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The relationship between empowerment and compassion satisfaction, compassion fatigue, and burnout in nurses during COVID-19 outbreak

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Abstract:

BACKGROUND: The quality of nurses' professional life is at stake in crises such as COVID-19. Empowerment helps employees perform better and advance the goals of the organization. This study aimed to investigate the relationship between empowerment and the quality of nurses' professional life during the outbreak of COVID-19.

MATERIALS AND METHODS: The current cross-sectional study was conducted in 2021 in the hospitals of Babol University of Medical Sciences with the participation of 200 nurses providing care for COVID-19 patients who were included in the study by convenience sampling method. Data collection tools included the Empowerment Questionnaire (Leader Empowerment Behaviors Scale, Structural Empowerment, and Psychological Empowerment) and the Professional Quality of Life Questionnaire. SPSS software version 23 was used to analyze the data. Multiple linear regressions were used to investigate the relationship between empowerment and quality of professional life.

RESULTS: In the majority of nurses, compassion satisfaction 140 (70%), burnout 172 (86%), and compassion fatigue 126 (63%) were at moderate level. A significant relationship was found between compassion satisfaction and Leader Empowerment ($R = 0.54, P = .001$), Psychological Empowerment ($R = 0.55, P = .001$), and Structural Empowerment ($R = 0.42, P = .001$) and Compassion Fatigue and Leader Empowerment ($R = 0.35, P = .001$), psychological empowerment ($R = 0.42, P = .001$), and structural empowerment ($R = 0.49, P = .001$).

CONCLUSION: Nursing managers' attention to empowerment strategies in crises such as COVID-19 can improve compassion satisfaction and reduce compassion fatigue in nurses. It is also necessary to implement policies and guidelines for the development of psychosocial support to health promotion of the workplace, education, informing, and empowering nurses.

Keywords:

Burnout, compassion fatigue, COVID-19, empowerment, nurses, satisfaction

Introduction

In November 2019, a new disease called the coronavirus (COVID-19) was reported and then spread in the city of Wuhan, the capital of Hubei province, China.^[1] The disease spread rapidly all over China and

other places and become a health emergency in the world.^[2] The outbreak of the corona virus in Iran was officially announced on February 18, 2020 and as a serious public health situation has been confirmed. In Iran, according to the official statistics of the Ministry of Health on March 26, 2020,

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the number of patients 137,724 was announced of which 7,451 had died and 107,713 had improved.^[3]

The COVID-19 pandemic has placed a heavy burden on the healthcare system, especially nurses.^[4] Many of these nurses and healthcare professionals fight not only the virus but also the humanitarian crisis with limited protective resources and put their lives on the line.^[5] Nurses around the world work under challenging conditions, including heavy, intense, and continuous work and unstable work environments, all of which affect their morale and reduce their ability to provide compassionate care.^[6] Limited resources, long shifts, disruption of sleep and work-life balance, and occupational hazards associated with exposure to COVID-19 have contributed to physical and mental fatigue, stress and anxiety, and burnout of medical personnel.^[7]

Compassion, which is recognized as a fundamental feature of the nursing profession, is an incentive to reduce the suffering of others. Compassion fatigue is expressed as an undesirable effect to help those who suffer from traumatic events or other cases.^[8] Compassion fatigue is seen among individuals who fall victim to secondary trauma stress while working, helping, or being willing to help victims of accidents.^[9] Compassion fatigue occurs when a person is unable to save someone from harm, which causes them to feel guilty and upset. Burnout, on the other hand, occurs when a person fails to achieve their goals, resulting in feelings of frustration, loss of control, increased imagination effort, and low mood. Compassion fatigue appears unexpectedly and progresses rapidly, as opposed to burnout, which manifests itself slowly.^[8] Compassion satisfaction is a positive aspect of helping others and is the satisfaction of helping others and performing actions in the best possible way.^[10]

Nurses today work in therapeutic environments that are changing rapidly. The pressure of such workplace changes requires nurses to benefit from the leadership with supportive and empowering characteristics. Empowerment is the use of power to create opportunities and conditions through which employees can gain power, be able to make decisions, use and enhance their abilities and skills, and increase their ability to manage care conditions.^[11]

Workplace empowerment has two aspects: structural empowerment and psychological empowerment. Structural empowerment occurs when individuals have access to "information, support, resources, and opportunities to learn and grow." Psychological empowerment is a process that occurs when employees are motivated in their workplace.^[12] Although several

studies have been conducted on leadership empowerment in nursing, few have been conducted on how leadership empowerment behaviors relate to the effectiveness of nurses' work. In the study by Zhang *et al.*^[13] (2018), the rate of burnout and compassion fatigue in nurses were reported to be 52.55% and 51.98%, respectively. In the study by Hansaker and Megan, low support of the nursing management was significantly associated with compassion fatigue and high burnout. High support of the nursing management was associated with high compassion satisfaction.^[14] In a study in Iran by Tirgari *et al.*,^[15] 77.5% of nurses had burnout, 53.8% had compassion fatigue at moderate level, and 96% of them had compassion satisfaction at moderate and high level. Other study has suggested a relationship between empowerment and burnout.^[16] The quality of providing medical services depends on the quality of life, commitment, and satisfaction of human resources. Therefore, higher commitment and better quality of professional life of employees lead to higher performance and better service.^[7]

Therefore, due to the specific and stressful working conditions of nurses during the COVID-19 outbreak^[17] and since very few studies have been conducted on the relationship between empowerment and compassion fatigue and burnout, in this study, we aimed to investigate the relationship between empowerment and compassion satisfaction, burnout, and compassion fatigue in nurses during the outbreak of COVID-19.

Materials and Methods

Study design and setting

The present cross-sectional study was conducted in 2021 in the hospitals of Babol University of Medical Sciences.

Study participants and sampling

Of 247 nurses working in inpatient wards of COVID-19, 200 nurses completed the questionnaires which were selected by convenience sampling method. Inclusion criteria include working full-time or part-time, having at least 1 year of nursing experience, and at least 6 months caring for patients with COVID-19 during the coronavirus outbreak. Exclusion criteria included unwillingness to participate in the study.

Data collection tools and technique

Data collection tools included the Empowerment Questionnaire (Leader Empowerment Behaviors Scale, Structural Empowerment, and Psychological Empowerment) and the Professional Quality of Life Questionnaire.

The empowerment questionnaire consisted of four sections as follows:

a. Demographic characteristics of the nurse, including age, sex, marital status, number of children, history of illness, work experience, and level of education.

b. Leadership Empowerment Behaviors Scale: The Leader Empowerment Behaviors Questionnaire was used to assess the nurse's understanding of leader empowerment behaviors. The questionnaire included 27 questions in five sections: creating meaning for work (six questions), encouraging employees to participate in decision-making (five questions), expressing high-performance confidence (six questions), facilitating the promotion of goals (five questions), and promoting independence from bureaucratic constraints (five questions) scored on a seven-point Likert score from 1 (strongly disagree) to 7 (strongly agree). The higher the score in this section means more empowering behaviors of the leader.^[18]

c. The Conditions for Work Effectiveness Questionnaire (II) was used to measure structural empowerment. This questionnaire comprises 19 questions in six subscales of opportunity (three questions), information (three questions), support (three questions), resources (three questions), formal power (three questions), and informal power (four questions) rated on a five-point Likert scale from 1 (none) to 5 (very high). A higher score indicates more structural empowerment.^[19]

d. Spritzer psychological empowerment scale was used to measure mental empowerment. This questionnaire includes 12 questions in four subscales of meaning, competence, self-regulation, and effectiveness. Each subscale consists of three questions scored on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). A high score indicates higher psychological empowerment.^[20]

Leader empowerment, structural, and psychological questionnaires were used in many researches. In a study in Iran by Morsal *et al.*,^[21] it was confirmed by experts and the reliability of these questionnaires was calculated through Cronbach's alpha test. Cronbach's alpha coefficient of leader, structural, and psychological empowerment questionnaire was equal to 0.91, 0.86, and 0.88, respectively, and the total Cronbach's alpha coefficient of these questionnaires was equal to 0.88. Also, in other studies, the reliability of leader empowerment questionnaires,^[18] structural empowerment,^[19] and psychological empowerment^[20] were reported as 0.97, 0.89, and 0.87, respectively.

To measure compassion satisfaction, burnout, and compassion fatigue, the Professional Quality of Life questionnaire was used. This questionnaire includes 30 items rated on a five-point Likert scale (1 = never

to 5 = most often). The questionnaire includes three concepts of compassion satisfaction, burnout, and compassion fatigue.^[5] Of 30 questions, 10 questions (3, 6, 12, 16, 18, 20, 22, 24, 27, and 30) are related to compassion satisfaction, 10 questions (1, 4, 8, 10, 15, 17, 19, 21, 26, and 29) are related to burnout, and 10 questions (2, 5, 7, 9, 11, 13, 14, 23, 25, and 28) are related to compassion fatigue. Questions 1, 4, 15, 17, and 29 are negatively scored. Regarding each of the three concepts, a total score of 22 or less implies low, 23 to 41 moderate levels, and 42 or more high levels of compassion satisfaction, burnout, or compassion fatigue.^[22] The tool is widely used and has reliability (0.87 for compassion satisfaction, 0.72 for job burnout, and 0.80 for compassion fatigue) and validity for all three concepts.^[5] Validity and reliability of the entire professional life quality questionnaire was confirmed in Yadollahi *et al.*'s^[23] study and its Cronbach's alpha was reported as 0.70. In the study of Vagharseyyedin *et al.*,^[24] Cronbach's alpha of compassion fatigue was reported as 0.73. In the study of Gerami Nejad *et al.*,^[25] the validity and reliability of the quality of professional life questionnaire was confirmed with an alpha coefficient of 0.75.

Statistical analysis of data was performed using SPSS software version 25 at a significance level of less than 0.05. Multiple linear regressions tests were used to investigate the relationship between empowerment and quality of professional life.

Ethical considerations

Data collection was done after obtaining informed consent and permission from the ethics committee with the code IR.MUBABOL.HRI.REC.1399.092.

Results

The age range of participants in this study was 23 to 57 years. Their mean age was 33.34 ± 7.32 years. Totally, 71% of the participants were female and 87.5% had a bachelor's degree [Table 1].

In this study, the majority of nurses had moderate compassion satisfaction, compassion fatigue, and burnout [Table 2].

The results showed that leader, psychological, and structural empowerment have a significant relationship with compassion satisfaction and compassion fatigue [Table 3].

Discussion

The aim of this study was to investigate the relationship between empowerment and compassion satisfaction, compassion fatigue, and burnout in nurses during

Table 1: The mean and standard deviation of empowerment, compassion satisfaction, compassion fatigue, and burnout according to demographic and clinical characteristics of nurses

Main Variables		n (%)	Leader empowerment	Structural empowerment	Psychological empowerment	Compassion satisfaction	Compassion fatigue	Burnout
Total Samples		200 (100)	42.95±8.92	61.38±12.23	112.94±35.84	32.90±7.87	26.72±8.25	27.96±5.67
Gender	Female	142 (71)	42.50±8.57	60.44±12.10	110.19±36.21	32.57±7.37	27±9.74	28.44±5.74
	Male	58 (29)	44.08±9.73	63.62±12.37	119.46±34.39	33.68±9.01	26.03±11.93	26.79±5.36
	P		0.26	0.11	0.10	0.36	0.54	0.06
Education	Bachelor	175 (87.5)	42.73±9.15	60.73±12.13	111.02±35.17	32.46±7.87	27.08±10.01	27.91±5.91
	Master	25 (12.5)	44.44±7.09	65.82±12.28	128.28±38.31	35.84±7.42	24.16±10.77	28.32±3.67
	P		0.37	0.06	0.03	0.04	0.18	0.73
Job Position	Rotating shifts	141 (70.5)	44.20±8.58	60.63±12.70	113.06±36.91	33.57±7.43	25.96±10.06	28.50±5.83
	Fixed shift	32 (16)	39.87±7.35	63.64±11.21	112.68±30.92	32.12±7.68	27.43±9.23	27.18±5.31
	Head nurse	16 (8)	42.37±10.63	65.20±9.17	113.56±40.03	30.18±8.67	30.75±12.80	26.18±5.30
	Supervisor	11 (5.5)	36.66±12.02	54.20±10.42	119.25±3.46	30/88±13.05	28.55±12.13	25.50±4.17
	P		0.01	0.27	0.71	0.35	0.44	0.28
Employment status	Unstable,	108 (54)	42.8±9.19	63.7±12.89	118.55±36.55	33.53±8.09	26.99±10.64	28.55±6.08
	Stable/permanent	92 (46)	43.17±8.57	57.9±10.31	105.45±33.65	32.00±7.51	26.33±9.68	27.12±4.94
	P		0.77	0.002	0.01	0.17	0.65	0.07
Marital status	Married	149 (74.5)	43.12±8.79	61.93±12	114.28±35.89	32.91±7.86	26.73±10.35	27.73±4.41
	Single	51 (25.5)	42.42±9.38	59.82±12.86	108.87±35.78	32.84±7.99	26.68±9.97	28.64±8.41
	P		0.65	0.31	0.37	0.95	0.97	0.33
Disease history	Yes	35 (17.5)	45.11±6.90	66.20±11.67	124.91±37.17	35.88±7.47	25.4±10.79	26.48±5.55
	No	165 (82.5)	42.48±9.25	60.22±12.12	110.22±35.09	32.26±7.83	10.12±27	28.28±5.66
	P		0.11	0.009	0.02	0.01	0.4	0.09
COVID-19 infection	Yes	74 (37)	40.93±9.56	60.19±13.28	110.20±37.51	30.83±8.64	28.63±12.13	29.25±3.93
	No	126 (63)	44.17±8.32	62.17±11.48	114.44±34.96	34.11±7.15	25.59±8.79	27.20±6.38
	P		0.01	0.28	0.43	0.004	0.04	0.01

Table 2: Levels of compassion satisfaction, compassion fatigue, and burnout among nurses

Levels Satisfaction variable	Low n (%)	Moderate n (%)	High n (%)
Compassion satisfaction	20 (10)	140 (70)	40 (20)
Compassion fatigue	19 (9.5)	126 (63)	55 (27.5)
burnout	27 (13.5)	172 (86)	1 (0.5)

the outbreak of COVID-19. The results showed that leader, psychological, and structural empowerment had a significant direct relationship with compassion satisfaction, an inverse relationship with compassion fatigue, and no significant relationship with burnout. In a study by Nursalam *et al.*^[26] 2017 in Indonesia, empowerment led to burnout reduction and job satisfaction. Employees’ motivation and independence lie in empowerment and thus can increase their satisfaction with the work environment.^[18] Lack of appreciation from the hospital or team may lead to negative feelings about tasks and demotivation toward achieving high success. As a result, nurses eventually feel fatigued and reduce the quality of work. This factor, along with multiple COVID-19 peaks, may account for the lack of relationship between empowerment and burnout in this study. In this regard, health managers are required to take into account the fact that increasing empowerment alone cannot reduce burnout, and it is necessary to study more seriously the causes of burnout in nurses in times of crisis.

Zhou *et al.*^[27] (2021) in Wuhan, China, emphasized that managing and empowering nurses and health workers for less burnout and more compassion satisfaction required interventions and adherence to health behaviors since health workers had lower health behaviors, more burnout, and less compassion satisfaction. Nayna Schwerdtle *et al.*^[28] (2020) likewise stated that healthcare leaders and policymakers in any country during the COVID-19 pandemic should take steps to reduce nursing burnout and compassion fatigue to empower and strengthen nurses. Structural empowerment has a direct effect on psychological empowerment.^[29] Considering strategic plans and appropriate solutions such as creating motivation in the workplace, participating in decision-making, setting regulations, and considering the system of material and nonmaterial rewards, respecting justice leads to improving the performance of medical personnel.^[7] Therefore, psychological empowerment can have an impact on increasing compassion satisfaction and reducing compassion fatigue and burnout.

In this study, leader empowerment was also associated with increased compassion satisfaction and reduced burnout. In this regard, no similar study was found to compare the findings; however, in the study of Sohrabi *et al.*,^[30] increasing the quality of professional life of medical personnel was emphasized as an important factor in ensuring the sustainability of the healthcare

Table 3: Association between empowerment and quality of professional life (compassion satisfaction variables, compassion fatigue, and burnout in nurses): Multiple Linear Regressions

Empowerment Quality of Life	Leader empowerment			Structural empowerment			Psychological empowerment		
	β^*	<i>P</i>	95% CI **	β	<i>P</i>	95% CI	β	<i>P</i>	95% CI
Satisfaction Compassion (Model 1)	0.11	<0.001	0.08 to 0.14	0.32	<0.001	0.24 to 0.41	0.45	<0.001	0.34 to 0.57
Fatigue Compassion (Model 2)	-0.06	0.002	-0.10 to -0.02	-0.28	0.001	-0.34 to -0.09	-0.28	0.001	-0.45 to -0.11
Burnout (Model 3)	-0.01	0.804	-0.10 to 0.08	0.04	0.265	-0.03 to 0.11	0.00	0.458	-0.01 to 0.03

Model 1: Adjusted Factors: age, sex, Education, Job Position, Employment status, Disease history, COVID-19 infection. Model 2: Adjusted Factors: age, sex, Education, Job Position, COVID-19 infection. Model 3: Adjusted Factors: age, sex, Job Position, Disease history, COVID-19 infection. **CI: Confidence interval
* β : Beta coefficient

system and capable managers should pay attention to the quality of professional life of personnel and their job satisfaction. The direct relationship between leader empowerment and psychological empowerment may justify the relationship between leader empowerment and increased satisfaction and reduced compassion fatigue.

In this study, only 20% of nurses had high compassion satisfaction, while the majority of them had moderate levels of compassion fatigue, burnout, and compassion satisfaction. Similar to our study, the results of Orrù *et al.*'s study (2021) showed that the majority of trauma nurses had moderate levels of burnout and compassion satisfaction.^[31] As in other studies in critical situations, in the study by Ruiz á Fernández *et al.*^[6] (2020) conducted in Spain with the participation of nurses and physicians, moderate to high levels of compassion fatigue and burnout were observed and levels of compassion satisfaction were higher, especially in nurses. The difference in the percentage of high levels of these variables in these two studies may be due to the participation of physicians along with the nurses in this study. In the study by Zhou *et al.*^[27] (2021), none of the health workers experienced high level of burnout and the majority of them had low level of burnout. Regarding compassion satisfaction, half of the health workers experienced compassion satisfaction at a moderate level and the other half at a high level, so that the staff situation was better than our study. This may be due to the increased workload of Iranian nurses or several coronavirus peaks in Iran, which has resulted in more secondary traumatic stress.

According to the results of this study, psychological empowerment and compassion satisfaction were related to the nurses' level of education, so that in nurses with higher education, satisfaction and empowerment were higher. In a study by Ouyang *et al.*^[32] (2015) in China, nurses' psychological empowerment and job satisfaction were related to their age and work experience yet not to their level of education. The study by Kawar *et al.*^[33] (2019) indicated that compassion fatigue was higher in newly graduated and undergraduate nurses and, if ignored, nurses' health and quality of care may be threatened. Also, fatigue caused by fear, insecurity, and uncertainty caused by the COVID-19 pandemic can

affect the performance of nurses and their relationships.^[7] Therefore, nurses' leaders and managers can use this basic evidence for proper planning at different levels of nursing and in inexperienced nurses to deal with compassion fatigue and reduce nurses' health disorders.

The results of the present study showed that leader empowerment was associated with work shifts and workplace responsibilities; however, compassion satisfaction, compassion fatigue, and burnout were not associated with work shifts. The study by Ruiz-Fernández *et al.*^[6] (2020) similarly showed that compassion satisfaction, compassion fatigue, and burnout were not related to work shifts. However, Kawar *et al.*^[33] (2019) showed that experienced and night shift nurses had more compassion satisfaction. According to a study by Al-Majid *et al.*^[34] (2018), responsible nurses experienced more burnout and compassion fatigue. Accepting responsibilities by nurses cause them to endure more stress and be more prone to burnout; therefore, policies and guidelines should be established to develop preventive interventions and psychosocial support for nurses to health promotion of the workplace, education, inform, and empower them.

Our study showed that structural and psychological empowerment has a significant relationship with nurses' employment status. In the study by Li *et al.*^[29] (2013), both psychological and structural empowerment had a positive relationship with the job satisfaction of nurses in long-term care facilities and structural empowerment had a mediating effect on job satisfaction. However, the results of other studies in Spain and Australia showed that compassion satisfaction, compassion fatigue, and burnout were not statistically different in full-time or part-time nurses.^[6,35] This may be due to differences between Iran's and these countries' economic, social, and cultural situations.

The results of our study showed that structural and psychological empowerment and compassion satisfaction had a significant relationship with the underlying disease in nurses. According to a study by Wu *et al.*^[36] (2016), nurses with a history of a headache were at higher risk for burnout, compassion satisfaction, and secondary traumatic stress. Certainly, the presence

of disease reduces a person's ability to withstand work stress and negatively affects reducing their satisfaction.

According to our study, structural empowerment, compassion satisfaction, compassion fatigue, and burnout have a significant relationship with the history of nurses with COVID-19. Ustun (2021), in a review entitled 'The effect of COVID-19 on nurses' mental health,' stated that nurses experience higher levels of burnout, compassion fatigue, and primary and secondary traumatic stress due to hard work, work in different shifts, inadequate staff, constant contact with patients and their relatives, and showing strong empathy.^[37] In another study, burnout and secondary traumatic stress were significantly higher in health workers working in the COVID wards than in other wards.^[31] Therefore, the focus on supporting nurses during and after the COVID-19 pandemic is of great importance for the future of nursing and community safety.

One of the strengths of our study is its comprehensiveness. No study was found that simultaneously examined the types of empowerment, compassion satisfaction, compassion fatigue, and burnout in nurses. This study had limitations, one of which was not discussing the details of the data due to the large amount of data. Also, the high workload of nurses during the outbreak of COVID-19 caused a delay in completing the questionnaires.

Conclusions

This study showed that leader, psychological, and structural empowerment was significantly associated with compassion satisfaction and compassion fatigue; however, there was no statistically significant relationship between these variables and burnout. It is suggested that health managers need to focus on leadership, psychological, and structural empowerment strategies in nurses and examine staff burnout more seriously to increase compassion satisfaction and reduce compassion fatigue. It is also necessary to implement policies and guidelines to develop preventive interventions and psychosocial support to health promotion of the workplace, education, inform, and empower nurses. In the end, for a more detailed examination of empowerment and improving the quality of professional life of nurses, qualitative research or quantitative research with more samples is suggested.

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Conflicts of interest

There are no conflicts of interest.

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