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Original articles

Autonomy, belonging and competence: a qualitative analysis of the core workplace needs of the frontline physicians working during the COVID-19 pandemic in Bangladesh

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Background

Healthcare institutions around the world have been going through extensive reorganisation as a result of the COVID-19 pandemic. Being on the front line of the COVID-19 battle, doctors worldwide had to adapt to these changing workplace dynamics and expectations of the patients. Accordingly, the aim of this qualitative study was to explore the experience of the Bangladeshi physicians on these sudden changes in their workplaces and identify the core workplace needs of the Bangladeshi front-line doctors using the ABC (autonomy, belonging and competence) model of the doctors' workplace needs framework designed by the General Medical Council, UK.

Methods

Front-line physicians from Bangladesh who were working during the COVID-19 pandemic were recruited through convenience sampling for this qualitative study. In total, 29 in-depth telephone interviews were conducted with the participant doctors and transcribed interviews were analysed using template analysis.

Results

Most participants reported a lack of preparedness, safety measures, basic amenities, and essential hospital equipment at their workplaces. The increased workload, altered work schedule, and redistribution of team members were pointed out as crucial workplace challenges, along with the lack of professional recognition and reward mechanisms for their services during the pandemic. The majority of participants also reported leadership and managerial weaknesses. Furthermore, their usual learning and training process was hampered following the emergence of the COVID-19 pandemic.

Conclusions

This study has revealed how the front-line physicians perceived the drastic changes resulting from the emergence of the COVID-19 pandemic and the key challenges they experienced at the workplace. These findings signify the ardent need for the government and policymakers in the health sector of Bangladesh to undertake a holistic approach toward ensuring a workplace capable of providing adequate support and protection to their doctors, particularly during a catastrophic event like this pandemic in the future.

INTRODUCTION

The World Health Organization declared the emergence of a global pandemic (known widely as the COVID-19 pandemic) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on March 11, 2020.[1] The healthcare delivery system of many countries soon became overwhelmed with the growing number of patients affected by a virus responsible for causing a concerning number of deaths globally. Under these circumstances, doctors worldwide were put in a challenging position to provide services to patients infected with a novel virus, the infectivity rate of which was high, whereas the treatment protocol was

unknown. Since the beginning of the pandemic, evidence from around the world identified the lack of personal protective equipment (PPE), fear of getting infected from the workplace, and inadequacy of essential hospital equipment (e.g., oxygen supply, ventilators, ICU beds etc.) to provide the needed services as some crucial workplace factors leading to burnout, fatigue and psychological distress among the doctors.[2-4] Additionally, the increased workload, longer working hours, and the altered team dynamic at the healthcare facilities due to the pandemic have been described as some major occupational challenges faced by the doctors during this period.[5]

Like many other countries, dealing with a pandemic of this nature has been a completely new experience for the doctors of Bangladesh. The country's healthcare system was in a vulnerable and ill-equipped state to serve the needs of its large populations even before the pandemic. Besides, the workload of the doctors has always been high in Bangladesh due to severe shortages in their health workforce, as evident by the presence of only 0.4 physicians per 1000 population there.[6] On top of that, the COVID-19 pandemic has shifted the dynamic of healthcare needs in the country, thereby resulting in an unexpected transformation of the hospital environment. Since the beginning of this pandemic, the health system of Bangladesh has been reported to be struggling with the scarcity of PPE, diagnostic kits, oxygen supply and ICU (intensive care unit) facilities in their hospitals.[7,8] Considering the shortage of physicians in the country, it can be assumed that the emergence of the COVID-19 pandemic has amplified the workload and psychological distress of their doctors. The government did take some measures to reorganise the structure and atmosphere of the hospitals in the country in an attempt to cope with the demanding circumstances of the pandemic. However, no in-depth assessment has been done to understand the adequacy and effectiveness of those measures in supporting and fulfilling the core workplace needs of their doctors during this period of crisis till date.

Therefore, this study has been conducted to understand the perspectives of the Bangladeshi doctors on their core workplace needs using a qualitative research design. Our definite objective was to identify the factors which have been producing an impact (either positive or negative) on the doctors' workplace during the COVID-19 pandemic. Towards that goal, an adaptation of the doctor's core workplace needs framework outlined in the 2019 UK General Medical Council (GMC) report has been used as a guideline for our study. To improve the working culture and environment of the healthcare facilities, the GMC report revealed a set of workplace factors which are likely to impact the physical and mental wellbeing of the physicians working at a hospital. Based on these factors, GMC has developed a framework incorporating 'Autonomy/ control', 'Belonging' and 'Competence' (i.e., ABC) as the three core components necessary to improve the workplace condition of doctors.[9] This core workplace needs framework by GMC has been used in our study to assess the workplace related concerning issues for the doctors of Bangladesh and bring them to the attention of the responsible authorities so that these needs can be addressed on an urgent basis to better support the front-line physicians during this pandemic and beyond.

METHODS

STUDY DESIGN AND SETTING

An exploratory qualitative research design was used for our study. The study was conducted using semi-structured, in-depth and remote interviews between June 2020 and July 2020. The convenience sampling method was used to recruit participants for this study as the purpose of this study was to generate a hypotheses on the stated topic.[10] The study was publicised through the researchers' online (e.g. social media) and offline networks. Some participants responded directly with interest in participating in the study, whereas others came to know about it through their friends and colleagues and expressed an interest in participation. We adhered to the key principles of the Declaration of Helsinki while designing and conducting the study.[11]

Ethical approval for our study was obtained from the Institutional Review Board of the Institute of Health Economics, University of Dhaka, Bangladesh. Study participants were assured that their anonymity would be maintained. Consequently, data related to their hospital affiliation or any other potential identifiers of the participants have not been reported to ensure their anonymity and confidentiality.

STUDY PARTICIPANTS

Our study participants were medical doctors working at various levels of healthcare facilities (both public and private) in Bangladesh during the COVID-19 outbreak. In total, 29 doctors participated in our interview. Participation in this study was completely voluntary. Those who did not respond to our request for participation or have the time for an interview were excluded from the study. The required number of study participants was determined by data saturation point and we stopped collecting data when no new information was being generated from the interviews.

DATA COLLECTION METHOD

For data collection, in-depth telephone interviews were conducted with the selected participants. We opted for telephone interviews to comply with the government's nationwide lockdown and movement restrictions. A semi-structured interview guideline was developed for the study based on literature review and expert opinions. Pilot testing of the interview guideline was done with two non-sample participants with similar characteristics as the selected sample, and necessary modification was made to ensure clarity and appropriateness based on the received feedback. During data collection, a convenient time slot was scheduled beforehand with each interviewee and telephone interviews were conducted by the principal investigators of this study. The objectives and procedures of the study were explained to each participant before the interview, and informed consent was obtained from them for their participation. A soft

Table 1. Doctors' core workplace needs framework (adapted from the 2019 GMC report 'Caring for doctors, caring for patients'[9])

Core Components	Sub-categories	Description
Autonomy/ Control	Voice, influence and fairness	Having the voice and influence in co-designing and refinement of the services and management process of their healthcare organisation to ensure a just and fair working culture at the workplace.
	Work conditions	Provision of essential amenities such as time and places to rest and sleep during/between duties; having a safe locker to store personal belongings; provision of nutritious and quality meals during duties etc.
	Work schedule and rotas	Creating work schedules that allow the necessary amount of off days/break between duties and ensures safe swapping of shifts; providing the rotas in advance so that other responsibilities can be managed accordingly; involving doctors from appropriate specialities considering the responsibilities given to them etc.
Belonging	Team working	Having supportive multidisciplinary teams with shared and manageable work objectives at the healthcare organisation makes the team members feel valued, respected and ensures the effective functioning of the team.
	Culture and leadership	Presence of inclusive and compassionate leadership that nurtures a positive culture and environment within the organisation to ensure high-quality service provision and staff wellbeing.
Competence	Workload	Division of workloads of the doctors in a way that enables high level of competence and does not exceed their capacities to ensure delivery of safe and high-quality care.
	Management and supervision	Ensuring proper educational and clinical supervision and management are available to the doctors, and also balancing their workloads to provide them with protected time for these functions
	Learning, training and development	Supporting doctors with flexible systems and frameworks within the organisation for training and learning opportunities to enable them to grow and develop throughout their careers

copy of the consent form and the description of the purpose and objectives of the study were sent to the participants before their scheduled interview. Interviews were conducted in Bangla and/or English; on average, it took 45 to 60 minutes to complete each interview session.

DATA ANALYSIS

For this paper, data were analysed using the template analysis technique. The development of an initial coding template based on previous research data is key to template analysis. After applying the initial template to further data, it can be revised and refined to modify the template. Therefore, this technique offers flexibility in regards to the format and style of the template as it allows for the induction of new codes to the template as needed.[12]

As our initial coding framework, we used the ABC model of doctors' core workplace needs framework outlined in the 2019 GMC report during our analysis. The first component of the framework is 'Autonomy', which has three sub-categories. The second component is 'Belonging', and it has two sub-categories. 'Competence' is the final component of the framework with three sub-categories (see *Table-1*).[9] Based on this framework, we analysed our collected data. Each component of the framework was considered as a 'theme', and the sub-categories under each component were taken as the 'sub-themes' for our analysis, to which we later assigned the relevant identified codes from the interviews.

Each interview was fully transcribed verbatim as soon as they were completed. Then, the transcriptions were read thoroughly by the principal investigator and the research team several times to develop an interpretive understanding of the experiences and perspectives of the participant doctors on their core workplace needs. An iterative data coding process was done, comparing, contrasting and refining to identify the relevant codes under each theme and sub-theme. The research team held several meetings to discuss each component/theme of the preliminary framework in detail and compared the codes with them. Any disagreements regarding the placement of a code were resolved through discussion between the team until a consensus was reached. Following these steps, the template for the final analysis was developed.

QUALITY, VALIDITY AND TRUSTWORTHINESS

We have used the qualitative approach to capture various experiences of our participants related to our study objectives rather than solely focusing on achieving a statistical representation of the population. Transferability and trustworthiness are more significant in qualitative research than generalizability and reliability.[13]

To ensure quality in our research, we have followed the criteria from the Standards for Reporting Qualitative Research Framework (SRQR).[14] To obtain diversity in experiences and opinions, we attempted to include a varied sample of participants by considering their age, gender, level of workplace and years of clinical expertise. It allowed us to enhance the potential transferability of our findings. Furthermore, all research team members were actively in-

Table 2. Characteristics of the participants (N=29)

Variables	Categories	N (%)
Age	Under 30 years	11 (37.9)
	30-45 years	18 (62.1)
Gender	Women	17 (58.6)
	Men	12 (41.4)
Level of education	MBBS (undergrad) complete	16 (55.2)
	Postgraduation (ongoing)	13 (44.8)
Marital Status	Single	6 (20.7)
	Married	23 (79.3)
Family members	Less than 5	18 (62.1)
	More than 5	11 (37.9)
Years of clinical experience	Less than 5 years	10 (34.5)
	More than 5 years	19 (65.5)
Nature of workplace	Public	26 (89.7)
	Private	3 (10.3)
Level of workplace	Primary	10 (34.5)
	Secondary	10 (34.5)
	Tertiary	9 (31.0)
Comorbidity	Absent	22 (75.9)
	Present	7 (24.1)

volved in the data collection, coding and analysis. This helped enhance the validity of the results as the decisions were made based on continuous meetings and discussions between the team to identify any missing points and to challenge the assumptions of each other when needed.

Finally, to establish trustworthiness, the 'Four-dimension criteria' outlined by Lincoln and Guba (1985) were used for our study.[15,16] To ensure the fulfilment of the criteria, researchers notably experienced in qualitative methods conducted the in-depth interviews; pilot testing of the questionnaire was done; investigator triangulation was ensured by involving multiple researchers in the analysis, and interviews were continued until a data saturation point was reached.

RESULTS

Twenty-nine participants were interviewed for our study. Participants were registered medical doctors working at various levels of Bangladesh's public and private healthcare facilities. They were all working in clinical positions at their workplace at the time of the interview. The age of the participants ranged from 26 to 44. Out of the 29 participants, three were working at private hospitals, seven were working at the newly developed dedicated COVID-19 public hospitals, and the rest 19 were posted at various levels of other public healthcare facilities across the country. The key socio-demographic information for the participants has been illustrated in *Table 2*.

A detailed account of the participant's responses on their core workplace needs in relation to the ABC (i.e., Autonomy/control, Belonging and Competence) model of doctors' core workplace needs framework was captured through our study. A summary of the main themes, subthemes and relevant codes obtained from the data analysis has been presented in *Table 3*.

Perspectives of the participants on the core themes and sub-themes have been explored in detail below, along with some exemplar quotes.

A) AUTONOMY/ CONTROL

I. VOICE, INFLUENCE AND FAIRNESS

Participants of the study experienced several challenges regarding establishing their voice and influence in maintaining a fair and just working environment during the COVID-19 pandemic.

To provide services to the rapidly growing number of COVID-19 patients, the healthcare delivery system has been reorganised across the country. Government redesigned and/or created some public healthcare facilities as dedicated COVID-19 hospitals during the early phases of the pandemic. Many doctors were redeployed from their original workplace to these dedicated hospitals with very little prior warning. Some doctors felt it was unfair to transfer them so abruptly to a new workplace without considering their willingness.

> *'I have been redeployed to a dedicated COVID-19 hospital without prior warning. I was unprepared for this transition but had no choice but to accept the decision. It felt helpless not even to have the chance to weigh in on such a*

Table 3. Themes, subthemes and codes obtained from the data analysis

Themes	Sub-themes	Codes
Autonomy/ Control	*Voice, influence and fairness*	• Perception of organisational support • Status of safety measures/protocols • Redeployment/transfer issues • Rewarding and/or financial support mechanism
	Work conditions	• Personal Protective Equipment (PPE) • Oxygen cylinders, ventilators and ICU facilities • Accommodation support • Transport to and from work • Daily provision of meals
	Work schedule and rotas	• Changes in regular work schedule • Duration of the quarantine period • Workforce issues
Belonging	*Team working*	• Sense of unity and team spirit • Negative changes in attitude • Competency of support staff • Adapting to the new environment • Adjusting to the new team dynamic
	Culture and leadership	• Support from colleagues and seniors • Negativity between groups and staff • Socio-cultural barriers for female doctors • Role and effort of the leaders • Mental health support
Competence	*Workload*	• Sudden changes in workload • Exhaustion and burnout
	Management and supervision	• Disruptive management and supervision • Impact of time and resource constraints • Supervision of nurses and support staff
	Learning, training and development	• Opportunities for academic learning and training • Time constraints for academic learning and training • Issues with speciality training

> *big decision regarding my workplace, especially under the current circumstances.'* (Participant #4)

Several respondents also reported receiving insufficient support and recognition from the hospital authorities when they voiced their concerns about their hospitals' inadequate safety and security measures. These problems were more severe for the doctors working at the existing public and private healthcare facilities, which had not been reassigned as 'dedicated' COVID-19 hospitals.

> *'...most patients are unwilling to wear masks, which increases our risk of exposure to the coronavirus. To prevent this, we need to ensure that nobody can enter the hospital without wearing a mask. Besides, the number of attendants with each patient should be limited to only one to reduce overcrowding of the hospital premises. There is also no restriction of movements between the COVID-19 zone (flu corner and COVID-19 testing unit) and the other hospital departments, which puts everyone at risk.'* (Participant #1)

> *'I know our supervisors and managers have a lot on their hands right now. However, still when I am not feeling particularly well-supported as an employee, it demoralises me. Yes, they cannot meet with us every day and ask individually how we are doing. But at least there could be a monthly meeting where we are given time to discuss our challenges and issues. During harder times like this, it is more important that they (managers/supervisors) show compassion towards our needs and make us feel included in the decision-making process.'* (Participant #5)

Participants working at the dedicated hospitals reported receiving financial incentive packages from the government for their services. However, no such rewarding mechanism and/or financial incentive support was established for the doctors working in the other hospitals, which some participants stated to be discriminatory and unjust. They said that the lack of recognition and/or rewards for their services during this challenging period often left them feeling demoralised. It also made them feel unappreciated and undervalued at work.

> *'Similar to the doctors at the dedicated hospitals, we are also risking our lives by being in service every day. However, they are given adequate PPEs during their duty period and provided financial packages to reward their services. On the other hand, we have insufficient PPE and equipment in our hospital, making it extremely challenging to do our job, but we continue to provide services to*

> *our patients. Then, why are we not given the same benefits and rewards as them? Yes, our hospital is not labeled as 'dedicated'; but alongside our routine services, we now have to maintain a flu corner for screening COVID-19 patients and admit suspected cases until they get a confirmatory result. Does that not put us at high risk as well? It feels like we have been cast into the shadows just because we do not work at a dedicated hospital. Is it fair?'* (Participant #19)

II. WORK CONDITIONS

Doctors working at the dedicated COVID-19 hospitals reported having a comparatively controlled and secure working environment. They also said that they received decent support regarding PPEs and other essential hospital equipment such as- oxygen cylinders, ventilators, ICU facilities, etc. Most of them reported adequate and timely provision of PPEs; although some were sceptical about the quality of some PPEs, especially the mask.

> *'I am grateful for the arrangements made for us here. I was nervous when I began working at this dedicated COVID-19 hospital. However, considering our amenities and support, I cannot say I am unhappy here. During each duty roster, we are given N95 respirators, surgical masks, full body gowns, face shields, and gloves. I have not experienced any shortages of PPE so far. It is possible that the N95 respirators are not of the highest quality and the mask size does not always fit. But at least I am getting them when there are severe shortages elsewhere.'* (Participant #13)

However, the participants working at the other (non-dedicated) public and private hospitals were dissatisfied with the inadequacy of safety features and COVID-19 diagnostic facilities at their workplaces.

> *'In my opinion, working at a non-COVID hospital is riskier than the dedicated hospitals. Because the safety protocols are maintained quite strictly there and they only admit confirmed cases of COVID-19 patients. We do not have any such system in place, so all sorts of patients come to us daily. We have no option but to manage the patients, mostly without knowing whether they are affected by the virus or not.'* (Participant #12)

> *'...there is much fear and misbelief among people regarding COVID-19. So, often when they come to us for treatment, they deliberately hide their flu-like symptoms and contact history in fear of being stigmatised. We cannot test each patient as we do not have the resources or facilities to test everyone, which makes our job riskier and more stressful.'* (Participant #6)

The shortages of PPE and essential hospital equipment (e.g., oxygen cylinders, ventilators, ICU beds etc.) were also particularly highlighted by the participants working at hospitals other than the dedicated facilities.

> *'The doctors at dedicated hospitals were given multiple sets of PPEs for each round of duties, whereas I was given only one N95 mask and one gown! So, I have to reuse my mask and gown longer than recommended, which is certainly a risk for me.'* (Participant #25)

> *'Unlike the dedicated hospitals, there are not enough oxygen cylinders at our hospital wards, making it difficult to manage suspected patients in critical condition. This lack of essential equipment at our hospital makes it harder for us to provide the needed services.'* (Participant #2)

Dissatisfaction was also expressed regarding the lack of transport and accommodation facilities for the doctors working at the 'non-dedicated' hospitals. The nationwide lockdown made commuting to and from work very difficult for them. Hence, many participants wanted to stay at the hospital dorms during the duty period to avoid the hassle of daily commuting. But there was not enough space in all dorms for everybody and the quality of some of these dorms were quite poor which made it difficult to stay there.

> *All the other institutions and offices were closed during the lockdown, except the hospitals. I used to commute to work in public buses, but public transportation was restricted during the lockdown. In such a situation, we hoped that the authorities would provide us with transport for work, but no such support was given.'* (Participant #1)

> *'...I wanted to stay at the hospital dorm but could not as no room was available. My colleagues also told me that there was no provision of meals at the dorm, and the outside restaurants were closed due to lockdown. So, making everyday food arrangements in the dorm by yourself gets quite difficult.'* (Participant #17)

A female doctor working at a primary-level hospital reported the lack of safety and proper amenities as a reason for not staying at the hospital dorms.

> *'There are no night guards at the dorm, which are situated a bit further away from the main hospital building. Hence, I did not feel safe staying there at night by myself. Instead, I had to rent a private car at a high price to commute to work every day from home which is quite expensive for me.'* (Participant #11)

However, a government initiative of providing free accommodation, transport and meal support was taken for the doctors working at the dedicated COVID-19 hospitals across the country, which was quite appreciated by the participants working in those facilities.

> *'We stay in the hospital dorms during our duty period. The entire hospital campus is well-protected to keep it isolated and to control the spread of the virus. So, staying at the dorm feels quite safe to me. The food there is not bad either. During our quarantine period, we are provided accommodation and meal at a local hotel free of cost and I am satisfied with the whole arrangement.'* (Participant #18)

III. WORK SCHEDULE AND ROTAS

Varieties in opinion were noticed regarding the changes in work schedule and rotas due to the pandemic. Several participants described having a ten-day long duty roster and 14 days of quarantine period in between the rosters. Some were content with this modification.

> *'We decided to divide the doctors in three teams and each team had to do ten days of consecutive duties. Although it is stressful to work longer hours for ten days wearing PPEs in such hot weather; however, it meant that we could quarantine for a full 14 days or more between each roster. Working daily for lesser hours would expose us to more risk in my opinion. Therefore, I believe the current system is better'* (Participant #19)

Nonetheless, some doctors were not satisfied with these changes. They complained of fatigue and burnout owing to the longer hours, uncomfortable protective gear and lack of air-conditioning at the hospitals.

> *'It is exhausting to work 12 straight hours for ten consecutive days! Furthermore, the hospital rooms get so hot as there is only one ceiling fan per room and no air-conditioning system! I feel physically ill wearing those tight masks, gowns and gloves for such a long period in this heat.'* (Participant #15)

Although, some participants were keen on having the ten-day rota system, but they did not have enough doctors in their hospital to make it work.

> *'There are only five doctors in our 50-bed hospital. It is difficult as it is to support the hospital with all five of us working round the hours. How can we divide ourselves into teams and pull a ten-day roster like the others? Yes, working daily exposes us to more risk, but we simply do not have a choice.'* (Participant #16)

B) BELONGING

I. TEAM WORKING

Some participants stated that the function and coherence between the team members had improved during the pandemic, which they felt was extremely important in providing effective services during this crisis period.

> *'We were stuck in the hospital together, away from our families and always anxious about the situation. It changed something in everyone's mind! I was working side by side with a doctor I did not know a week before, but somehow, we understood what our roles were and performed our duties and responsibilities in harmony amid all this chaos.'* (Participant #24)

However, a few participants experienced some disputes and a growing difference in opinions among the team members during the pandemic, which made it difficult for the team to work in harmony.

> *'Alongside our usual departments, now we have a flu corner for screening and an isolation ward for managing suspected COVID-19 patients in the hospital. So, the workload and division of duties have been changed. However, some colleagues and staff are dissatisfied with these changes and refusing to work per their assigned hours and/or responsibilities. I understand that everyone is panicked at the moment and things have been kind of chaotic, to be honest. But their non-compliance is creating a divide in the team and making it harder to work together.'* (Participant #9)

Participants further stated how the natural process of communication and bonding between colleagues have been hampered due to all the changes and safety regulations in their workplaces.

> *'We cannot see each other's faces now because of the masks. Neither can we sit or eat together during the break because of the social isolation protocols in place. I feel like in recent months, we have become distant to each other due to these communication barriers. I think this is hindering our ability to be compassionate towards each other during this trying time.'* (Participant #11)

The level of competency and skill of some support staff (e.g., nurses, medical technologists/ MTs etc.) in the team was not up to the mark, according to some participants, which they described to be a challenge for the entire team.

> '...they (support staff) do not have adequate skills or training to deal with a situation like this. But, the role of skilled support staff, especially the MTs, is crucial during this pandemic! Also, our manpower is short. So, if someone falters in their duties, that hampers the entire team's functionality.' (Participant #16)

After the pandemic had begun, many doctors were redeployed from their original workplace and assigned to the dedicated COVID-19 hospitals with very short notice. According to our respondents, this sudden transfer to an unfamiliar workplace and having been put in a more acute frontline of healthcare services was difficult to adapt to. Some participants who were transferred to a dedicated hospital did not fully enjoy the experience of working at a different team and/or a different environment all of a sudden.

> *'I had worked in my old workplace for a long time now and developed a good understanding with my colleagues. But I was suddenly transferred to a dedicated hospital. To be honest, adjusting to the new hospital environment and working with an unfamiliar team have been a difficult experience for me.'* (Participant #20)

> *'I do not mind working here at the dedicated hospital; but still, I would prefer to go back to my previous post at my old hospital. I feel that I could contribute better there compared to here considering my specialty.'* (Participant #8)

II. CULTURE AND LEADERSHIP

Several participants felt that the uncertainty of the pandemic has brought on a sense of compassion and unity among the entire hospital staff which helped brew a positive and supportive working culture.

> *'I had bouts of anxiety attacks during the first month of my COVID duty. I only had six months of work experience at that point, so I felt unprepared for such drastic changes in my workplace when the pandemic began. I would get really anxious when I had to manage a critical patient. But my colleagues and seniors have been really supportive towards me! They helped me whenever I needed it and I feel grateful for that.'* (Participant #23)

However, some participants felt that the nurses and other hospital staff may have felt discriminated as they were given lesser amount of protective gear and support compared to the doctors which created sort of a negative working environment at the hospital.

> *'I feel as if they (nurses and other support staff) were less supportive to us than before. Probably because they are scared, and have lesser information regarding the pandemic than the doctors. Also, the doctors were given priorities when distributing the limited number of PPEs. I guess, it has made them feel a bit discriminated against and demotivated them from committing fully to their roles.'* (Participant #17)

Some female doctors reported the lack of compassion and support from senior management when it came to balancing their professional and personal lives during the pandemic. They felt that being a working mother in a country like Bangladesh has always been challenging. Because, the societal notion here is that the women are responsible for taking care of their children and the concept of daycare centers at work is not widely recognised either. However, the pandemic has made things more difficult than before according to them.

> *'I have a two and a half years old daughter at home. Before the pandemic, I could leave my baby with my cousin's family when I was at work. But my cousin relocated to a different town when the pandemic begun and the working hours have extended at the hospital. So, it has become really difficult for me and my husband to be with our daughter as both of us are doctors. I requested my supervisor and colleagues to consider the situation and provide me with some flexibility over choosing my duty days. But often my requests were not taken into consideration. Some colleagues did help me sometimes, but I wish I had received more support from my workplace considering my situation!'* (Participant #15)

When asked about the impact of leadership on their workplaces during the pandemic, the opinions were divided between the participants. Some participants acknowledged that they realise it was difficult for their leaders/managers to fulfill all of their needs owing to the leaders' own inexperience in dealing with a pandemic and the resource constraints. But, the demotivating factor for them was the lack of effort among the leaders in supporting them during this crisis.

> *'I asked our manager to provide us with a dedicated space for safe donning and doffing of PPEs. But, that did not happen. There were no proper PPE disposal system and the cleaners were often absent at work without notice. I feel as if our leaders are also uncertain as to how they should act. But such managerial oversights are creating difficulties for us in conducting our daily work.'* (Participant #2)

> *'I heard from a doctor friend that their hospital manager arranged free transport for them at his own initiative. It was really nice to hear how they were being supported by their leader. But we did not receive any such support. I think it shows that a leader's willingness and sincere efforts matter greatly in overcoming the resource challenges.'* (Participant #9)

However, a few doctors from some 'non-dedicated' hospitals shared a positive experience regarding leadership in their hospitals.

> *'I am thankful to our hospital head for keeping us motivated and maintaining a well-balanced division of workload between all groups of hospital staff. He seems to take into consideration our opinions when making a crucial decision that would impact us. Most of us had no experience of dealing with a pandemic. But we could always turn to him for help and guidance.'* (Participant #10)

On the other hand, majority of the doctors working at the dedicated COVID-19 hospitals had a better experience in this regard. They found these newly developed hospitals to be more organised, and acknowledged the role of good leadership as a reason behind that.

> *'I have worked as a doctor at several healthcare facilities before working at this dedicated COVID-19 hospital. I had mostly found the organisational capacities of the public facilities to be poor due to weak management and limited resources. But I have found the activities and systems in this hospital to be well-organised and so far, the hospital is running quite smoothly without any major disruption of services. The credit definitely goes to the director of our hospital for his effective leadership and management.'* (Participant #7)

Nevertheless, majority of our respondents from all levels of hospitals reported that support for mental health and wellbeing was mostly not given enough attention in any of their workplaces.

> *'I became COVID-19 positive about a month ago. Although I have recovered physically, but I have been suffering from anxiety and insomnia ever since. These problems are affecting my ability to concentrate and do my work properly. But despite working in a hospital, we do not have access to any structured mental health support system. I wish our authorities would recognise the necessity of maintaining the psychological wellbeing of their staff during this unprecedented period and provide us with the needed support.'* (Participant #20)

C) COMPETENCE

I. WORKLOAD

Since the beginning of the pandemic, the workload at the hospitals have become extremely high. Majority of the participants working at both dedicated and the other hospitals reported working for eight to twelve hour shifts per day for eight to ten consecutive days with slight modifications based on the manpower situation at the hospital.

Our participants working at the dedicated COVID-19 hospitals reported of exhaustion and burnout due to these longer duty hours and heavy workload.

> *'...working for eight straight hours per day for ten days with critically ill patients wearing full PPE the entire time is so exhausting! I thought it would get easier with time,*

> *but it feels like I am getting more fatigued with each cycle of duties.'* (Participant #8)

The workload had increased massively in the 'non-dedicated' hospitals as well due to the establishment of additional services (e.g., flu corner, telemedicine services etc.) in the wake of the pandemic. Moreover, many of their doctors were transferred to the dedicated hospitals leaving them with fewer manpower than before.

> *'...along with all the regular services, now we also have to manage the flu corner and provide telemedicine services. But no new doctors or nurses have been appointed to our hospital to help with this increased workload. Instead, many have been reassigned to the dedicated COVID-19 hospitals. Additionally, two of our female doctors are currently pregnant (making them immunocompromised). Hence, we have to keep their workload light to reduce their exposure to the virus.'* (Participant #3)

Some doctors also pointed out that their already high workload would further increase when any doctor and/or support staff got infected with COVID-19 virus and therefore were unable to work for a long period.

> *'In the last one and a half month, two doctors and three nurses have become COVID-19 positive. It was and is inevitable. But when someone gets sick, we do not get a replacement personnel in their absence which increases the workload for the rest of the team.'* (Participant #14)

II. MANAGEMENT AND SUPERVISION

Doctors described that the reformed division of duties among the teams following the pandemic has resulted in a disruptive management and supervision process in the hospitals.

> *'There are around 30 doctors in our department including our departmental head and senior supervisors. Before the pandemic, more or less, we were all coming to the hospitals daily. So, when I needed support or advice from a particular supervisor, it was easier to reach them. But, now only about ten doctors are allowed to be in the ward per day. Moreover, the team division and work schedules have become too complicated to know who is going to be available at the hospital on which day and when! Therefore, it has become difficult to reach the supervisors these days when needed.'* (Participant #26)

Some participants also stated that the shortage of doctors and the increased workload has left their leaders/managers with so little time that effective supervision is not really possible under the current circumstances.

> *'Us including our supervisors are so busy with the patient load that there is no time left for training and learning. I do not blame the supervisors here. All of us are having to work around the clock and at the end of the day, none of us have the energy or motivation to attend a lecture or training session, to be honest.'* (Participant #6)

According to some respondents, strong supervision and management was lacking for the nurses and other hospital staff which they felt to be extremely important as working at a hospital needs effective and supportive teamwork.

> *'I am extremely concerned about the attitude of the nurses and other hospital staff towards the pandemic. They were reluctant to wear PPEs properly, even the mask! This exposes them and the rest of us to great risks as they are a crucial part of our team. Hence, our senior officials and managers should put more emphasis on the training and supervision of these staff to ensure better hospital management.'* (Participant #3)

Inadequate training of support staff such as- Medical technologists (MT) also created complications for the team during service provision.

> *'There is a shortage of skilled MTs in the public hospitals and the training they received regarding COVID-19 sample collection was inadequate in my opinion. I think, proper quality checks on their performance needs to be put in place by the management to ensure better service provision.'* (Participant#27)

III. LEARNING, TRAINING AND DEVELOPMENT

All of our participants reported going through a period of instability resulting from the pandemic. Their daily routine became too uncertain at their workplaces, and it hampered their regular learning, training and development process.

> *'I was supposed to train as a general practitioner during my two years placement at a primary hospital. But now, I am working with COVID-19 patients only. And if my two years goes by like this, then I will miss out on the experience of working with varied patients.'* (Participant #4)

However, some doctors felt that the practical learning and training of dealing with a pandemic has been a valuable experience for them. They thought that this opportunity has made them more competent and confident for the future.

> *'I had only read about pandemic management in books and articles before. I am glad that I got the opportunity to learn it first-hand this time.'* (Participant #23)

Doctors from the dedicated COVID-19 hospitals reportedly received more training compared to the other participants. However, some commented that the rigor and duration of the training can be increased for better outcomes.

> *'I have attended several training sessions related to COVID-19 virus and overall pandemic management, which I believe have increased my capacity and efficiency as a doctor and prepared me to better serve in the future in an emergency like this. Some training sessions were better than others. I wish we had more time to train.'* (Participant #13)

> *'The doctors who were assigned to the dedicated hospitals invariably received all the basic training on pandemic management and PPE use. But only a few of us got the opportunity to attend the training as the capacity of the training sessions were limited and priority was given to*

> *the doctors working at the dedicated hospitals.'* (Participant #10)

Participants from the teaching hospitals reported that their regular course learning and training processes were disrupted due to the pandemic. They were worried that it might hamper their development as a specialist in their fields as their training period is limited.

> *'I am a surgical resident at a medical college hospital. I was supposed to learn and train on my speciality. Because of the pandemic, our academic activities are on pause as we now have to focus on providing emergency services. Regular morning sessions and lecture classes are not being held like before. If the pandemic continues for a long period, then by the time my residency ends, I am afraid I will not gain adequate training on my speciality.'* (Participant #24)

DISCUSSION

Dealing with the COVID-19 pandemic has undoubtedly been an overwhelming experience for Bangladesh's entire population, including medical doctors. When the pandemic hit the country in March 2020, a nationwide lockdown was announced within weeks of the first case detection, and social isolation protocols were put in place by the government to curb the spread of the virus.[17] The hospital authorities also made some drastic organisational changes at all levels of healthcare facilities across the country to cope with the demand of the pandemic. The health system of Bangladesh consists of a three-tiered (i.e., primary, secondary and tertiary) network of healthcare facilities. Primary level facilities are considered as the first level of contact between patients and the health system, secondary level consists of district-level hospitals and tertiary level facilities are usually situated at the divisional level, which includes large medical college hospitals and specialised institutes.[18] In the wake of the pandemic, the government created and/or redesigned many public hospitals as dedicated COVID-19 treatment facilities. Most of these dedicated hospitals were situated at the secondary level, whereas a few tertiary hospitals were declared dedicated COVID-19 hospitals. Additionally, flu corner/triage corners were established at the other healthcare facilities to screen for potential COVID-19 patients. Telemedicine services were also provided to patients to limit the number of hospital visits. All in all, the atmosphere and service delivery structure of the hospitals around the country underwent a lot of modifications due to the pandemic.

According to our participants, it was extremely challenging to be in the front-line of the healthcare service delivery amid this transition, and they felt quite unprepared to deal with these abruptly shifting circumstances of their workplace. Evidence from other countries has revealed that the changing dynamic of the healthcare facilities following the beginning of the COVID-19 pandemic harmed the mental well-being of the doctors.[19,20] Consequently, such uncertainty and chaos at their workplaces made them feel dispirited, affecting their competence and focus at work.[21] That is why the importance of maintaining a positive working environment for physicians during a public health crisis like this has been iterated by several previous studies.[22-24] The GMC 2019 report stated that fulfilling the core workplace needs criteria can help a great deal to ensure the physical and mental well-being of the physicians.[9] Accordingly, this study attempted to assess the felt needs of the Bangladeshi doctors regarding their work during the pandemic using the ABC (Autonomy, Belonging, Competence) framework provided in the GMC report as a guideline.

When talking about their sense of 'autonomy/control' at their workplace during the COVID-19 pandemic, most of our participants described their voices and concerns often not acknowledged by the hospital management. They felt that their feedback and suggestions should have been considered when the authorities made significant modifications in the service delivery structure, workload, team development, and transfer/redeployment process. Their feelings resonate with previous evidence, which emphasises the significance of acknowledging the feedback and concerns of the doctors by their authorities in order to help strengthen their perception of professional autonomy.[25] In addition, our participants stated that the shortage of skilled human resources, PPEs and other equipment necessary for proper service delivery created a sub-optimal working condition at the hospitals which also diminished their autonomy and left them with a sense of helplessness at their workplace. This is alarming as such feelings of vulnerability and lack of control at workplace have reportedly led to decreased motivation and low self-esteem among the healthcare professionals.[26] Our participants were also experiencing exhaustion and fatigue resulting from the new work schedule and longer working hours which resonates with the global experiences of physicians during the COVID-19 pandemic.[27-29] In our study, doctors who were working at the dedicated COVID-19 hospitals described having a comparatively better experience in regards to the provision of PPE, essential amenities and financial incentives. On the contrary, the doctors who were working at hospitals other than the dedicated facilities felt discriminated against as they received inadequate support regarding safety measures, recognition and incentives compared to those working at the dedicated hospitals. They opined that their workload and risk of exposure to infection was as intense as the dedicated hospitals. But still, they had fewer manpower, PPE, diagnostic kits, oxygen cylinder and other equipment than the dedicated facilities, making it harder and more stressful for them to provide services during the pandemic. They also stated that they received very limited support from their authorities with the arrangement of safe accommodation, transport and meal during the pandemic, which was a cause of dissatisfaction and distress for them. A similar report of the inadequacy of these support to the doctors was presented by a quantitative study conducted in Bangladesh during the early stages of the pandemic.[30] Consistency of such findings among the doctors of Bangladesh is worrying, as Williams et. al have shown that the presence of stress, burnout and dissatisfaction among doctors has been associated with diminished competency and efficiency at work.[31] In order to improve the situation, the hospital

management should build a structured format or platform for open and honest interaction with the doctors and express a positive attitude towards the concerns they raised. In addition, adequate support regarding basic amenities and essential equipment at the workplace should be provided to make the doctors feel well-supported during a crisis like this. Evidence from other literature also suggests that appreciating the contributions of the doctors via providing incentives and public recognition should be done to lift their spirit and motivation at work.[32,33]

Several points regarding the team dynamic and work culture were revealed in the question of' belonging' at their workplace. Their work's normal flow and structure were severely disrupted due to the pandemic. With the new regulations and changes made at the healthcare facilities, many felt disconnected and displaced from their usual workplace roles. Some participants who were abruptly transferred to a different hospital due to the pandemic reported experiencing difficulties in adjusting to the new environment under these unstable circumstances. Even those who continued to work at their old workplace stated that the generalised feelings of fear and uncertainty often lead to dispute among the team members regarding the division of workload and scheduling; thus, creating a negative work environment. Some pointed out that not being able to properly socialise with the colleagues due to the safety protocols created an unusually grim environment at the hospital which might have aided to the communication barriers and disputes in the team. However, some doctors described that the pandemic brought on a unique sense of unity and shared purpose among the team members. Such sense of connection has also been reported elsewhere and it has been evident that these newfound feelings had made the doctors more compassionate and understanding towards each other's needs during this crisis.[34] Reflecting on their experiences, our participants from the dedicated COVID-19 hospitals reported the culture and harmony between teams to be better and the leadership to be stronger at their workplace compared to the doctors from other facilities. However, other participants experienced a lack of harmony between the doctors and other healthcare staff (e.g., nurses, medical technitians, etc.) at their workplaces, which often hindered the hospital's regular workflow. Their observation was that such lack of coordination and compassion among the staff happened because the element of inclusive leadership was missing at their workplaces. Previous research has also provided evidence that compassionate and inclusive leadership is an extremely critical component in preserving a positive, harmonious and supportive work culture at hospitals.[9,35] The issue of managerial and leadership weaknesses was also brought up by the majority of our participants when they talked about the nonexistence of mental health support at their workplaces. They stated that there was little to no scope of receiving any structured mental health support from their workplaces which has been reflected as a key leadership and managerial weakness in other studies.[36] Therefore, the hospital managers in Bangladesh need to pay proper attention to the mental health needs of the doctors and provide the necessary support to protect their psychological wellbeing so that they can function to the fullest of their capacities at both personal and professional levels.[37-39] Likewise, the managers and senior officials of the healthcare facilities must work on their leadership and interpersonal skills to better understand and address these needs of the doctors. In order to lift the morale of the doctors under challenging circumstances, the leaders need to find a way to make themselves more visible and approachable to their colleagues and subordinates.[40-42] Previous research has shown that resilient and successful leaders are capable of creating a positive impact on the team under stressful situations through meaningful communication and provision of essential learning opportunities.[33,43]

Finally, while taking about the impact of the pandemic on the 'competence' of the doctors at their workplaces, the participants also pointed out several challenges. For instance, their individual and cumulative workload had increased significantly due to longer working hours and added responsibilities during the pandemic, whereas insufficient manpower and equipment were at their disposal. This abrupt increase in workload led to burnout and fatigue among many doctors, and these findings resonate with the statements from a majority of the front-line physicians globally.[44,45] Lack of proper supervision and training of the other hospital staff (e.g. nurses, MTs, ward boys etc.) were also reported by our participants (especially by those who were not working at dedicated COVID-19 facilities) which often led to disruptive functionality of the hospitals and added to the workload of rest of the team. To mitigate these issues, the hospital managers need to ensure that there has been a fair and manageable workload division between the employees so that they do not feel burnt out in the long run. In order to enhance the competency and efficiency of the hospital staff, they also need to conduct mandatory training sessions at regular intervals for all to keep them updated on the newest guidelines and protocols on COVID-19. However, our participants told us that owing to the increased workload and altered service delivery structure of the hospitals, there was almost no time to focus or participate on their regular training and learning processes like normal times which resonates with the findings reported by Smyrnakis et al.[46] Our participants also felt that since the pandemic began, it has become difficult to conduct normal academic and training sessions as their supervisors were not as available. Most of them perceived such hindrance as nobody's fault, rather the undeniable demand of the situation. Nevertheless, almost everyone thought that this would, to some extent, deter their development as specialist physicians in their respective fields as they are unable to dedicate their time and attention to their usual learning and knowledge development processes. Therefore, despite the difficulties, it is important that the supervisors make time for the junior physicians and support them with their learning and development processes. If needed, the supervisors should seek additional support to lessen their workload so that they can devote more time to the training and supervision of the doctors and staff working under them. If being physically present at the hospital is not feasible for the seniors considering the current situation, then

they should conduct virtual training and learning sessions to ensure the continuity of education and career growth of the junior doctors.[47,48]

LIMITATIONS OF THE STUDY

At the time of conducting this study, no other known qualitative study had been conducted or published on this topic of immense importance. The advantage of this study is that it explored the work experiences of the front-line doctors of Bangladesh in detail during the early phases of the pandemic through in-depth discussions. Such prolonged engagement and open discussion with the participants have created an effective way to understand their perspectives and needs in their workplaces from different dimensions. As this study was done during the early phase of the pandemic, conducting a follow-up study at later stages can be useful in exploring whether there have been any notable changes in the workplace situation of the doctors or not.

The limitation of the study lies in the fact that it only explored the experience of the doctors and not the other healthcare professionals such as nurses and medical technologists, who are also an integral part of healthcare facilities. Therefore, it is recommended that similar studies be conducted among other groups of healthcare professionals to compare the experiences between groups and to get a complete picture of the core workplace needs of the healthcare professionals of Bangladesh.

CONCLUSIONS

This study has revealed the doctors' perspectives on their core workplace needs during the crisis period of the COVID-19 pandemic. It has provided a clear and comprehensive understanding of the overall situation of their workplaces. It has revealed how they were dealing with the changes that occurred as a consequence of the pandemic and what obstacles they were facing at their workplace, which not only hindered their ability to provide adequate services but also had a profound effect on their psychological and physical wellbeing. These findings provide a foundation for further research into the topic and signify the need to build a workplace capable of providing adequate support and protection to the doctors of Bangladesh who had served as the front-line heroes in the country's battle against the pandemic since day one.

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ETHICS STATEMENT

The authors declare that the research work meets all the required ethical guidelines. Ethical approval for the study was obtained from the Institutional Review Board of the Institution of Health Economics, University of Dhaka, Bangladesh (IHEirb120520-4).

DATA AVAILABILITY

The data generated and analyzed during the current study are not publicly available due to the confidentiality agreements with the participants. However, de-identified data may be available from the corresponding author upon reasonable request and with permission from the ethics committee, subject to ensuring that participant anonymity and confidentiality are maintained.

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All the authors mentioned have fulfilled the following 4 criteria:

- Substantial contributions to the conceptualization and designing of the research work; and the acquisition, analysis, or interpretation of data for this research; AND
- Drafting the work or reviewing it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be 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.

DISCLOSURE OF INTERESTS

The authors completed the ICMJE Disclosure of Competing Interest form (available upon request from the corresponding author) and declare no conflicts of interest.

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