ORIGINAL ARTICLE

Coping Strategies and Job Satisfaction among Rehabilitation Medical and Paramedical Staff in a COVID-19 Referral Center: A Cross-sectional Study

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ABSTRACT

Objectives. The objective of this study was to determine the coping strategies and job satisfaction among rehabilitation medical and paramedical staff deployed to different areas at the University of the Philippines Manila-Philippine General Hospital, a designated COVID-19 referral center.

Method. This was a cross-sectional study that utilized total population sampling of the medical and paramedical staff of the Department of Rehabilitation Medicine deployed to other areas in PGH and who carried out non-rehabilitation-related clinical work responsibilities during the COVID-19 pandemic. Electronic informed consent was obtained from each participant. Two sets of validated and reliable self-administered online questionnaires, namely, the Brief Coping Orientation to Problems Experienced (COPE) Inventory Tool and Satisfaction of Employee in Health Care (SEHC) Survey, were used to determine coping strategies and work satisfaction, respectively. Descriptive statistics (such as frequencies, percentages, ranges, means) were used to present the data.

Results. A total of 50 medical and paramedical staff participated in the study. The participants' age ranged from 22 to 60 years (mean: 30.2 ± 8.7). The majority were single (84%), women (64%), and with a Bachelor of Science degree. Most of the participants were assigned in the orange zone, which included the COVID ward nurses' station and donning/doffing areas; with 30% who rotated in the COVID wards. There were three types of coping strategies utilized by the department staff: (1) emotion-focused coping, (2) problem-focused coping, and (3) dysfunctional coping. Problem-focused coping was the most common general strategy (mean COPE score for all problem-focused strategies, 3.1 ± 0.9). Acceptance was the most common specific coping strategy, followed by active coping and a tie among positive reframing, planning, and self-distraction. The work satisfaction rate was at 76.9% ± 13.2. Three out of 4 participants would recommend their workplace to other healthcare workers.

Conclusion. The medical and paramedical staff of the Department of Rehabilitation Medicine in a COVID referral center had relatively high job satisfaction despite their health risks and changes in responsibilities among others. The majority utilized functional coping strategies to help them adapt to the work demands. The sources of motivation and values of the staff are areas for future research to help explain their positive outlook about their jobs and generally high recommendation about their workplace in the middle of the COVID-19 crisis.

Key Words: coping, job satisfaction, health personnel, rehabilitation medicine, Philippines

INTRODUCTION

Since early January of 2020, the World Health Organization (WHO) has been working to respond to the coronavirus disease 2019 (COVID-19) outbreak that started in Wuhan, China.[1] This outbreak, caused by a new strain of coronavirus (SARS-CoV-2), was characterized as a pandemic on March 11, 2020, leaving many countries unprepared for this unprecedented situation.

In the Philippines, the Department of Health (DOH) announced its first case of COVID-19 on January 30, 2020,[2]

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and the first case of local transmission was confirmed on March 7, 2020.[3] Tertiary healthcare facilities in Metro Manila were overwhelmed with the exponential rise of patients seeking consultations and subsequent admissions, which pushed several hospitals to their limits of admitting capacity and healthcare resources, including personal protective equipment (PPE). Inadvertently, healthcare providers in the front lines got infected with COVID-19 resulting in a spectrum of clinical presentation, from asymptomatic infection to severe illness and even death. Furthermore, they were also exposed to undue emotional stress with which they were expected to cope and adjust in a short amount of time to keep up with the increasing demand for healthcare services.[4]

In response to the growing need for dedicated hospitals to address and contain COVID cases, the Philippine government designated three hospitals in the National Capital Region as COVID referral centers, including Philippine General Hospital (PGH) in the University of the Philippines Manila, which is the national university training hospital in the country. On March 30, 2020, PGH officially started its operations as a 130-bed capacity COVID-19 referral center. Various healthcare efforts, manpower, and resources were rechanneled to COVID cases, non-essential services, including face-to-face rehabilitation medicine consultation and therapy, were suspended. The patients previously admitted in the Rehabilitation Medicine ward were discharged to give way to patients with COVID-related concerns. The rehabilitation workforce of the department, composed of Rehabilitation Medicine residents, physical therapists, occupational therapists, speech-language therapists, psychologists, prosthetist-orthotists, rehabilitation nurses, and utility workers, were reassigned to other wards in the hospital and assumed non-rehabilitation tasks. Paramedical staff (i.e., therapists) were trained as safety officers in the COVID zones ensuring proper donning and doffing steps. They were assigned to work in 8-hour shifts either in the morning (6 am–2 pm), afternoon (2 pm–10 pm), or evening (10 pm–6 pm) to augment the hospital manpower for 24 hours. While some Rehabilitation Medicine residents manned the COVID wards, the others continued to respond to rehabilitation-related concerns or referrals.

Healthcare workers in a COVID referral center are especially exposed to a variety of health and safety risks. Hazards at work can come in various forms related to physical, cognitive, emotional, and psychological concerns.[5] Such unprecedented pressure may put a psychological strain on the hospital's manpower resources and threaten their work commitment.

For every workplace, the organization should ensure the well-being of its employees. The individual's well-being is crucial as it can indirectly reveal one's adaptability, engagement, and capacity to perform at work.[6] With the different work responsibilities given to the medical and paramedical staff of the Department of Rehabilitation Medicine (DRM) working unexpectedly in a new setup, the need to understand their current coping strategies will be an important initiative to determine the sustainability and prevent or address potential strains. To the authors' knowledge, there has been no study that explored the coping strategies and work satisfaction among rehabilitation providers working in a COVID-19 referral center during the pandemic.

METHODS

Study Design

The study employed a cross-sectional research design.

Study Population

The study participants satisfied all of the following inclusion criteria:

a. Medical or paramedical staff of the DRM in PGH working during the COVID-19 pandemic: Rehabilitation Medicine resident, physical therapist, occupational therapist, speech-language therapist, psychologist, prosthetist-orthotist, rehabilitation nurse and nursing aides
b. Deployed to a different area in the hospital, such as emergency room triage (i.e., as a front-liner), COVID zone, or non-COVID zones
c. Assigned to an 8-hour shift
d. With electronic or written informed consent to participate in the study
e. With a working telecommunication device, such as smartphone, tablet, or computer with internet access to accomplish an online survey
f. With a personal e-mail address

The exclusion criteria in this study included any of the following:

a. Non-medical or non-paramedical staff of the DRM in PGH: administration officers, administration aides, and utility workers
b. Medical or paramedical staff of the DRM in PGH not deployed in new areas or assignments
c. No informed consent
d. No telecommunication device
5. No access to the internet
6. No personal email address
7. Assigned to a 24-hour shift

The withdrawal criteria included any of the following:

a. Decision of the participant not to proceed in or discontinue answering the survey
b. Any medical or psychological problem related or unrelated to the study until completion and submission of the online questionnaire

Study Setting and Period

The study setting was in the PGH of the University of the Philippines Manila. The entire study ran for 9 months

starting from ethical approval in August 2020 to completion and submission of the manuscript in April 2021. Data collection took place within one month while PGH was a COVID-19 referral center and the rehabilitation workforce was assigned to other non-rehabilitation services.

Study Procedure

Data collection commenced after approval from the institutional review board of the study hospital. The principal investigator identified the medical and paramedical staff who were reassigned to do non-rehabilitation duties in any area in the hospital during the pandemic and sent an invitation to participate in the study through text message and personal institutional e-mail address. Each eligible participant was emailed the electronic PDF copy of the study's Informed Consent Form (ICF), which contained the study objectives, procedure, benefits, risks, and limitations. Each personnel who agreed to participate either affixed their e-signature on the ICF or signed on a print-out and submitted the accomplished form to the principal investigator through a designated institutional e-mail address or in person in the office of the DRM.

Once the ICF was submitted, the participant was e-mailed the link to the online survey, which was available on GoogleSurvey™. The survey was accomplished in less than 10 minutes. To ensure that there was no missing response or unanswered item, the online survey had set all important items as required fields, which allowed each participant to submit the accomplished survey only when all items had been answered.

Data Collection Tools

The data collection form contained three parts, namely, (1) demographic profile, (2) questionnaire on coping, and (3) questionnaire on job satisfaction.

Part 1 (demographic profile) asked for the following information: age, birthdate, sex, civil status, educational level, work or profession (Rehabilitation Medicine resident physician, physical therapist, occupational therapist, speech-language therapist, psychologist, prosthetist-orthotist, rehabilitation nurse, or nursing aide), the number of years working in the department, COVID zone assignment, work shift, and the number of completed 7-day duties so far.

Part 2 (questionnaire on coping) adopted the 28-item self-report validated and reliable Brief Coping Orientation to Problems Experienced (COPE) questionnaire developed by Charles Carver.[7] The Brief COPE questionnaire determined which specific strategies were being strongly employed by an individual to adjust amid a particular, often difficult, situation (particularly about the COVID-19 pandemic). This frequently used instrument measured 14 coping factors of 2 items each.[7] Each item was answerable by a Likert scale ranging from 1 ("I haven't been doing this at all.") to 4 ("I've been doing this a lot."). There was no overall summative score for the questionnaire.

Lastly, part 3 (questionnaire on job satisfaction particularly during the COVID-19 pandemic) adopted the 20-item self-report Satisfaction of Employees in Health Care (SEHC) survey, which had adequate reliability and validity to assess satisfaction among multidisciplinary staff.[8,9] Created by Rachel Alpern et al.,[8] the first 19 items of the the questionnaire are answerable by a 4-point Likert scale (item numbers 1–18: 1 in strong disagreement and 4 in strong agreement; and item number 19: 1 as no and 4 as definitely yes) and its last item answerable by an ordinal scale ranging from 1 as worst to 10 as best. The first 18 items were rescaled by multiplying each response by a factor of 25 to yield a sub-score ranging from 0 to 100 per item.[8] Each participant had a total SEHC score corresponding to the average of the rescaled sub-scores from the first 18 items. Meanwhile, the last two items of the questionnaire measured the global work satisfaction of the medical and paramedical staff. Item number 19 asked whether the staff would recommend the healthcare facility to other workers, while item number 20 asked the staff to rate the healthcare facility as a place to work in. For all 20 items, higher scores corresponded to greater satisfaction.

To the knowledge of the authors, the adopted questionnaires had neither been used previously in the local setting nor translated in Filipino, hence, a pre-test was performed on 6 medical residents and 6 paramedical staff of the department for a total of 12 pre-test participants, as recommended by Ruel et al.[10] The pre-test participants were selected based on convenience sampling and requested to review and give feedback on the content and format of the questionnaires. Those who had answered the pre-test were still eligible to participate in the actual study and had to re-answer the survey but using the final version of the questionnaire.

Sample Size and Sampling Method

During data collection, 57 medical and paramedical staff of the DRM were reassigned to perform non-rehabilitation roles, including 12 Rehabilitation Medicine resident physicians, 19 physical therapists, 10 occupational therapists, 1 psychologist, 3 prosthetist-orthotists, and 12 rehabilitation nurses and aides. No speech-language pathologist was reassigned a non-rehabilitation role. Total population sampling was employed to include all eligible study participants.

Treatment of Data

Descriptive statistics in the form of frequencies, percentages, means, standard deviations, and ranges were used to present all data, where applicable. All demographic variables were presented in frequencies and percentages, except for the following variables presented in means and standard deviations: age, number of years working in the department, and number of completed 7-day duties. For the Brief COPE questionnaire, items were grouped

according to the 14 coping strategies. Each item was presented in means and standard deviations. Each coping strategy had a score corresponding to the average of the scores from two items. For the SEHC survey, means and standard deviations were used to summarize the total SEHC score (corresponding to the first 18 items), recommendation of the healthcare facility to other workers (corresponding to item number 19), and rating of the healthcare facility as a place to work (item number 20).

RESULTS

A total of 50 out of 57 participants (response rate: 87.7%) answered the online survey. The majority were physical therapists (36%) and Rehabilitation Medicine resident physicians (24%) (Table 1). The mean age of study participants was 30.2 ± 8.7 years. The majority were single (84%), women (64%), and had at least obtained a Bachelor of Science degree. In terms of employment duration, majority had at least 1–4 years of experience working with the DRM at PGH.

More than 70% of the participants were assigned to the orange zone. The orange zone included the COVID ward nurses' station and donning and doffing areas. Meanwhile, almost 60% of the participants were also assigned in the green zone (i.e., non-COVID area) and nearly 30% were deployed in the red COVID zone. The study participants were deployed to several zones in their 7-day duty. The majority of the participants reported for the morning and afternoon shifts. The participants had completed 7-day duties for an average of nearly seven weeks before the study.

The coping strategies employed by the participants were categorized into three general types: (1) emotion-focused coping, (2) problem-focused coping, and (3) dysfunctional coping (Table 2). The problem-focused coping was the most common general strategy (mean COPE score for all problem-focused strategies, 3.1 ± 0.9). Among the specific problem-focused coping strategies, active coping (3.3 ± 0.8) was most commonly used. Among the emotion-focused coping strategies, acceptance (3.6 ± 0.6) and positive reframing (3.2 ± 0.9) were the most common. The dysfunctional coping strategies were the least commonly used among the three general types of coping strategies. Among them, self-

Table 1. Demographic profile of participants (N = 50)

Demographic Characteristics	n (%)*
Age, years	
Mean (SD)	30.2 (8.7)
Range	22–60
Sex	
Male	18 (36.0)
Female	32 (64.0)
Civil status	
Single	42 (84.0)
Married	8 (16.0)
Highest educational level	
Bachelor of Science (BS)	31 (62.0)
Post-graduate degree [e.g., Doctor of Medicine (MD)]	17 (34.0)
Post-doctorate degree [e.g., Doctor of Philosophy (PhD)]	1 (2.0)
Others: Midwifery	1 (2.0)
Work or Profession	
Rehabilitation Medicine resident physician	12 (24.0)
Physical therapist	18 (36.0)
Occupational therapist	9 (18.0)
Prosthetist-orthotist	3 (6.0)
Rehabilitation nurse and nurse aide	8 (16.0)
Number of years working in the DRM, PGH	
<1 year	9 (18.0)
1–4 years	27 (54.0)
5-8 years	5 (10.0)
>8 years	9 (18.0)
Hospital zone assignment/s	
Red	14 (27.5)
Orange	36 (70.6)
Green	28 (56.0)
Usual work shift	
Morning shift	24 (48.0)
Afternoon shift	20 (40.0)
Evening shift	6 (12.0)
Number of completed 7-day duties	
Mean (SD)	6.8 (6.0)
Range	0-21

**Unless otherwise specified: X (SD) or range, where applicable.*

Table 2. Coping strategies employed by rehabilitation medical and paramedical staff in a COVID referral center during the pandemic (N = 50)

Coping Strategies	Mean (SD) COPE score
Emotion-focused coping	
Acceptance	3.6 (0.6)
Positive reframing	3.2 (0.9)
Emotional social support	3.0 (1.0)
Religion	2.9 (1.1)
Humor	2.1 (1.0)
Average	***3.0 (0.9)***
Problem-focused coping	
Active coping	3.3 (0.8)
Planning	3.2 (0.9)
Instrumental support	2.8 (1.0)
Average	***3.1 (0.9)***
Dysfunctional coping	
Self-distraction	3.2 (0.9)
Venting	2.5 (1.1)
Self-blaming	1.8 (0.9)
Behavioral disengagement	1.6 (0.8)
Substance use	1.4 (0.8)
Denial	1.4 (0.7)
Average	***2.0 (0.9)***

** COPE, Coping Orientation to Problems Experienced*

Table 3. Job satisfaction (based on SEHC scores) among rehabilitation department medical and paramedical staff in a COVID referral center during the pandemic (N = 50)

Job Satisfaction Items	Mean (SD) SEHC score	Highest possible score
Total SEHC score (Items 1 to 18)	76.9 (13.2)	100
Recommendation of the health-care facility to other workers	3.3 (0.7)	4
Rating of the healthcare facility as a place to work	7.5 (1.4)	10

**SEHC, Satisfaction of Employee at Health Care*

distraction (3.2 ± 0.9) and venting (2.5 ± 1.1) were the most common, while substance use (1.4 ± 0.8) and denial (1.4 ± 0.7) were used the least. The top three individual coping strategies were acceptance (mean COPE score for a specific strategy, 3.6), active coping (3.3), and a tie among the following at 3.2: positive reframing, planning, and self-distraction.

The participants rated their job satisfaction at 76.9±13.2% (Table 3). Three out of 4 participants would recommend their workplace to other healthcare workers. In general, the healthcare facility was rated approximately 75% by the participants.

DISCUSSION

Despite the unprecedented increase in workload and various changes in the organizational, structural, administrative, and clinical aspects of their jobs, the medical and paramedical staff in the DRM showed a relatively high job satisfaction and still generally recommended PGH to their colleagues as a workplace with a rating of 75%. The staff generally used functional coping strategies (i.e., problem-based and emotion-based) more commonly than dysfunctional ones. Among the specific coping strategies, acceptance and active coping were the most common.

The high job satisfaction could be related to the functional or "healthy" coping strategies adopted by most participants in the study. Our study shared similar findings in the literature, wherein healthcare providers used acceptance, active coping, and positive framing to survive in the middle of a severe acute respiratory syndrome outbreak.[11]

Coping is a natural response of healthcare workers to perceived stress during the pandemic.[4] For problems that can be readily solved, one actively copes by taking direct and effective action on the problem. Planning is a problem-based coping strategy that is done by coming up with strategies and steps to resolve issues. Seeking advice and help is an example of employing instrumental support. In contrast, when the problem is prolonged or seems unsolvable, such as dealing with permanent loss, or a broken relationship, the focus of coping tends to become more emotional. Emotion-based coping is internal to oneself, which is a more cognitive or psychological response. Learning to live with the situation and accepting the reality exemplifies acceptance. While positive reframing is a coping style that looks on the positive side, finding good things that can happen in a situation. Lastly, dysfunctional strategies may also be employed because they are relatively easy to do and can provide a quick fix, but they may harm the person in the long run. In our study, some of the participants employed distraction to avoid facing the truth or stressors. It is natural to cope with problems using a blend of different coping strategies to mitigate the psychological effects particularly brought about by COVID-19.[12,13]

Regarding shift assignments of the staff, the majority reported working for morning and afternoon shifts. A minority of the study participants reported having been assigned in the graveyard shift during the height of the pandemic. As long-term night shifts could promote negative consequences on the health of the staff,[14] careful planning and scheduling of rotations should be considered to ensure that all the staff gets fair and equal chances to rotate during the daytime, when it is usually most optimal to work. Providing an in-between space after night shifts will not only promote wellness, but also professional longevity.[15]

Of notable point, most Filipinos are Roman Catholic. However, religion did not come out as one of the top coping mechanisms used by the study participants. This could be possibly related to fatigue after a day's work and not being able to spend time for prayer or religious meditation. Furthermore, it would be possible that our study tool, the Brief COPE, failed to explore an individual's spirituality as a way of coping with life stressors.[4]

CONCLUSION

The study revealed a relatively high job satisfaction among the medical and paramedical staff of the DRM in a COVID referral center in the epicenter of the pandemic in the Philippines. Functional coping strategy was the most commonly employed coping strategy by the participants. It underscored their positive outlook towards work and favorable support for the department and hospital. We suggest future qualitative research that explores the motivations and values of the healthcare workers and their effect on job satisfaction.

Statement of Authorship

All authors contributed in the conceptualization of work, acquisition and analysis of data, drafting and revising and approved the final version submitted.

Author Disclosure

All authors declared no conflicts of interest.

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