Professional Quality of Life: Frontline and Non-frontline Workers of Sukraraj Tropical and Infections Disease Hospital

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ABSTRACT

During the coronavirus pandemic health care workers are one of the most at risk of infection and work-related stress, which can have negative impact on their professional quality of life. A cross-sectional study was conducted at Sukraraj Tropical and Infections Disease Hospital where professional quality of life was examined among 89 healthcare providers. This study showed high level of compassion satisfaction, low level of burnout, moderate level of secondary traumatic stress. When using Mann-Whitney U-test, significant difference between frontline (Median=20) and non-frontline (Median=17) workers regarding burnout ($p < 0.05$) was observed, no significant difference was observed among frontline (Median=43) and non-frontline (Median=47) workers regarding compassion satisfaction, and secondary traumatic stress frontline workers (Median=26) and non-frontline workers (Median=23). This study showed that the frontline workers and non-frontline workers were dealing well with the pandemic situation. However, as the pandemic continues further with increasing cases, increase in burnout and secondary stress, along with decrease in compassion satisfaction is probable. As such, timely preventive psychological intervention would be beneficial for overall professional quality of life of healthcare workers.

Keywords: Frontline workers, Non-frontline workers, Compassion Fatigue, Compassion Satisfaction, Burnout, COVID, Secondary Traumatic Stress

Introduction

The feelings of an individual working as a helper feel is known as professional quality of life (PQL). It might be positive as well as negative emotions and consist of compassion fatigue (CF), compassion satisfaction (CS) and burnout (BO) (Stamm, 2002). The sense of fulfillment of pleasure and satisfaction an individual gets from their work which drives him/her to perform the duties smoothly when taking care of patients at trauma or critically ill is compassion satisfaction (Hinder et.al, 2014). The mental and physical exhaustion and emotional pull-out experienced by person taking care of sick or

traumatized people is compassion fatigue (Mathieu, 2007). CF consist of two different part burnout which is characterized as exhaustion, frustration, anger, depression and secondary traumatic stress (STS), which is fear and work related traumatic negative feeling (Stamm, 2019).

The first case of Coronavirus Disease 2019 (COVID-19) was reported to WHO on December 31, 2019 which was declared by WHO as pandemic on Mach 11, 2020 (Cennimo et al., 2020). A lot of impact was observed on professional life of health care workers during pandemic such as psychological disturbances which is directly related to increase of CF and decrease of CS (WHO, 2020; Hinder et al., 2014; Upton, 2018). Cases of suicide by medical care providers while serving large number of COVID-19 cases at hospital in USA, China, United Kingdom and Italy is taken as alarming signs (Thakur & Jainb, 2020).

Similar study was found in 1918-19 influenza pandemic where an increase in number of suicide deaths was observed by people in USA than that of World War I (Wassermann, 1992). Moreover, increase in number of suicide cases was observed in Nepal after the declaration of lockdown ("Suicide cases on the rise, mental health expert warns of grim situation", 2020). Further, such emergency situation increases work load in health care workers along with increasing distress (Amanda, et al., 2010; Khalid et al., 2016). Past studies conclude when providing acute medical care, nursing the sick and dying person is physically as well as emotionally demanding and can cause care providers vulnerable to CF which can further cause change in compassionate care ability of care provider (Upton, 2018). Symptoms of secondary trauma stress such as irritability, inability to concentrate, anger, sleep disturbances, disturbances in sleep were observed in ICU nurse with higher level of CF (Hinderer et al., 2014). The significant rise in cases of different psychological disturbances such as anxiety, depression, panic disorders, emotional imbalance, economic shutdown, financial and future insecurities, fear of getting infected were seen with rise of case (Thakur & Janib, 2020). Thus, for proper assessment and management of frontline workers to provide necessary psychological and psychosocial help for needed one it is necessary for timely identification and it holds high value of importance to study the professional quality of life of staff working as frontline and non-frontline workers at STIDH.

The general objective of the study was to study Professional Quality of Healthcare Workers (HCWs) at Sukraraj Tropical and Infectious Disease Hospital (STIDH) working during Covid-19 pandemic. The specific objectives of the study were to analyze and compare level of Compassion Satisfaction (CS), Burnout (BO) and Secondary Trauma Stress (STS) among frontline and non-frontline HCWs of STIDH working during COVID-19 pandemic.

Method

This study was conducted using cross-sectional research design in which permanent staffs working as frontline and non -frontline was surveyed by using purposive sampling techniques. Among the 169 permanent staffs, 120 were approached, only 90 respondents responded to the survey and one out of them didn't complete the survey. Therefore, data from 89 respondents was used for study out of them 51 were working as frontline and 38 non-frontline workers. Descriptive analysis and Mann-Whitney U test was performed for data analysis.

The study was conducted using professional quality of life scale version 5 (ProQOL-5) tools. Its tool consists of 30 statements, ten each for the three scales: CS, BO, and STS where respondents had to respond to the statements using 5-pomt Likert type scale. ProQOL-5 has good construct validity (Stamm, 2010) and good reliability for CS (α= 0.88), BO (α= 0.75) (Stamm, 2010) and STS (α= 0.81) (Adhikari, 2017).

The data was collected after obtaining ethical consideration from Nepal Health Research Council (NHRC), Janamaitri Multiple Campus and STIDH only after written consent from the respondent was taken where respondents were free to withdraw any time from the study.

Result

The sociodemographic distribution of the respondents shows that 57.3 percent were frontline workers, 74.16 percent were females, 84.27 percent were married and 52.81 percent had more than 5 years of service experience in STIDH. Mean age, in years, of the respondents was 39. 02 (SD= 10.47), and mean years of service was 8.12 years (SD= 7.39).

Descriptive statistics (Mean and standard deviation) for study variables have been presented in Table 2.

Table 2: Mean and Standard Deviation for Study Variables: CS, BO and STS

	Frontline workers		Non-frontline workers		Total participants	
Variables	M	SD	M	SD	M	SD
CS	42.65	6.50	44.76	5.56	43.55	6.18
BO	20.76	5.48	18.11	4.51	19.63	5.23
STS	25.98	7.11	23.11	6.43	24.75	6.94

Note: N=99 (Number of frontline workers= 51, Number of non-frontline workers= 38, CS= Compassion Satisfaction; BO= Burnout; STS= Secondary Trauma Stress.

Mean score of all respondents for CS was 43.55 (SD= 6.18), which indicates high level of compassion satisfaction, for BO was 19.63 (SD= 5.23), which indicates low level of burnout, and for STS was 24.75 (SD= 6.94), which indicated moderate level of secondary

trauma stress. Comparing frontline and non-frontline workers, frontline workers, both scored at high level of CS, low level of BO, moderate level of STS. Higher percentage of respondents (67.42%) scored at high level of CS. On the contrary, high percentage of respondents scored at low level of BO (73.03%) and high percentage of respondents scored at moderate level of STS (62.92%). No respondent scored at high level of BO. In case of both frontline and non-frontline workers, high percentage of respondents scored at high level of CS, low level of BO, and moderate level of STS.

Mean score of study variables showed non-normal distribution. Therefore, to compare the study variables between frontline and non-frontline workers, Mann-Whitney U-test was used, the results for which have been presented in Table 4

Table 4: Mann-Whitney U-test for Study Variables between Frontline and Non-Frontline Workers

	Frontline workers		Non-frontline workers					
Variable	Median	n	Median	N	U	Z	P	r
CS	43	51	47	38	773	-1.63	0.103	-0.17
BO	20	51	17	38	670.5	-2.48	0.013*	-0.26
STS	26	51	23	38	743.5	-1.87	0.061	-0.19

*Note: N= 89; CS= Compassion Satisfaction; BO= Burnout; STS= Secondary Trauma Stress; *p< 0.05.*

Mann-Whitney U-test showed that there was significant difference between frontline and non-frontline workers regarding BO, and no significant difference was observed regarding CS, and STS. Frontline workers (Median= 20, n= 51) had significantly higher BO score compared to non-frontline workers (Median= 17, n= 38), U= 670.5, z= -2.48, p< 0.05, r= -0.26.

Discussion and Conclusion

The professional quality of life related to COVID-19 was assessed in healthcare workers of STIDH, Teku working during the period of pandemic. The mean and standard deviation of the components of ProQOL indicated low level of burnout, moderate level of STS and higher level of CS in total sample collected. When compared between frontline and non-frontline HCWs, significant differences emerged with regard to BO, whereas there was no significant difference observed in CS and STS. Similar finding was found in previous study done using ProQOL-5 tool. Studies by Buselli et al., (2020) and Zhou et al., (2020) reported low level of BO in health care workers. However, in the study conducted in USA by Cantu and Thomos (2020) showed moderate level of BO and in study by Franza et al., (2020) low to moderate level of BO was found among different groups of health care workers. Moderate level of STS was reported by Zhou et al., (2020) and Cantu and Thomas (2020). However, Buselli et al. (2020) reported

low level of STS and Franza et al reported low to moderate level of STS. In case of CS studies reported overall moderate level of CS (Buselli et al., 2020; Cantu & Thomas, 2020; Franza et al., 2020; Zhou et al., 2020) which is contrary to our study.

Further, our study finding was alike previous studies on medical professional which was performed using ProQOL-5 during non-pandemic period. Al Barmawi et al., (2019) and Mckinely et al., (2020) reported moderate level of STS. Moreover Adhikari (2020) and Shepherd (2020) reported low level of BO. However, some studies reported moderate level of BO (AL Barmawi et al., 2019; McKinely et al., 2020; Shepherd, 2019).

Adhikari (2020) reported that the numbers of years of experience had significantly negative affect of BO and STS, and has positive affect on CS. The mean years of experience in this study was 8.12 where SD was 7.39 years. Along with that level of maturity in regards to age and marital status (Adhikari, 2020) and work experience (Sprang et al., 2007) has been related to lowered vulnerability of BO and STS, and higher CS (Adhikari, 2020). In our study mean age of respondents was 39.02 years i.e., 10.47 in SD and 84.26?5 of them were married. When there is increase in CS, the negative factors in ProQOL decreases (Bercier & Maynard, 2015, as cited in Adhikari, 2020). Therefore, BO and STS might have been balanced by CS (Adhikari, 2020; Busselli et al., 2020) in the current study as only 1.1% of the participants had low level of CS and more than half of the participants (67.4%) had high level of CS. The sense of gratification and sense of personal success in treating patients with COVID-19 (Buselli et al., 2020) is the positive impact of serving the patients (Adhiakri, 2020) which might be reason to balance the negative effects like BO and STS in our study.

In a study conducted by Luo et al., (2020) it was found that having sufficient medical resources, taking adequate precautionary measures and having timely and accurate information have been found as protective factors against negative psychological impacts during COVID-19 pandemic. This might also explain low level of negative aspects of ProQOL in the current study. STIDH is one of the focal and dedicated hospitals of Nepal during the COVID-19 pandemic and so has been handling cases form the very beginning and since the first case in Nepal. Moreover, the health care workers at STIDH received proper safety and protective equipment, they were trained with skills needed to use it and provided with accurate and timely information about handling crisis situation. Also, being the only and specialized infectious hospital of the country the staffs their experience of handing infectious disease from the past like HIV, SARS, rabies etc. As half of the participants had more than 5 years of service experience in STIDH, these factors can be the reason that helped the staff to reduce the negative impacts like BO and STS.

In this current study, when the levels of CS, BO and STS of frontline and non-frontline workers was compared, frontline workers showed significantly higher level of BO (Median:20, n=51) than non-frontline worker (Median:17, n=38), U=670.5, z=-2.43,

p=.013, r=-0.26 whereas, there was no significant difference for CS and STS. Ruiz-Fernandez et al. (2020) reported similar finding for BO in which earlier version of ProQOL was used for the study. Mckinley et al. (2020) found significantly higher burnout than other specialty groups when compared between different specialties of doctors, those working in emergency medicine. Physicians working in the frontline care were found significantly more burned out than other specialties (Shanafelt et al., 2020). The other factors like work pressure, number of patients, time constraints, understaffing, being the first to respond in emergency department are probable reasons for BO (McKinely et al., 2020).

The finding of the current study contradicts findings from Buselli et al. (2020) and Adhikari (2020). Buselli et al. (2020), using ProQOL-5, found higher level of CS among frontline workers than that of non-frontline workers working during COVID-19 as healthcare providers and no significant difference was reported in BO and STS. Similarly, no significant difference in all subscales of ProQOL-5 was reported by trauma care providers working with earthquake survivors and other trauma group by Adhikari (2020).

The pressures of working higher number of patients, patients with COVID-19 patient being the high-risk situation for contacting infection for frontline workers might be possible reason for significantly higher level of BO in frontline workers than those working in non-COVID unit (McKinely et al., 2020). On the other hand, frontline workers had to follow strict and rigorous safety measures under high work pressure environment, like working in PPE for longer hours, decreased family time and interaction even after getting home for avoiding possible transmission of infection to family might have contributed for higher BO in frontline workers.

The current study shows low level of burnout and moderate level of STS among healthcare workers at STIDH which needs to be soon addressed. When the data was collected the rate of COVID-19 was rapidly increasing which adds more pressure directly to healthcare workers working in during the pandemic. Compassion fatigue when not addressed timely can result in physical and emotional exhaustion which affect job performance, increase staff turnover and absenteeism (Sheppard, 2014). Therefore, it is recommended to conduct psychological intervention at both individual and organizational level for STIDH. Programs such as yoga, mindfulness, mediation, music therapy can increase CS and decrease CF at individual level (Wlodarczyk, 2013; Duchemin et al, 2015; Horner, Piercy, Eure, & Woodard, 2014). Along with that support from peers and peers and supervisors can be helpful to decrease the effects of professional burnout at organizational level (Lakey & Cohen, 2000; Ray & Miller, 1984; Whittaker, 1983: Winnubrust, 1993). Health care workers working under pandemic situation of COVID-19 are vulnerable to exposure of infection, concern about contracting the virus themselves and exposing to family members which can lead to unwillingness to

seek help from friends and family, this reduce the capacity to be compassionate in the workplace (Wallace, Wladkowski, Gibson, & White, 2020). Therefore, activities that promote better coping strategies, including social support system and management of healthier and supportive work environment (AL Barmawi et al., 2019) are recommended for management and administrative team of STIDH.

Limitation of Study:

The finding from the study is especially applicable for STIDH and doesn't reflect professional quality of life of HCWs at other hospital so it lacks generalization. Data about BO, CS, and STS before pandemic was not available, so to exactly determine how much the impact on these variables is due to COVID-19 is not possible.

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