\therefore p = 23.2\%(6)$; $q = 100 - p = 100 - 23.2 = 76.8$

With relative precision 20% of p, $d = 20\%$ of $P = 20\%$ of $23.2 = 4.64$

$n = (1.96)^2 * 22.3 * 77.7 / (4.64)^2 = 317.93$

$n = 318$.

Screening questionnaire: Socio-demographic characteristics, information on COVID19 exposure in the previous month, the Professional Quality of Life Scale version 5 (ProQOL-5) to estimate compassion satisfaction (CS), burnout, and secondary traumatization (ST) related to their role, the Patient Health Questionnaire-9 (PHQ-9) to examine depressive symptoms, and the Generalized Anxiety Disorder Seven-Item (GAD-7) to examine possible anxiety disorder were the five main components of the study questionnaire.

The study sample's professional quality of life was assessed using Stamm's ProQOL-5 which is a 30-item Likert scale that ranges from 1 (never) to 5 (frequently) and covers compassion satisfaction (CS), secondary traumatization (ST), and burnout (very often). The raw score ranges from 10 to 50 for each category, with scoring ranges available for each.(7)

The PHQ-9 is a nine-item depression measure based on the Diagnostic and Statistical Manual of Mental Disorders' major depressive disorder criteria (DSM). The participants in the study were asked to rate the frequency with which they had encountered a certain symptom over the preceding two weeks. From 0 ("never") to 3 ("always"), items are scored on a four-point scale.

The DSM clinical diagnostic criteria for generalised anxiety disorder are used in the GAD-7, which was established for clinical use. Seven items are scored on a range of 0 ("Not at All") to 3 ("Very Much"). (8,9)

Statistical Analyses: The study parameters were entered using Microsoft Office Excel 2016. All statistical analyses were performed using the SPSS 20.0. Categorical variables

were reported using percentages. The relationship between the dependent and independent variables was investigated using the Chi-square test with <0.05 P-value.

Results

The study consisted of 318 participants. The characteristics of the respondents by socio-demographic variables (Table 1).

The quality of life of doctors at work during the COVID19 pandemic was represented by Compassion Satisfaction (CS), Burn Out (BO), and Secondary Traumatization (ST) and was graded as high, moderate, and low (Figure 1).

The results showed that high Compassion Satisfaction (24.2) was seen among a major proportion of doctors treating COVID-19 patients compared to Compassion Fatigue.

(Table 2) shows 36 (11.3%) participants were diagnosed with clinically significant (severe) depression related to the pandemic. Whereas 109 (34.3%) of the medical professionals had severe anxiety. A significant association was found between Burnout, ST and mental health outcomes (Table 3).

Discussion

During the present pandemic, this study discovered a link between doctors' professional quality of life and their mental health. Similarly, in a study conducted by Tsion Firew et al in the United States in May 2020, HCWs who contracted COVID-19 reported higher levels of depressive symptoms (mean diff.=0.31; 95 percent CI 0.16 to 0.47), anxiety symptoms (mean diff.=0.34; 95 percent CI 0.17 to 0.52), and burn-out (mean diff.=0.54; 95 percent CI 0.36 to 0.71).

Anxiety may be heightened by the dread of becoming a virus carrier and transmitting the disease to co-workers and family members. The concern of COVID-19 transmission is identified as important because of cases of asymptomatic transmission. During this pandemic situation, such overwhelming thoughts can have negative consequences.

In a study conducted by Rodolfo Buselli et al in April 2020 on 256 health care employees in Italy, females reported higher levels of Secondary Traumatization than males. Frontline workers and healthcare aides, on the other hand, reported higher levels of compassion satisfaction than second-line workers and physicians, respectively. Burnout and secondary traumatization were connected to depression and anxiety levels, just as they were in the current study.

In April 2020, Sofia Pappa et al. completed a study in London that included thirteen studies and 33,062 participants. Anxiety was measured in 12 research with a combined frequency of 23.2 percent, and depression was measured in ten studies with a prevalence of 22.8 percent. According to subgroup analysis, female HCWs and nurses had higher incidence of emotional symptoms than male and medical professionals, respectively.(6)

From January to March 2020, Jens Bohlken et al conducted 14 studies on healthcare workers in all disciplines, with nurses and medical professionals accounting for the majority. The percentage of COVID-19-related activities varied between 7.5 and 100%. Association was found between demographic characteristics, proximity to COVID19 patients and the severity of anxiety.(10) According to Chang D et al, China, HCWs account for 3.5% of all COVID19 patients, with 14.8% of those cases being severe or critical.(11)

Conclusion

The ongoing COVID-19 outbreak poses a new set of concerns for doctors. Professional quality of life and psychological discomfort have a significant and probable bi-directional relationship.

Recommendation

We recommend that doctors obtain timely psychological counselling and interventions to minimise burnout and ST, as well as the danger of harmful mental health impacts.

Limitation of the study

Prior to the outbreak, it was impossible to acquire data on doctors' mental health, making a meaningful comparison difficult. To expand our considerations and acquire an adequate understanding of the facts, we must wait for longitudinal data.

Some indicators of burnout and secondary traumatization partially correlate with depression or anxiety symptoms, according to the ProQOL, PHQ-9, and GAD-7 questionnaires. To support the study conclusions, an adequate control group is required to distinguish between the association of symptoms with being a medical practitioner and those caused solely by the pandemic.

Relevance of the study

The pandemic appears to have both positive and negative effects on medical professionals' mental health. It's especially important for analysing whether and how COVID-19-related working burden affects the quality of doctors' professional lives.

Authors Contribution

The hypotheses were made by AR-G. The data collected and analysed by AR-G and PV. Literature review and drafting the manuscript as per journal policy done by MCV, AR-G and PV. MCV and AR-G were the major contributors for critically revising the manuscript for important intellectual content. MCV has given expert opinion and final approval of the version to be published, and submission of the article. All authors read and approved the final manuscript.

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Tables

TABLE 1 STUDY PARTICIPANTS' FREQUENCY DISTRIBUTION BY SPECIFIED CHARACTERISTICS (N=318)

Characteristics	Frequency (n)	Percentage (%)	
Gender	Male	170	53.5
	female	148	46.5
Age (completed years)	≤ 29	193	60.7
	30-39	115	36.2
	40-49	10	3.1
Role in hospital	General Practitioner	96	30.2
	Resident/Fellow	68	21.4
	Physician/Respiratory Physician	28	8.8
	Paediatrician	53	16.7
	Surgeon	18	5.7
	Anaesthetist	9	2.8
	Emergency Physician	6	1.9
Clinical setting	Others	40	12.6
	Emergency / Casualty	22	6.9
	ICU	39	12.3
	Inpatient Hospital	152	47.8
	Clinic	32	10.1
	Nursing Home / Long term care facility	12	3.8
Others	61	19.2	

Commented [PS1]: Possible source: https://www.researchgate.net/publication/283818714_Influence_of_Professional_Self-Concept_and_Professional_Autonomy_on_Nursing_Performance_of_Clinic_Nurses

TABLE 2 GRADE OF DEPRESSION AND ANXIETY AMONG STUDY PARTICIPANTS (N=318)

Variables	Grade	Frequency (n)	Percentage (%)
Depression	None / Minimal	62	19.5
	Mild	77	24.2
	Moderate	68	21.4
	Moderately severe	75	23.6
	Severe	36	11.3
Anxiety	Mild	116	36.5
	Moderate	93	29.2
	Severe	109	34.3

TABLE 3 ASSOCIATION OF DEMOGRAPHIC CHARACTERISTICS AND QUALITY OF LIFE OF DOCTORS WITH SELECTED MENTAL HEALTH OUTCOMES

Variables	Depression				Anxiety			
	Chi-square	OR	95% CI	p-Value	Chi-square	OR	95% CI	p-Value
Age	.325	.872	.545-1.396	0.568	4.903	.588	.367-.943	0.027*
Gender	1.586	.743	.468-1.180	0.208	2.206	.704	.442-1.120	0.137
CS	3.567	.578	.326-1.025	0.059	1.614	1.408	.829-2.391	0.204
Burnout	55.671	15.135	6.361-36.013	<0.001**	57.518	18.014	7.054-46.007	<0.001**
ST	56.701	15.432	6.486-36.717	<0.001**	26.281	4.558	2.476-8.390	<0.001**

Figures

FIGURE 1 CS, BO, ST AMONG STUDY PARTICIPANTS (N=318)

