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MEDICAL STAFF SATISFACTION SURVEY IN A MAKESHIFT EMERGENCY PANDEMIC COVID HOSPITAL

Hospital Administration

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ABSTRACT

Summary: The recent COVID pandemic required medical staff to be deployed at short notice to makeshift COVID hospital. A questionnaire-based study for finding the satisfaction levels of the medical staff working in an emergency makeshift COVID hospital was conducted to ensure the right kind of working environment for the staff. **Method:** A questionnaire was developed by the authors and validated by experts in the field and then circulated amongst the medical staff in the facility. The responses were marked on a Likert's scale with five options. The data on demographic variable was collected. The data on various aspects of difficulties such as administrative, structural, process and personal fronts was collected. **Results:** Most individuals were satisfied with the administrative provisions, however, 51% of the participants were concerned about taking the infection back home to their families, 41% of individuals had qualms about the patient-to-staff ratio, and 40% of the staff were unhappy with the under performance of the housekeeping staff. **Conclusion:** The deployment of medical staff needs to align with the number of patients in need of care. Also, the ancillary staff needs to be made accountable for their actions through proper contract management. Organizational background makes a considerable difference in maintaining the morale of its employees.

KEYWORDS

Medical Staff Satisfaction, COVID emergency, Makeshift Hospital

INTRODUCTION

Coronavirus disease-19 (COVID-19) a pandemic of 21st Century is caused by Severe acute respiratory syndrome coronavirus-2. During its peak, it overwhelmed the health care infrastructure of countries including India. The number of cases rising to 1,44,829 on 09 April 2021 .(1)

In India, adhoc medical facilities were started both during the first wave and second wave of COVID-19. However, during the second wave, there was a steeper rise in a number of cases, and these adhoc facilities were made functional in the shortest period of time. In Delhi, a similar Dedicated Covid Hospital of the Government was made functional on 18 April 2021. The medical staff including doctors, nurses and paramedics were moved at a very short notice to man the hospital. Outsourcing was carried out for the tasks such as hanger construction, medical Gas pipeline systems, IT, Pharmacy, laboratory Services, House-keeping to various private agencies. Medical equipment such as ventilator, monitors, probes, beds (motorized) were purchased through government funding.(2)

The hospital was made functional with multiple agencies working together that required close collaboration to deliver quality of care to the patient. Every organization behaves uniquely based on the training, prevalent practices and motivation levels. This was a unique situation where multiple organizations contributed to the completion of a common task i.e the running of an emergency pandemic hospital. This study attempts to understand the complexities of the organizational behavior. Work satisfaction or Job satisfaction is known to improve worker productivity and increase organizational effectiveness. Work satisfactions or job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job experience" or "the achievements of one's job values in the work situation result in the pleasurable emotional state". It may have serious consequences for the well-being of an individual in terms of physical & mental health along with satisfaction with life in general.

Since the medical staff was moved at short notice into suboptimal conditions a satisfaction survey was conducted to explore their satisfaction levels.

Methodology

A cross-sectional online survey was conducted among the healthcare personnel at a 1000 bedded hospital in India from 24 Apr 2020 to 21 Jun 2021. The list of doctors and nurses working in the hospitals was obtained from the hospital's database. The inclusion criteria included that anyone who has worked in the hospital for more than a week. The questionnaire was developed after a focused group discussion with all relevant stakeholders and ratified by a statistician. 20 questions with a 5 point likert's scale was created and pilot-tested amidst 30 respondents. Their responses were analyzed and changes made in the form based on the analysis and feedback received from the participants. Email ID was used as a unique identifying field to avoid multiple submissions.

The final survey instrument was circulated among healthcare workers. The submission of form was taken as consent of the participant. Confidentiality of the data was maintained, and data were analyzed as anonymous aggregate data. The study was approved by the institutional ethics committee. The continuous variable was described as mean and standard deviation. The categorical data were described as number and percentages. The answer for each question was added for each domain i.e. administrative, structure, process and personal to get total score. The contingency table was made of the score with socio-demographic variables. The Chi-square test was used as a measure of association. The statistical analysis was carried out using StataCorp.TX. The p value of less than 0.05 was taken as statistically significant.

RESULTS

A total of 160 respondents out of 198 responded (response rate of 79%). The questionnaire has been provided at the end as supplementary to this article. The Socio-demographic profile of the participants is given in Table 1.

Table 1

S.No	Characteristic	Statistics
1.	Age	32±6 yrs
2.	Sex F M	 61 (38.1%) 99 (61.9%)
3.	Marital Status Married Single	 100(62.5%) 60 (37.5%)
4.	Profession Med Offr Nrsg Offr Resident Faculty	 24 (15%) 41(45%) 79 (29%) 16 (10%)

5.	Posting	
	Field	7 (4.4%)
	Metropolitan city	137 (85.3%)
	Non metro city	16 (10.2%)

The response to questionnaire for administrative, structural, process related and personal subpart is given in figure 1, 2, and 3. Majority of the respondent responded affirmatively to justification for deployment (78% strongly agree and agree), administrative requirement (74% strongly agree and agree) and processes explained (59% strongly agree and agree). In structure, majority of the participants strongly agrees or agress that infrastructure (65%), consumables (85%), communication (72.5%) were adequate. However, for staff to patient ratio only 42.5% agree that the staff to patient ratio was sufficient. This was statistically different from their answers to other questions(<0.001). Finally, in process related procedure, only 36.8% responded with strongly agree and agree with provisions of housekeeping staff (p value <0.001).

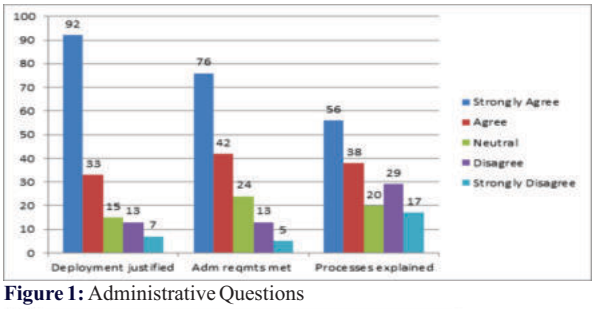

Figure 1: Administrative Questions

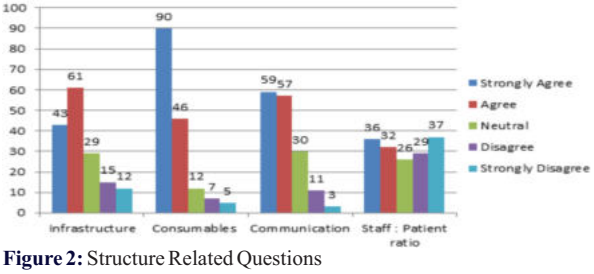

Figure 2: Structure Related Questions

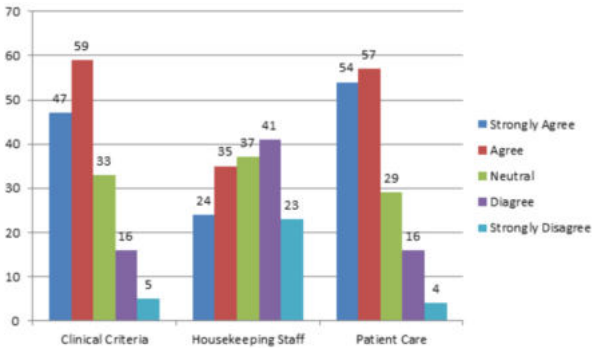

Figure 3: Process Related Questions

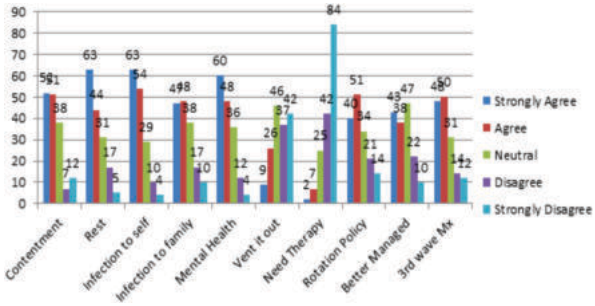

Figure 4: Personal Questions

In personal category, majority agreed that they were content, had rest, were happy with rotation policy, and would help third-wave management. The majority also disagree with the need for therapy and venting it out. The majority had fear (53%) of bringing the infection to their home.

There was no statistically significant difference in answers to questions regarding socio-demographic characterstic of respondent except that females agree more with justification of deployment and administrative requirements met (table 2).

Table 2

Demography	Total	Administrative	p value	Structural	p value	Process	p value	Personal	P value
Age			0.19		0.23		0.21		0.24
(i)<30	76	6.5 (2.7)		9.4 (3.7)		7.6(0.3)		25(6.5)	
(ii)>30	84	5.9 (2.8)		8.7 (3.4)		7.1(0.3)		24(5.4)	
Sex			0.003		0.66		0.5		0.7
(i)F	61	5.3(0.3)		8.8(3.2)		7.4(2.3)		24.6(5.8)	
(ii)M	99	6.6(0.3)		9.1(3.7)		7.2(2.7)		24.3(6.0)	
Marital status			0.66		0.87		0.96		0.7
(i)Single	100	6.0(2.7)		9.0(3.5)		7.3(2.6)		24.3(6.0)	
(ii)Married	60	6.2(2.7)		8.8(3.5)		7.2(2.5)		24.6(5.8)	
Profession			0.55		0.84		0.91		0.07
(i)Med Offr	24	6.3(2.9)		8.8(4.1)		7.1(2.8)		22.2(4.5)	
(ii)Nsg Offr	41	5.3(2.3)		9.1(2.9)		7.4(2.3)		25.2(6.0)	
(iii)Resident	79	6.6(2.8)		9.1(3.8)		7.4(2.7)		25.2(6.2)	
(iv)Faculty	16	6.0(2.6)		8.3(2.9)		7.1(2.1)		22.3(5.5)	
Posting			0.93		0.3		0.3		0.15
(i)Metro	137	6.1(2.6)		9.0(3.4)		7.3(2.6)		24.7(6.1)	
(ii)Non- metro	23	6.1(3.1)		8.2(4.1)		6.7(1.9)		22.8(4.7)	

DISCUSSION

As per the results depicted above, it is quite evident that the majority of the participants felt that their deployment was well justified and their administrative requirements were well looked after.

The structural aspects of the medical facility also seem adequate however it can be clearly observed that 41% of participants felt that the **patient : Staff** ratio was not enough to impart adequate treatment to the patients.

In the process related questions it is important to point out that 40% respondents felt that the **housekeeping staff** did not perform as per the basic necessity and were responsible for a great deal of heartburn for the medical staff. Nonetheless people were quite content after their shift with the quality of care provided to their patients.

Amongst the personal queries, it is a significant finding to see 53% of the participants concerned about **taking the infection back to their families** at home. Nonetheless, despite the adverse conditions, 68% respondents kept their **morale high** and 78% were even **willing to lend a patient ear** to another in need of counseling. 50% were of the opinion that there were gaping holes in the management of the facility and needed rectification at multiple levels nonetheless 58% were optimistic about the handling of the 3rd wave (in case it came).

Considering the correlation of the responses with demographic variables, the only significant finding with p-value of 0.003 was the female staff agreed more on administrative arrangements. This may be because a separate accomodation and transport was arranged for all the female staff deployed.

Work satisfaction represents a person-environment fit. It is a function of the interaction between the worker's value and various aspects of the workplace.(3) Health care workers (HCWs) can separate satisfaction

for their professional role from satisfaction with the organization for which they work. They may enjoy the work they do daily, but dislike the way that work is organized, especially if it impacts upon the quality they can give (4).

The satisfaction level may depend upon the training of the doctors and nurses and their expectations. The doctors and nurses deployed in this particular hospital are well trained in profession and in adverse conditions. They are also trained in moving at short notice as part of their training and have been given training on mental robustness, which reflects upon the organization they work in. Hence, probably satisfaction levels and morale were high despite the makeshift condition and in the midst of a lot of morbidity and mortality.

One of the study's strengths was that the survey was done at the time of the functional hospital. However, the study has certain limitation one of the limitation is the generalisability of the study, since the study was conducted among trained manpower which is adept in moving at short notice. Secondly even though the respondent were ensured anonymity, since most of the respondent knew the researchers hence, there may be bias in responding to the questionnaire.

Recommendations

Since most of the staff were concerned about taking the infection back to their families it could be suggested for arranging alternate accommodation for them for the duration of their stint in the emergency hospital. There seemed to be a consensus on the inadequacy of the housekeeping staff for which better accountability should be sought and means of better contract management with the vendor or alternate means of service should be explored. Lastly a better matrix needs to be calculated for the patient: staff ratio so that pre-emptive steps can be taken as and when the patient numbers rise.

CONCLUSION

The comparison of actual work situation & personal aspirations of the medical staff is a very important factor for determining professional satisfaction of an individual. The pandemic created a highly stressful situation for the medical fraternity whose personal experiences should be accounted and learnt from for better organization of future swift and calculated responses. With such a situation mitigated with rapid re-appropriation of available resources it is the natural way forward to further improve on our processes as it would be the only available answer to similar calamities in the future.

Conflict Of Interest

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form. The authors have no conflicts of interest to declare.

Authorship

(I) Conception and design: Dr Akshay Jain & Dr Saroj Patnaik
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(VI) Manuscript writing: All authors
(VII) Final approval of manuscript: All authors

Footnote:

The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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