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RESEARCH ARTICLE

QUALITY OF WORK LIFE AND MEDICAL TEACHERS' COMMITMENT: A MODERATED MEDIATION ANALYSIS OF FEAR OF COVID-19 AND JOB SATISFACTION

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ABSTRACT

This study is principally the first to test a moderated mediation model of COVID-19 fear and job satisfaction in the Quality of Work Life (QWL)-commitment relationship of medical teachers during the pandemic. The conceptual model draws its theoretical tenet from spillover and conservation of resources theories.

Cluster sampling was incorporated from four metropolitan cities in India. A mixed-method research design was administered to 378 medical teachers amidst the pandemic. The partial least squares structural equation modeling (PLS-SEM) results indicate a significant positive association between the constructs. Path analyses have highlighted positive associations between QWL, job satisfaction, and affective commitment to medical institutions. Further, a partial mediation effect of job satisfaction in the QWL-commitment relationship is highlighted, adding a new dimension to past studies. Intriguingly, each of the positive associations between QWL, job satisfaction, and commitment was negated and significantly moderated by the fear of COVID-19 experienced by the medical teaching fraternity.

The findings offer practical implications to the stakeholders (Ministry of Health and Family Welfare, Department of Higher Education, Government of India, and State Governments) in enriching the QWL, job satisfaction, and medical teachers' commitment induced by psychological stress, anxiety, role conflict, post-traumatic stress disorder, and fear of COVID-19 in the global pandemic.

KEYWORDS

Fear of COVID-19; quality of work life; job satisfaction; medical teachers' commitment; moderated mediation model

INTRODUCTION

The outbreak of SARS CoV-2 or the Coronavirus (COVID-19) and its sub-variants have wreaked havoc across all spectrums of life, industry, and education. Given the virus's virulence, fatality, evolution, lack of proper vaccines, and uncertainty, the World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020. Consequently, nations were mandated to undergo complete lockdowns to abate the virus's rapid transmission, restructuring all possible medical resources to cater to the spiraling hospitalization load and address attention to other forms of medical care. Uncertainty impacted the education sector adversely as schools, colleges, and universities witnessed physical closure [1]. Notably, medical education, which relies on in-person teaching, was deeply impacted. Medical education is majorly patient-centric, interaction-based learning and assessment. Clinical teachings are best understood with in-person interactions

to unearth patients' clinical observations and develop patient interaction and counseling competencies [2]. The application of medical pedagogy transitioned from traditional/classroom teaching to remote learning or ICT-enabled technologies encountered teething problems in countries like India, which is limited by infrastructure and the voluminous demand for COVID-19 infection induced in the medical fraternity.

The literature has a plethora of articles highlighting the plight of the students and teachers in remote learning during the COVID-19 outbreak [3], but unfortunately, very few articles have precisely highlighted the challenges of remote medical pedagogy [2]. The global Delta wave induced overwhelming hospitalization, fatalities, and unprecedented challenges to healthcare professionals, and medical education were in a quandary. Nations like the US, UK, Australia, and Canada completely halted clinical rotations and summative examinations [4]. The unprecedented transition in the application of medical pedagogy via the virtual format in countries like India was not smooth [2,3]. Many Indian medical schools adopted ICT-enabled learning; the pre-clinical curriculum was transformed into remote learning through online lectures and group discussions via the virtual format. Past research has highlighted the limitations of online medical pedagogy: lack of personal interaction with the mentor, incomplete syllabus, incompetence to engage in ICT tools, rampant digital divide, and unpreparedness in curriculum delivery [5]. The psychological impact on students has been reported as demotivated, feeling of incompetence, especially concerning clinical skills, application of theoretical lessons in practice, low confidence in interaction, and counseling with a live (in-person) patient [6]. The literature has ignored the facets of work in remote medical teaching, its influence on job satisfaction, and overall well-being amidst the fear of COVID-19. The findings provide an impetus for implications for the management, medical fraternity, health care department, and government authorities. The need of the hour is to enrich the workplace (academic and professional), inducing job satisfaction and commitment, which are crucial for quality health care service.

LITERATURE REVIEW AND HYPOTHESES

QUALITY OF WORK LIFE AND AFFECTIVE COMMITMENT

The need-based theory of QWL [7,8,9,10] posits that every individual harbors basic needs to be satisfied when engaged at work. The degree of QWL experienced is exhibited through the extent these seven basic needs are satisfied by the job settings [9,10]. These are identified as i) health and safety needs (good healthiness and protection from harm at work); ii) economic and family needs (equitable compensation and attending domestic needs); (iii) social needs (collegiality at the workplace); (iv) esteem needs (recognition from within and outside work); (v) actualization needs (opportunity to achieve one's full potential; (vi) knowledge needs (training and development of competencies); (vii) aesthetic needs (personal creativity and independence at work) [7,8,9,10]. Affective commitment is perceived as an emotional drive to remain an institution member and assist in achieving its goals through intrinsic involvement and acceptance of organizational values [11,12]. Past studies have reported that as the employee needs (QWL) are satisfied, it instigates employee loyalty and commitment [7,8,9,10,11,12,13,14]. Based on this observation, the following hypothesis is proposed:

H1 – QWL is positively associated with medical teachers' affective commitment.

QWL AND JOB SATISFACTION

Job satisfaction reflects the employee's emotive and affective bond with their work, instigating happiness, positivity, and overall well-being [7,8,9,10,12]. Past research has categorically highlighted QWL is an antecedent to job satisfaction [8,9,10,12]. Hence, the literature has reported that a high degree of QWL induces positive attitudes, affective bonding, and job satisfaction [7,8,9,10,11,13,14]. Considering this past research, the following hypothesis is formed:

H2 – QWL positively predicts job satisfaction.

MEDIATING ROLE OF JOB SATISFACTION

Literature provides evidence that employees satisfied with their job leads to exhibit loyalty and commitment toward their institution [9,10,11,12,14]. Further, the spillover theory [15] posits that an individual harbors different domains of life (social, family, work life, etc.). The satisfaction from one domain influences the satisfaction in other domains of life. Hence, with the theoretical tenet of spillover theory, we propose that as the medical teachers' needs are satisfied through work (QWL), it spills over/instigates teachers' affective bond and job satisfaction, which percolates a feeling to remain a member of the institution through affective commitment and loyalty to work/ hospital

[8,9,10,11,12,13]. Thus, the following hypotheses are formed:

H3 – Job satisfaction positively predicts commitment.

H4 – Job satisfaction mediates the positive relationship between QWL and medical teachers' affective commitment in the COVID-19 outbreak.

MODERATING ROLE OF FEAR OF COVID-19

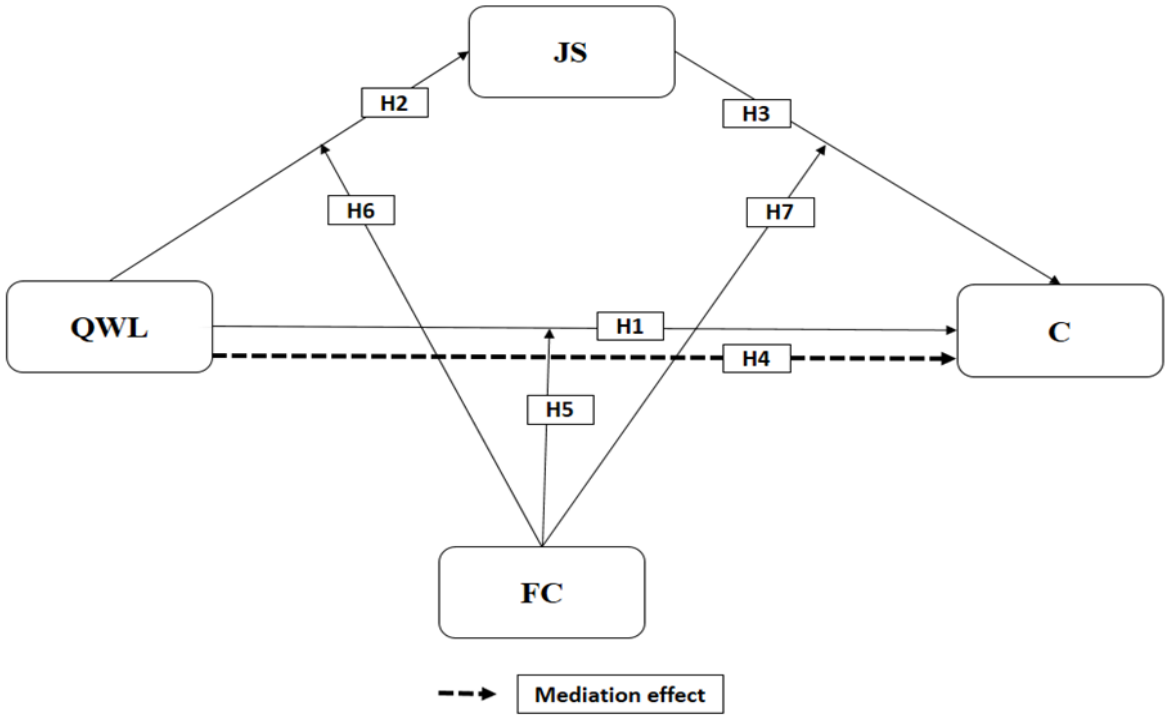
The COVID-19 pandemic has affected life through all spectrums. Prior studies have categorically highlighted the challenges [1,2,3,4,6] possible innovations in online medical education [2,7,16,17,18,19] and psychological repercussions on medical students [1,2,3,5,6,13,16,18], particularly concerning scepticism in clinical practices, patient interaction, and counseling [2,5,6,8,12,13,14,17]. Through extensive literature review, it has been observed that research highlighting the quality of work life of medical teachers in addressing the overwhelming demand of hospitalization, patient care, stigmatization, lack of adequate staff, and simultaneously managing the unprecedented challenge of ICT-enabled teaching and assessment have been ignored in the present literature [1,2,3,5,6,7,8,9,12,13,16,17,18,19,20]. However, there are virtually no articles published investigating the impact of fear of COVID-19 on work and work outcomes (job satisfaction and commitment) of the medical teaching fraternity. We further introduce the construct of fear of COVID-19 from the medical psychology literature [21] to provide an impetus for the psychological impact on facets of work and mental well-being. This research provides a psychosomatic perspective to unearth the moderating impact of fear of COVID-19 on the spillover effect of job satisfaction in the relationship between quality of work life (QWL) and commitment of the Indian medical teachers (Figure 1). We propose a moderated mediation conceptual model on the tenet of spillover theory [15] and conservation of resources theory [22]. We further postulate that as the personal resources of medical teachers (time, energy, reputation, and social relationships) are threatened/ challenged by the risk of contagion, stigmatization, and fear of infecting family members, the fear of COVID-19 moderates/ calibrates the mediation spillover effect of job satisfaction. The following hypotheses are proposed to test the moderated mediation framework:

H5 – The fear of COVID-19 moderates the predictive effect of QWL on commitment.

H6 – The fear of COVID-19 moderates the predictive effect of QWL on job satisfaction.

H7 – The fear of COVID-19 moderates the predictive effect of job satisfaction on commitment.

FIGURE 1: CONCEPTUAL FRAMEWORK



Note: QWL- Quality of Work Life; JS- Job Satisfaction; C- Commitment; FC- Fear of COVID-19

METHODS

SAMPLE

Initially, cluster sampling was administered to garner qualitative information from medical colleges of four prominent metropolitan cities (clusters) of India, i.e., Chennai, Delhi, Kolkata, and Mumbai. The study time frame was May 2021 to April 2022, coinciding with India's Delta and Omicron waves. Consequent to the havoc caused by the pandemic and strict COVID-19 appropriate norms issued by the Government of India, a cross-sectional approach with the circulation of e-questionnaires via email, Facebook, Instagram, and WhatsApp was deployed. The initial response rate was nominal, and snowballing techniques were adopted to increase the sample size. The optimum sample size was calculated as 119 through G*Power software (v3.1.9.4) with 'a priori' analysis, medium effect size (f2: 0.15), power: 0.95, and a: 0.05 (Figure 2).

Since the crux of this research is limited to garnering the perception of medical teachers towards the sundry facets of work life, a cover letter attached to the e-questionnaire categorically highlighted the nature of voluntary participation and confidentiality in the research. The ASA Code of Ethics (1999) mentions that confidentiality of information should be highlighted to the respondents at the beginning of a research relationship. Hence, complete anonymity of the responses was ensured to collate unbiased qualitative and quantitative perspectives towards the quality of work life, satisfaction, and commitment. The principals of the medical colleges were duly informed via email, and the link to the e-questionnaire was attached to ensure ethical approval for the voluntary participation of medical teachers in the online survey during the global COVID-19 pandemic.

Altogether, 378 complete responses were recorded on a five-point Likert scale (1: strongly disagree to 5: strongly agree) greater than the minimum sample size. The demographic profile of the respondents is elucidated in Table 1.

TABLE 1: DEMOGRAPHIC PROFILE

Demographic	Characteristics	Frequency	(%)
Designation	Professor	9	3.1
	Associate Professor	126	38.4
	Assistant Professor	243	58.5
Gender	Male	249	64.2
	Female	132	34
	Prefer not to say	7	1.8
Age	Below 30	127	32.7
	31-40	168	43.3
	41-50	78	20.1
	Above 50	15	3.9
Marital Status	Unmarried	187	48.2
	Married	172	44.3
	Widowed	16	4.1
	Separated	13	3.4
Teaching Experience	Below 10	215	55.4
	11-20	154	39.7
	21-30	12	3.1
	Above 30	7	1.8

FIGURE 2: G*POWER GRAPH

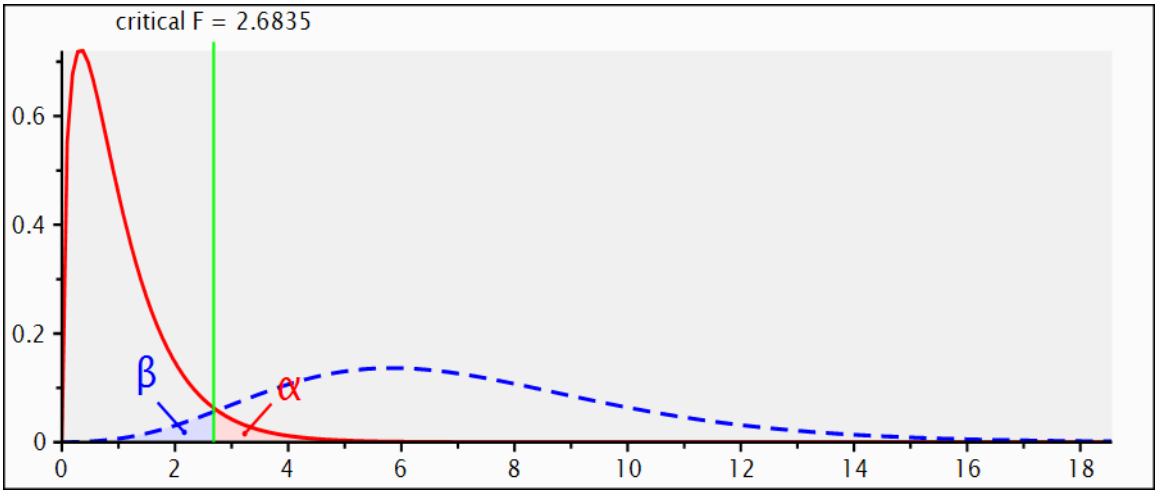


TABLE 2. MEASURES

Constructs	Reference	Items
Quality of Work Life Scale (QWLS)	[10]	16
Job satisfaction	[25]	3
Commitment	[26]	5
Fear of COVID-19 Scale (FCV-19S)	[21]	7

STATISTICAL TECHNIQUES

The hypothesized relationships were tested through partial least squares structural equation modeling (PLS-SEM) through SmartPLS (v. 3.3.9) [23], Statistical Package for the Social Sciences (SPSS) (v. 22), and PROCESS macro (v. 4.1) [18].

MEASURES

Measurement scales of constructs were adopted from prior studies, as exhibited in Table 2. Items were edited to suit the medical teaching fraternity.

RESULTS

MEASUREMENT MODEL

Prior to the testing of the structural relationship, the construct validity of the measurement model is tested. The internal consistency was verified through item-factor loadings, Cronbach's alpha (a), Rho, and composite reliability (CR), which all exceeded the standard of 0.7 [27,28,29] (Table 3). The average variance extracted (AVE) exceeded the threshold of 0.5, which supports the convergent validity criterion [27,28,29] (Table 3). The discriminant validity assessment was done through Fornell and Larcker criteria [28] and heterotrait-monotrait (HTMT) ratio [24]. The square root scores displayed diagonally were greater than their inter-correlations (Table 4), and the HTMT scores were less than 0.85 [25] (Table 5). This provides evidence of the constructs' high degree of discriminant validity [27,28,29,30]. Hence, with empirical evidence, the measurement model exhibits high construct validity and reliability [27,28,29,30]. Since our research was predominantly based on survey information, we addressed the multi-collinearity and common method bias issue through variance inflation factor (VIF) [29,30] and Harman's single factor test [31]. The VIFs were under the limit of 5, and the total variance extracted by all items loaded into one factor was 39.538% lower than the 50% mark. These statistics confirm that the measurement model is independent of multi-collinearity and common method biases [27,29,30,31]

TABLE 3. CONSTRUCT VALIDITY

Reflective Constructs	Indicators	Loadings/ Coefficients	t-value	VIF	a	Rho	CR	AVE
Quality of Work Life	HS	0.684	23.167	2.19	0.888	0.89	0.912	0.601
	E	0.801	36.177					
	A	0.791	34.672					
	EF	0.795	34.298					
	S	0.771	32.975					
	K	0.819	37.003					
	AS	0.74	28.06					
Job Satisfaction	JS1	0.854	48.357	1.69	0.804	0.806	0.884	0.718
	JS2	0.845	47.866					
	JS3	0.843	43.876					
Commitment	C1	0.876	71.551	2.22	0.868	0.871	0.919	0.791
	C2	0.894	63.118					
	C3	0.781	55.590					
	C4	0.879	60.048					
Fear of COVID-19	FC1	0.733	13.563	1.71	0.797	0.802	0.881	0.721
	FC2	0.867	49.719					
	FC4	0.816	25.246					
	FC5	0.846	32.628					

Note: HS- Health and safety needs, EF-Economic and family needs, S-Social needs, E-Esteem needs, A-Actualization needs. K-Knowledge needs, AS-Aesthetics needs, QWL- Quality of Work Life; JS-Job Satisfaction; C- Commitment, FC-Fear of COVID-19. All factor loadings are significant at 99% confidence levels.

TABLE 4. DISCRIMINANT VALIDITY (FORNELL-LARCKER CRITERION)

Constructs	1	2	3	4
1. Fear of COVID-19	***0.843***			
2. Job Satisfaction	0.421	***0.848***		
3. Commitment	0.373	0.431	***0.889***	
4. Quality of Work Life	0.507	0.707	0.385	***0.773***

TABLE 5. DISCRIMINANT VALIDITY (HTMT)

Constructs	1	2	3	4
1. Fear of COVID-19				
2. Job Satisfaction	0.521			
3. Commitment	0.446	0.515		
4. Quality of Work Life	0.604	0.812	0.43	

STRUCTURAL MODEL

The measurement model was empirically proven to be reliable and valid. The results of PLS-SEM are depicted in Table 6. The first hypothesis (H1) tested the direct relationship between QWL and the commitment of medical teachers in the COVID-19 pandemic. The path analysis results explicate that QWL significantly predicts commitment (β = 0.385; t-statistics = 7.874) levels. H2 also confirmed that the medical teachers' job satisfaction was significantly predicted by QWL (β = 0.707; t-statistics = 24.27). Job satisfaction also predicted hospital commitment during the pandemic (β = 0.317; t-statistics = 4.398), which supported H3. The mediation effect of job satisfaction in the relationship between QWL and commitment was tested as per Baron and Kenny's [27] and Preacher et al.'s [33] recommendations. The predictive effect (c') [27] of QWL on commitment in the presence of the mediator (job satisfaction) was positively significant (β = 0.161; t-statistics = 2.07). This implies that the predictive effect of QWL on hospital commitment during the pandemic was partially mediated through job satisfaction [32,33,34].

The moderated mediation model was tested as per the bootstrapping technique of 5000 subsamples [33,34] (Table 7). The results from Process Macro [35] (Model: 59) exhibited that the fear of COVID-19 had a significant negative moderating effect (β = -0.284; t-statistics = -2.569) on the relationship between QWL and commitment of the Indian medical teachers. Hence, H5 was confirmed. The interaction term (Fear of COVID-19 × QWL) significantly negatively affected the relationship between QWL and job satisfaction (β = -0.251; t-statistics = -6.059), which supported H6. The moderating effect of fear of COVID-19 on the predictive effect of job satisfaction on commitment was insignificant (β = 0.148; t-statistics = -0.272; p > 0.05). Hence, H7 was rejected.

TABLE 6. MEDIATION MODEL TESTING

Hypotheses	Paths	β	t-value	Support
H1	**QWL → C**	0.385	7.874**	Yes
H2	**QWL → JS**	0.707	24.27**	Yes
H3	**JS → C**	0.317	4.398**	Yes
H4	**QWL → JS → C**	0.161	2.07**	Yes

Note: QWL- Quality of Work Life; JS-Job Satisfaction; C- Commitment, FC-Fear of COVID-19.

TABLE 7. MODERATION OF MEDIATION RESULTS

Hypotheses	Paths	β	SE	t	LL	UL	Support
H5	**FC × QWL → C**	-0.284	0.111	-2.569**	-0.502	-0.067	Yes
H6	**FC × QWL → JS**	-0.251	0.041	-6.059**	-0.332	-0.169	Yes
H7	**FC × JS → C**	0.019	0.148	0.131^{NS}	-0.272	0.311	No

Note: QWL- Quality of Work Life; JS-Job Satisfaction; C- Commitment, FC-Fear of COVID-19.

** p<0.01; LL: Lower limit confidence interval; UL: Upper limit confidence interval; NS: Not significant.

DISCUSSION

An intensive literature review has highlighted the paucity of research on the impact of fear of COVID-19 on facets of work and work outcomes of medical college teachers. This research is primarily the first to contribute to the extant literature. The study is conceptualized to 1) unearth the mediating effect of job satisfaction in the QWL-commitment relationship of the medical college teachers in the pandemic. 2) the moderating effect of fear of COVID-19 in the mediation model. The PLS-SEM results have highlighted significant positive associations among QWL, job satisfaction, and commitment. Our findings indicate QWL positively predicted medical teachers' job satisfaction and affective commitment to their medical care institutions, which is commensurate with past studies [7,8,9,10,11,12,13,14,16,20,25,26,36,37]. Former studies have merely reported the mediating effect of job satisfaction in the QWL-organizational commitment relationship, but the nature of mediation i.e., complete or partial [27] have not been explored. This study adds a categorical perspective of a partial mediation effect of job satisfaction in the spillover of QWL on commitment in furtherance to previous studies [7,8,11,12,13,14,16,26,36,37]. There are no articles

published on the moderating effect of fear of COVID-19 in the facets of the work life of the medical teaching fraternity; we could not compare our results with prior studies. The novel contribution of this research is to provide empirical evidence of the fear of COVID-19 on the spillover of QWL on job satisfaction and affective commitment. The path analyses have revealed that fear of COVID-19 significantly reversed the positive effect (β: 0.385; H1) of QWL on commitment (H5). The COVID-19 fear also negatively moderated the positive effect (β: 0.707; H2) of QWL on job satisfaction (H6). Hence, we infer that fear of COVID-19 has inhibited/negated the affirmative predictive effect of QWL on job satisfaction and commitment levels of the medical teaching fraternity amidst the pandemic.

The mental well-being of the medical fraternity during the pandemic has been in jeopardy [1, 2, 3, 4, 5, 6, 9, 12, 13, 14, 17, 36]. A plethora of studies has indicated depression, loneliness, anxiety, death, emotional burnout, financial stressors, social stigma, and quarantine crippling the mental health of the medical sector [1, 2, 3, 9, 17, 18, 19, 20, 35, 37]. The healthcare providers struggled with isolation from social engagements, which exacerbated chronic mental health issues. The WHO report categorically addressed augmented mental health challenges from emotional anguish, exposure to COVID-19, death, personnel and personal protective equipment (PPE) shortages, and moral misery in patient care [2, 3, 16, 18, 19, 20, 35 ,36, 37, 38]. Unfortunately, the expression of emotions and stressors in medicine has been criticized as unprofessional [18,19], but the results have categorically elucidated the urgent need to address the fear of COVID-19 and its repercussions on different facets of work, satisfaction, and commitment. It has also been reported that public hospitals/ medical-educational institutions need a full-time human resource (HR) manager designated to address the humane aspects of healthcare workers and proper human capital management in Indian public health care. Furthermore, through personal interviews and telephonic conversations with the respondents, it has also come to the fore that appointment of full-time mental health counselors in hospitals/medical schools is the urgent need of the hour to address the cognitive, work-related, behavioral, emotional, and fear of COVID-19 issues of the medical health care employees, students, and trainees. This has also been addressed by the WHO [4,21,36,38]. The pandemic has witnessed a high degree of suicidal tendencies, depression, loneliness, societal stigma, and anxiety in the medical sector [2,4,6,12,1318,20,37]. Hence, the appointment of qualified HR executives and mental health counsellors could greatly enrich mental well-being, enhance QWL, job satisfaction, overall commitment, and reduce workplace ostracism (perception of being ignored/excluded by the management or colleagues).

The State Government, the Ministry of Health and Family Welfare, and the Government of India should categorically formulate policies on fair compensation, managerial support, adequate training facilities, workspace flexibility, and work-life balance to meet family and leisure needs. The urgent need is the transparent disbursement of adequate funds for optimum infrastructure to afford quality medical education, research, and health care. The Indian government has infused a budgeted estimate of 2.1 percent of gross domestic product (GDP) in the fiscal year of 2021-2022, well above 1.3 percent for the previous fiscal year (2020-2021). This ambitious endeavor is minuscule compared to the percentage of contribution to the GDP of developed nations like the US (19 percent), China (7.1 percent), and the UK (11.9 percent). The pandemic had a notable effect on clinical rotation training in India, adversely impacting hands-on learning and experience. The American College of Chest Physicians introduced virtual reality-enhanced classrooms and digital educational escape rooms for real-time clinical interaction [17,1835,36]. Such could be introduced by the Indian government for such unexpected pandemics or lethal variants of COVID-19 to provide seamless delivery of medical pedagogy in crisis. The medical teachers were adversely impacted by role conflict and ambiguity during the pandemic. The teachers had to attend the voluminous hospitalization and patient care while undertaking virtual/ in-person classes during the pandemic. Hence, the managerial authorities must emphasize adequate infrastructure, training, competencies enhancement, research and development, and a culture of mental health awareness and well-being. This study has been conducted with a cross-sectional research design due to the COVID-19 wave significantly impacting data collation. A longitudinal study incorporating the post-COVID-19 era could provide intriguing insights into HR policies. The coping mechanisms adopted by medical teachers during the pandemic may provide a novel perspective on the structural model. Some respondents have voiced a certain degree of workplace ostracism. The impact of ostracism, leadership practices, perceived organizational support, and culture in different facets of work life and well-being could explore new avenues in organizational behavior and medical psychology literature.

CONCLUSION

The medical fraternity was at the receiving end of the brunt of the COVID-19 in terms of the death toll, mental health issues, burnout, and post-traumatic stress disorder (PTSD). Literature has a plethora of articles on the generic impact of COVID-19 on life, education, and industry but ignores the impact of fear of COVID-19 on medical care providers. This article addresses the impact of psychological fear of COVID-19 in sundry facets of work life and the delivery of medical pedagogy in times of crisis and uncertainty. The pandemic has induced a negative spillover effect on the teachers' mental well-being, which needs critical attention from the management and health ministry. The study concludes with a positive spillover of job satisfaction in the association between QWL and commitment. The fear of COVID-19 had a negative inhibiting/ moderating effect on the positive influence of QWL on job satisfaction and commitment. Fair compensation policies, adequate training, infrastructure, understaffing, work flexibility, work-life balance, and appointment of HR managers and counselors are urgently needed. Critical care must be dedicated to increased staff participation in decision-making, competencies/ skill development programs, continuous knowledge development schemes, and reward and appraisal policies that could induce motivation, employee engagement, satisfaction, institutional commitment, and well-being in crises like the COVID-19 pandemic. Considering the fact that the Indian emergency medical system harbors a large number of staff, employee participation in decision-making could induce their aesthetic needs, creativity, independence, and innovation at work. These measures could enrich work-life experiences, commitment and reduce the fear of COVID-19 amidst difficult times.

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