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ORIGINAL ARTICLE

Experiences of Non-ICU Physicians Redeployment in ICU during COVID-19

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ABSTRACT

Background: During the COVID-19 pandemic, enormous pressure on health care services resulted in a significant shift of work force from different departments of the hospital to the intensive care unit.

Objective: To study the impact of redeployment on doctors and to focus on the factors affecting their satisfaction levels.

Study Design: Cross-sectional study

Place and Duration of Study: Riyadh First Health from 1st April 2021 to 30th September 2021.

Methods: Sixty-six respondents were included.

Results: Most physicians (59.1%) had no choice before being redeployed to the ICU. The proportion of happy and very happy doctors was 45.5%. A total of seven participants felt very unhappy when they were deployed to the ICU, six of them had no choice and only one had the option to redeploy. Prior to redeploy to the ICU, 37 (56.1%) doctors received orientation, among them 54.05% found it useful. Thirteen participants indicated that they were unclear about their role and 8 (61.5%) of them did not attend the orientation course. 68.2% of doctors worked more than 36 hours a week and 63.6% complained that the number of hours was greater than that of the previous department. 69.7% of doctors found their deployment useful for patient care, while 22.7% were neutral. 62.1 % doctors felt the deployment was beneficial for them and 59.1% felt satisfaction in fulfilling their role and 27.3% were neutral. Forty two (50%) were satisfied with their ICU redeployment and 33.3 % was neutral.

Conclusion: By opting few measures, satisfaction levels of redeployed doctors can be boosted. This includes adequate administrative support, a well-organized orientation that clarifies the role of physicians and helps to elevate their morale. Before redeployment physicians should be given a choice so that they can freely join the ICU.

INTRODUCTION

The COVID-19 pandemic has created tremendous pressures on global health care systems.[1] As the large number of patients needed intensive care services due to COVID-19 infection, this has increased the need for a more skilled workforce in intensive care units (ICU) also increased.[2] This stretching of health care resources has created a serious challenge for medical services. To cope with this challenge, the hospital management has to reshuffle the doctors and paramedical staff from different departments of the hospital to the ICU.[3]

Riyadh's medical services, like other countries, had to redeploy physicians from different specialties to intensive care units to manage COVID-19 infected patients. The COVID-19 pandemic continues to impact the global health care system and places tremendous psychological pressure on physicians and job dissatisfaction.[4] It is therefore paramount important to provide an effective, relaxed, and protected working environment for the smooth running of a hospital. Working in pandemics is very stressful and when the doctors are redeployed in ICU it further enhances the pressure on doctors as the working environment is unfamiliar, no experience in ICU, less training opportunities, working hours and roster changes.[5,6]

Likewise, new staff and administration with different rules can be detrimental to the mental health of redeployed physicians. To improve productivity, it is essential to maintain a healthy workforce of physicians and to identify and eliminate all factors that contribute to a lower level of job satisfaction. Each hospital should understand and educate its hospital staff about the importance of mental health and its relationship with hospital progress and patient well-being. Health Education refers to a number of factors that are key to the well-being of health care workers, including morale, balance in working hours, a healthy and respectable relationship with new staff and administration, independence and security.[7]

Right now, there is very less data available, which is a lack of on the impact of redeployment on physician well-being during the COVID-19 pandemic. Our study sought to address this information gap. A comprehensive survey was developed to better understand the well-being of physicians redeployed due to COVID-19. The analysis of the findings enabled us to understand the factors affecting the satisfaction levels of health care providers and by better understanding we will be able to deal with this unforeseen situation more effectively.

MATERIALS AND METHODS

It was a cross-sectional study that consisted of distributing a questionnaire to four major hospitals of the Riyadh First Health Cluster for six months from from 1st April 2021 to 30th September 2021. We received 98 questionnaires. The response rate was 30.8% as 318 physicians were contacted to fill out the response form. Thirty-two incomplete responses that did not meet the inclusion criteria were excluded. Therefore, we were left with 66 response forms for the analysis. The ethical committee of the institute approved the study. A multidisciplinary clinician team of the hospital designed the questionnaire and tested it for clarity and duration of answering. The questionnaire was composed of different sections. The first section contains the information on their demographic and previous working environment, the next section includes the protocols before the redeployment of the doctors, the next section assessed different factors during the redeployment that influence the satisfaction levels of doctors and the last section evaluates the overall satisfaction level after the redeployment and correlation of the dis-satisfaction status with different factors. A section was also added to the questionnaire that inquired about the major concerns in the mind of physicians related to ICU redeployment. All questions about satisfaction were answered on a 5-point-Likert scale. The data was entered and analyzed through SPSS-25.

RESULTS

The males were dominant in ICU which constituted 71.2% of the total population. The majority of the doctors were in the age group of 35-44 years (42.4%). Redeployment was done from almost all

the departments, but most of the doctors redeployed were the physicians and belonged to internal medicine physicians, and mostly working as the residents (39.4%) in their respective departments. Data also showed that 47% of doctors had previous ICU experience of the ICU and most of the doctors completed their vaccinations against COVID-19 infection. There were 17 (25.8%) doctors with a history of COVID-19 positive PCR (Table 1). There were 59.1% of redeployed doctors were not given a choice whether they want to move to ICU or not and 40.9% were moved after given a choice by their own will. The percentage of happy and very happy doctors was 45.5%. A total of seven participants felt very unhappy when they were deployed to the ICU. Data showed that among these 6 participants (85.7%) were those who had no choice and only one participant had the choice to be redeployed. Similarly, the orientation was given to 37 doctors (56.1%). Of those who attended the orientation 54.05%, said the orientation was used fully. Only 2 participants found orientation very un-useful (Table 2).

Table-1: Demographic distribution of study population

Variable	No.	%
Age (years)		
25-34	22	33.3
35-44	28	42.4
45-54	9	13.6
55-64	7	10.6
Gender		
Female	19	28.8
Male	47	71.2
Specialty		
Anaesthesia	7	10.6
Dermatology	4	6.1
ENT	3	4.5
ER	2	3.0
General Physician	12	18.2
Haematology	1	1.5
Internal Medicine	13	19.7
Ophthalmology	2	3.0
Orthopaedics	10	15.2
Paediatrics	7	10.6
Plastic Surgery	1	1.5
Pulmonologist	1	1.5
Thoracic surgeon	1	1.5
Urology	2	3.0
Position in specialty		
Assistant Consultant	8	12.1
Consultant	8	12.1
Resident	26	39.4
Specialist	21	31.8
Trainee	3	4.5
Previous ICU experience		
No	35	53.0
Yes	31	47.0
Vaccination		
1 Dose	43	65.2
2 Doses	14	21.2
NO	9	13.6
Ever tested positive for COVID		
No	49	74.2
Yes	17	25.8
Comorbidities		
Asthma	2	3.0
Bronchia	1	1.5
Diabetes	1	1.5
Disk prolapse L4	1	1.5
DM, HTN,	2	3.0
Hypertension	4	6.1
On Immunosuppressives	3	4.5
No	51	77.3
Smoker	1	1.5

More than fifty per cent of doctors are clear on the work they are assigned. Thirteen (18.2%) participants said that they were not clear about their role and among them, eight (61.5%) did not attend the orientation course. 68.2% present of doctors was working more than 36 hours per week and 63.6 % of doctors complained that the working hours were more than the previous department. Most of the doctors (63.6%) claimed the workload in ICU was more or much more than the previous departments while 25.8% of doctors said the workload was equal to the previous working place. Analysis showed that among those who worked more than 40 hours per week 33 (50%) complained of more working hours. The off time during the ICU redeployment remained the same as claimed by fifty per cent of the doctors. The majority of the doctors were on the same page regarding patient care. 69.7% per cent of doctors found their redeployment useful for patient care and 22.7% per cent of doctors remained neutral. The attitude of the nursing staff was positive or useful (54.6%) for the new doctors and only 16.6% of doctors found their attitude negative or un-useful. Whereas 63.6% of doctors were satisfied with the admin attitude and 36.4% of the doctor was not satisfied with the admin behaviour. More than 50 per cent of doctors were satisfied with their performance in ICU. 59.1 % of doctors had the feeling that they justified their role during ICU deployment and one-third of doctors (27.3%) remained neutral in fulfilling their role. Fifty-three per cent of doctors were satisfied with their redeployment and 30.3 % remained neutral. Whereas 13.6% were unsatisfied and only 3% of doctors were very unsatisfied with redeployment in ICU (Table 3).

Table 2: Factors during ICU redeployment associated with satisfaction levels

Question	No.	%
Clarity of Role		
Very unclear	5	7.6
Clear	28	42.4
Neutral	15	22.7
Unclear	7	10.6
Very Clear	11	16.7
Working Hours in ICU?		
24-36 hours	4	6.1
36-40 hours	10	15.2
40-48 hours	35	53.0
> 48 hours	17	25.8
Workload Evaluation		
Much less	2	3.0
Less	5	7.6
Equal	17	25.8
More	22	33.3
Much more	20	30.3
Off time comparison with previous department		
Decrease	22	33.3
Increase	12	18.2
Remain the same	32	48.5
Evaluation of deployment with regards to patient care		
Very un-useful	3	4.5
Un-useful	2	3.0
Neutral	15	22.7
Useful	28	42.4
Very Useful	18	27.3
Evaluation of the Attitude of ICU Staff		
Negative	7	10.6
Very negative	1	1.5
Neutral	19	28.8
Positive	19	28.8
Very Positive	17	25.8
Un-useful	1	1.5
Very un-useful	2	3.0
Support of Hospital Management evaluation		
Very little Supportive	13	19.7
Little Supportive	11	16.7
Moderate	14	21.2
Supportive	13	19.7
Very Supportive	15	22.7
Main Role in ICU		
Clinical	19	28.8
Intervention	7	10.6
Consultant round	7	10.6
paperwork	30	45.5
Family communication	1	1.5
All above	2	3.0

Table 3: Evaluation of satisfaction levels of redeployed doctors

Question	No.	%
Rating of self-satisfaction in fulfilling the role in ICU		
Very unsatisfied	4	6.1
Unsatisfied	5	7.6
Neutral	18	27.3
satisfied	26	39.4
Very satisfied	13	19.7
Satisfaction levels regarding ICU deployment		
Very unsatisfied	2	3.0
unsatisfied	9	13.7
Neutral	20	30.3
satisfied	22	33.3
Very satisfied	13	19.7
ICU redeployment beneficial or not?		
Very un-useful	5	7.6
Un-useful	6	9.1
Neutral	14	21.2
Useful	28	42.4
Very useful	13	19.7

DISCUSSION

Healthcare workers were under so much stress during the COVID-19 pandemic that they became dissatisfied with their jobs and even plan to quit. It is important for health care workers to feel comfortable with their jobs and their lives during a pandemic.[8] The current analysis showed the happy and unhappy feelings and status regarding redeployment and the various factors associated with ICU's atmosphere that affect physician job satisfaction. The results of the analysis enable hospitals to identify issues and factors that affect their work satisfaction during the COVID-19 pandemic. All previous research on job satisfaction and choices has established a relationship between these two factors and revealed that the choice of job impacts the employee's happiness or otherwise unhappy states.[9-11] Researchers suggest that career choice largely determines the degree to which job satisfaction is achieved.[12] Job satisfaction refers to the happiness with one's current work situation and depends on many factors, including the market, working conditions, place of work and other dynamic factors.[13,14] According to Zingeser[15], a person may feel very certain of having made a correct career choice but experience an unsatisfactory current work experience. In a pandemic like COVID-19 when the stress on ICU is maximum many decisions have to be made to cope with the situation.[16]

Although it is ethically important to ask the doctors before their redeployment from non-COVID areas to the ward or ICU that is dealing with the COVID-19 infected patients. In this study, we find 85.7% of very unhappy doctors were those not given the choice before redeployment to the COVID-19 ICU. The happy and unhappy status also depends upon the orientation before the redeployment. More than fifty per cent of happy and very happy doctors got the orientation and found orientation effective. Similarly, the ratio of happy status was much less in doctors who did not attend or didn't receive or provided with the proper orientation before redeployment. The orientation of healthcare workers, especially in emergencies like pandemics to their place of work, is one of the most neglected functions in many organizations and hospital settings.[17]

Health care providers must understand that orientation is not just a formal thing done by the organization. Orientation plays an important role in greeting new employees and integrating them properly into an organization.[18] When an employee finds themselves in a strange new situation, he or she experiences anxiety that may prevent them from learning how to do their jobs.[19] A good orientation helps reduce the anxiety that results from entering an unfamiliar situation and helps provide guidelines for behaviour and conduct, so the employee doesn't have to experience the stress of guessing.[20] All new redeployed doctors should attend and complete the orientation program. The orientation should be designed by the organization according to the situation or should add necessary elements, such as during COVIDcovid-19 pandemic redeployment into the covid-19 ICU doctors need specific training and orientation regarding the proper use of personal protective equipment and orientation should include some motivational session to enhance and boost up their morale.[21] In our study, 61.5% of doctors who did not attend the orientation were also not very much clear about their redeployed position in the ICU. High levels of burnout among health care workers have been reported throughout this pandemic. Numerous factors have been identified that contribute to the psychological impact of this pandemic on health care providers.[22]

The deadly nature of COVID-19, unknown status of effective treatment, rapid increase in rates of infection and higher mortality rates, isolation from family, and social stigma.[23] In addition, numerous organizational factors contributed to burnout among healthcare workers during this pandemic. The main organizational factors are longer work hours, lack of PPE, heavy workload, imprecise drug management protocols, change of location, and duties.[24] In this study, 63.6% of doctors complained of the extra workload, then their previous department and it is also found that 50 % of doctors working more than 40 hours per week complained of the extra workload. During covid-19, ICU workload increased due to the increased flow of patients in the ICU most of them in need of ventilatory support.[25,26]

Therefore, it is observed in our study, that doctors working less than 24 hours also complained of extra workload in the ICU compared with their previous workplace. A meta-analysis revealed similar findings of a high burn-out rate during COVID-19 and the reason explained in the study was because of the high workload imposed on them, the long hours of work and the low salaries. The literature has shown that job satisfaction is dependent on many factors and Herzberg[27] proposed the two-factor theory of job satisfaction: the theory of motivation-hygiene. Hygiene factors include organizational policy, administrative cooperation for favourable working conditions and job security. These factors do not bring about higher levels of motivation, but without motivation, dissatisfaction is noted in the employees. Motivational factors include success, recognition, growth, and progression, as well as interest in the position. As a result, job satisfaction or dissatisfaction is directly linked to motivating factors as well as workplace hygiene factors. The results of our study showed that 36.4% of doctors were not satisfied with the admin behaviour. If we see the relationship of different factors before, during and after the redeployment the satisfaction level was significantly correlated with the admin support. Correlation showed that satisfaction significantly increases as the support of admin increases. Other factors significantly associated with Job satisfaction in our study were found to be workload, clarity in their work and the happy feeling at the time of redeployment.

CONCLUSION

Deal with the pandemic, redeployment is a basic move of the healthcare facilities. But this creates dissatisfaction in front-line health care providers due to a number of institutional factors and identified some of the factors that are associated with the unhappy state of physicians such as disorganized orientation, lake cooperation of the hospital administration. As a result, by taking a few steps, the satisfaction levels of redeployed physicians can be increased, and these frontline combatants can scent well and effectively to fight the COVID-19 pandemic.

REFERENCES

1. El Bcheraoui C, Weishaar H, Pozo-Martin F, Hanefeld J. Assessing COVID-19 through the lens of health systems' preparedness: time for a change. Globalization Health 2020; 112:1-5.
2. Phua J, Weng L, Ling L, Egi M, Lim CM, Divata JV, et al. Intensive care management of coronavirus disease. Lancet Respir Med 2020, 8(5):506-17.
3. Pfefferbaum B, North CS: Mental health and the Covid-19 pandemic. New Engl J Med 2021; 383:510-12.
4. Ardebili ME, Naserbakht M, Bernstein C, Alzmani-Noodeh F, Hakimi H, Ranjbar H. Healthcare providers experience of working during the

COVID-19 pandemic: a qualitative study. Am J Infect Control 2020; 49(5): 547-54.
5. Faderani R, Monks M, Peprah D, Colori A, Allen L, Amphlett A, Edwards M. Improving wellbeing among UK doctors redeployed during the COVID-19 pandemic. Future Healthcare J 2020; 7(3):e71-6.
6. Payne A, Rahman R, Bullingham R. Redeployment of surgical trainees to intensive care during the COVID-19 pandemic: evaluation of the impact on training and wellbeing. J Surg Educt 2020; 78:813-9.
7. Moss M, Good VS, Gozal D. A critical care societies collaborative statement: burnout syndrome in critical care health-care professionals. A call for action. Am J Resp Criti Care Med 3016; 194:106-13.
8. Morrow-Howell N, Galucia N, Swinford, E. Recovering from the COVID-19 pandemic: a focus on older adults. J Aging Social Policy 2020; 32:526-35.
9. Hafeez M, Chaudhary AM. Innovation of audio-visual triage system to combat the spread of COVID-19 infection and its efficacy: a novel strategy. Pak J Intensive Care Med 2021.
10. Yiing LH, Ahmad KZB. The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance. 2020.
11. Foong C, Loke J. Leadership behaviours: effects on job satisfaction, productivity and organizational commitment. J Nursing Management 2001; 9:191-204
12. Brown D. Career choice and development. John Wiley & Sons, 2002.
13. Altaf A, Awan MA. Moderating affect of workplace spirituality on the relationship of job overload and job satisfaction. J Business Ethics 2011; 104:93-9.
14. Nauta A, Van Vianen A, Van der Heijden. Understanding the factors that promote employability orientation: the impact of employability culture, career satisfaction, and role breadth self-efficacy. J Occu Organ Psychol 2020; 82:233-51.
15. Zingeser L. Career and job satisfaction. The ASHA Leader 2004; 9: 4-13.
16. Vincent JL, Creteur J. Ethical aspects of the COVID-19 crisis: How to deal with an overwhelming shortage of acute beds. Eur Heart J Acute Cardiovasc Care 2019; 9:248-52.
17. Aacharya RP, Gastmans C, Denier Y. Emergency department triage: an ethical analysis. BMC Emerg Med 2011; 11:16.
18. Bieberstein N, Bose S, Fiammante M. Service-oriented architecture compass: business value, planning, and enterprise roadmap. 2006.
19. Rana M, Arif B, Siddiqui M. Strategies to allow family visits to acute care units during the covid-19 pandemic. Pak J Intensive Care Med 2021.
20. Phiri MA, Pillay N. A study on the effectiveness of the orientation process and cross-cultural training for the expatriate. J Regulation 2015; 4: 553.
21. Sheldon KM, Lyubomirsky S. How to increase and sustain positive emotion: the effects of expressing gratitude and visualizing best possible selves. J Positive Psychol 2006; 1:73-82.
22. Jalili M, Niroomand M, Hadavand F. Burnout among healthcare professionals during COVID-19 pandemic: a cross-sectional study. Int Arch Occup Environ Health 201; 94(6):1345-52.
23. Khan M, Adin SF, Alkhatlan HZ, Tahir MN, Saif S, Khan M, Khan ST. COVID- 19: a global challenge with old history, epidemiology and progress so far. Molecules 2020; 26(1). 39.
24. Gemine R, Davies GR, Tarrant S, Davies RM, James M, Lewis L. Factors associated with work-related burnout in NHS staff during COVID-19: a cross-sectional mixed methods study. BMJ Open 2021; 11(1):e042591.
25. Xie J, Tong Z, Guang X, Du B, Qiu H, Slutsky AS. Critical care crisis and some recommendations during the COVID-19 epidemic in China. Intensive Care Med 2020; 46(5):837-40.
26. Siddique A. The epidemics of COVID-19. Biol Clin Sci Res J 2020.
27. Herzberg G, Howe LL. The Lyman bands of molecular hydrogen. Canadian J Physics 1959; 37:636-59.