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Health Professional Well-being and Preparedness During the Covid-19 Pandemic in Trinidad and Tobago: an Online Survey

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ABSTRACT

Introduction: Poor well-being impacts mental health and subsequently affects personal lives, leads to absenteeism, poor productivity, and compromised patient safety. Frontline healthcare workers are highly vulnerable to COVID-19 pandemic-related mental health strain. This study assessed the well-being and preparedness of frontline healthcare workers in Trinidad and Tobago during the pandemic.

Methods: An online cross-sectional survey was sent to doctors, nurses, and prehospital providers from public and private healthcare sectors. Data was collected from May to June 2020 utilizing a self- administered online platform. The WHO Five Well-being Index (WHO-5) was used to assess well-being. Raw scores less than 13 indicated that participants were at risk for depression. Descriptive statistics and content analysis were used to analyze data.

Results: There were 296 respondents comprising 55.4% (n=164) doctors, 30.1% (n=90) nurses and 14.5% (n=43) prehospital care providers. More than half of participants (55.4%, n=158) scored less than 13 on the WHO-5 indicating that these participants were at risk for developing depression. Approximately 80% of participants did not feel supported by their workplaces. Resident doctors had lower well-being levels (59.4% (n=60), i.e., well-being scores less than 13) compared to attending physicians (45.6% (n=26)), but this was not statistically significant ($p = 0.516$). Two main categories were identified in the content analysis: factors related to the working environment and coping with COVID-19.

Conclusion: Levels of well-being indicated that more than half of the participants were at risk for developing depression. The findings also suggested that workplaces should provide health workers with the basic protective resources required to perform their roles. It is imperative that health organizations increase awareness of well-being and mental health in workplaces and develop interventions to support healthcare workers.

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INTRODUCTION

There has been an increasing global focus on mental health and well-being, which has been further amplified by the COVID-19 pandemic. The World Health Organization defines mental health as a 'state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community' [1]. Well-being is another term commonly used but is often difficult to define. Dodge et al. have proposed a definition of well-being that considers it a balance between one's psychological, social, and physical resource pool and challenges faced in these areas [2]. Stable well-being occurs when individuals have the necessary resources (psychosocial and physical) to address any challenges they encounter. [2].

Mental, neurological and substance use disorders now account for 10% of the global burden of disease with depression listed as the third leading cause of disability in 2017 [3]. The economic impact of mental ill health has resulted in an estimated global loss of US$1 trillion in productivity [4]. Mental health in workplaces is also gaining attention. Workplace risk factors, which may contribute to poor mental health of employees, include inadequate health and safety policies, poor communication, and low levels of autonomy [4].

Addressing poor well-being and mental health is of paramount importance in the current COVID-19 pandemic, especially considering the healthcare workforce. Prior to the pandemic, health professionals were at an already high risk for burnout with the highest rates of burnout detected in frontline workers [5, 6]. Poor well-being, mental health and, burnout in healthcare professionals may affect patient safety leading to medical errors, low performance, and high staff turnover rates [7, 8]. The psychological impact on healthcare workers may additionally lead to disrupted sleep patterns, high rates of burnout and poor well-being in the long term [8].

Several articles have emphasized the need to support the well-being of health professionals during this pandemic—while several international organizations have produced support guidelines [9-11]. Within the Caribbean region, it is necessary to evaluate healthcare professionals' well-being and preparedness

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throughout this pandemic to develop and maintain long-term effective strategies and interventions. This study aimed to evaluate the psychological impact and preparedness of frontline health professionals during the COVID-19 pandemic in Trinidad and Tobago.

METHODS

Study design

An online cross-sectional survey design was used to evaluate the well-being and preparedness of frontline health professionals who had access to internet services. The survey was named 'Well-being and preparedness of frontline healthcare professionals during the COVID-19 pandemic in T&T'. The estimated time to complete the survey was 20 minutes and it was administered July – September 2020, four months after the first case of COVID-19 was confirmed in Trinidad and Tobago.

The survey instrument included a questionnaire designed by the researchers based on existing literature on well-being in health professionals and consensus opinions of the research team [12-14] (**see Supplement 1**). The questionnaire consisted of three sections: demographics, pandemic preparedness questions and the WHO 5 Well-being Index tool. There was a total of 24 closed-ended questions and four open-ended questions.

The 1998 version of the WHO 5 Well-being Index tool was used to assess the psychological well-being of individuals [15] and has been used previously in other developing countries [16, 17]. The WHO 5 Well-being Index raw score ranges from 0-25. A score less than 13 coincides with poor well-being and is considered indicative of a high risk for depression [15].

Given the public health restrictions implemented at the time of the study, an online survey format was considered most appropriate for gathering information in a timely manner. The survey was self-administered online using Google Forms. Convenience sampling was used to recruit participants. One previous study that evaluated the psychological impact of COVID-19 on health workers identified the overall prevalence of mental health disorders as approximately 31% [18]. Thus, the sample size for this study was calculated as 328 participants. The minimum sample size was 329 based on a 95% confidence interval, 5% margin of error and using a prevalence of 31% for mental health disorders based on a previous study [18].

Participants

The target group were medical doctors, nurses, and prehospital care providers (Emergency Medical Technicians, Advanced Emergency Medical Technicians, Paramedics) who attended to suspected or confirmed COVID-19 cases. This included professionals working in facilities in each administrative subset of the health system (Regional Health Authorities and private hospitals) and the national ambulance service (Global Medical Response of Trinidad and Tobago).

Participation was voluntary, no compensation was provided, and all responses were anonymous and confidential. An online participant information sheet and consent form were also provided to all potential participants; consent was obtained at the beginning of the survey.

Data collection

The survey was piloted on a sample of 20 healthcare professionals from the target population. The pilot aimed to assess ease of understanding of the questions. The questionnaire was subsequently amended based on the feedback. The survey was distributed by the respective medical, nursing, and prehospital care associations through their social-media platforms such as Whatsapp. At the end of the survey, participants were signposted to relevant support services.

Ethical approval was granted from the Ministry of Health Trinidad and Tobago, the University of the West Indies, St. Augustine Campus (CREC- SA.0397/06/2020), North Central Regional Health Authority and Eastern Regional Health Authority.

Data analysis

Statistical analysis was conducted using The Statistical Package for the Social Sciences, Version 23 (SPSS 23 for windows). Descriptive statistics were used to summarize data related to key professional characteristics and preparedness. A p-value less than 0.05 was considered statistically significant.

The data obtained from the free text responses were considered quasi-qualitative [19]. An exploratory content analysis was used to analyze the open-ended question asking what participants' places of work could do to support health professional well-being [20]. Two researchers (LD, SM) reviewed the codes and themes. The third researcher (DD) resolved any discrepancies. Initial codes were generated, and these were condensed into subcategories and main categories. Quotes representing the different categories are presented. Gender, profession, and experience level were linked to each category. The frequency of occurrence of major codes are also presented.

RESULTS

Demographics and Professional Characteristics

In total, 316 participants responded to the survey. Of these, 16 were removed because they were duplicate responses and four were removed as these were not health professionals who attended to suspected or confirmed COVID-19 cases. Thus, 296 responses were analyzed. The majority of participants worked in the public sector (72.6%, n=215) and were female (69.6%, n=206). The most common age group was 30-39 years (53.4%, n=158). Of the participants' professions, residents (junior doctors) accounted for 35.5% (n=105). **Table 1** outlines the demographic factors.

Preparedness and Psychological Well-being

When asked about training, 54.4% (n=161) stated that they did not have training related to mass casualties, disaster, or pandemics prior to the COVID-19 pandemic while 55.1% (n=163) felt somewhat prepared to manage suspected or confirmed COVID-19 cases. Participants were asked about the type of training received on how to use personal protective equipment: 41.9% (n=124) had training (written or video instructions) in donning and doffing PPE while 46.3% (n=137) stated they had no training related to respiratory mask fit. Of the respondents,

34.5%(n=102) agreed the correct level of PPE was available for use and 45.6% (n=135) felt somewhat confident in using PPE. The top four areas that mattered most to health workers were 'sufficient PPE' (n=245, 82%), 'transmitting COVID-19 to colleagues/family' (n=232, 78.4%), 'having sufficient resources generally' (n=216, 73%), and 'having official protocols and screening' (n=209, 70.6%).

When asked how supported participants felt by their workplaces, 5.4% (n=16) said they felt very supported by their workplaces; 35.8% (n= 106) said well-being services were available in their work places, and 9.5% (n=28) of respondents utilized well-being services after the pandemic was declared.

The median WHO 5 Well-being Index score was 11.43 (IQR 6-16) with 53.7 % (n=159) of participants scoring less than 13. Well-being scores were compared between attending physicians and residents. In the resident group, 59.4% (n=60) had well-being scores less than 13 compared to 45.6% (n=26) of attendings. However, the result was not statistically significant ($p = 0.516$; $p > 0.05$).

Table 1: Demographic Characteristics of Participant Population

Demographic	Results	N (%)
Age range	18-29 years	56 (18.9)
	30-39 years	158 (53.4)
	40-49 years	57 (19.3)
	50-59 Ears	23 (7.8)
	>60 years	2 (0.7)
Gender	Male	87(29.4)
	Female	206 (69.6)
	Prefer not to say	3 (1.0)
Occupation	EMT/Advanced EMT/Paramedic	43 (14.5)
	Residents (Junior doctor)	105 (35.5)
	Attendings (Senior doctor)	59 (19.9)
	Nurse	78 (26.4)
	Nursing assistant- ENA/PCA	11 (3.7)
Area of Work	Private sector	30 (10.5)
	Primary care	64 (22.4)
	Emergency department (hospital/district)	112 (39.2)
	ICU	21 (7.3)
	COVID hospital/COVID team	25 (8.7)
	Prehospital	29 (10.1)
	Elderly care home	5 (1.7)
	Other discipline	62 (21.7)

Analysis of Free Text Question - What Support do Health Professionals Want From Workplaces

The open-ended question asking participants to comment on what support healthcare professionals wanted from their workplaces resulted in 278 responses, the majority from female respondents. Most responses consisted of either one word or single sentences. Two overarching categories were developed with seven sub-categories. These are presented in **Table 2** along with supporting quotes. The frequency of each subcategory was also noted (**Table 3**).

Within the working environment category, health professionals wanted proper COVID-19 protocols and assurance that training would limit infection among staff and assist with preparations for patient management. The need for a safe environment was dominated by reports of staff requesting adequate supplies of personal protective equipment.

The second main category was coping with COVID-19. In this category, health professionals suggested the need for financial and non-financial compensation, seen as a reflection of appreciation. Health professionals also commented on the need for well-being and support services.

Table 2: What Healthcare Workers Want From Their Organizations

Category	Subcategory	Quote
Working environment- what staff want from the workplace	Desire for proper guidance	'Drills and debriefing exercises post actual/possible COVID exposure' (female, junior doctor, ED)
	The workplace should be a clean and safe place	'Provide PPE without having to beg for basic PPE such as surgical masks'. (female, junior doctor, other) 'Provide proper showering stations and areas for change' (male, EMT, Prehospital)
	Listen to staff concerns	'…I believe workers on the ground have no voice…'(female, junior doctor, dedicated COVID-19 team) 'Just listen to concerns… work with us not against us in matters' (female, nurse, elderly care home)
	Flexible working patterns	'Shorter shifts, longer breaks between shifts' (female, senior doctor, ED)
Coping with COVID-19 – what will help staff cope	Financial and non-financial compensation	'Allow persons to take a two-to-three-day break from work' (female, junior doctor, primary care) 'Financial renumeration' (male, junior doctor, ED)
	Accessing well-being and support services	'Not just during this pandemic but overall, they should have more confidential counselling available and ongoing. Not just when you ask for it, some persons do not know how to or may not want to ask for help.' (female, EMT, prehospital)
	Empathy and understanding	'Having a little more sympathy for the fact that there are a lot of workers who probably had no one to take care of their children and not assuming that the staff was being absent for no apparent reason.' (female, nurse, primary care) 'They could have been a little more understanding and supportive to employees by having support meetings and actually paying attention to employees who may not have been coping well (female, nurse, other)

Table 3: Frequency of Codes Identified in Content Analysis

Code	Frequency of occurrence
Protocols and training	25
Personal Protective Equipment	51
Compensation	56
Flexible working patterns	15
Support services	48
Listen to staff	15
Safe environment	6
Empathy	6

DISCUSSION

This online cross-sectional survey evaluated well-being and preparedness of frontline healthcare workers during the early stages of the COVID-19 pandemic in Trinidad and Tobago.

The majority of participants reported that they did not have training to prepare them for disasters or pandemics. PPE training was mostly via written instructions or videos and most participants expressed a lack of confidence in using PPE. This finding is similar to an UK study on frontline health workers conducted in the early stages of the pandemic, where less than half of participants were somewhat confident in their infection control training [21].

One rapid review found levels of depression among healthcare workers during the pandemic ranged from 8.9% to 50.4%; anxiety levels ranged from 14.5% to 44.6% [22]. In this current study, low levels of well-being indicated that half of the participants were at risk for developing depression. This result was higher than previous levels of depression identified in the general population of Trinidad and Tobago, which was estimated at 10% [23]. However, the result was consistent with the prevalence of psychological distress in the Trinidadian healthcare workforce during the early stage of the pandemic, in a study which assessed a broader range of health workers including doctors, nurses, pharmacists, laboratory technicians, and dentists [24]. There was an overall depression prevalence of 42%, anxiety: 56% [24]. Pre-pandemic studies conducted in the Caribbean also identified high levels of burnout among doctors and nurses in Jamaica and the Bahamas, with ED physicians having higher levels of burnout compared with other specialties [25-28]. Taken together, this body of literature indicates that though the pandemic certainly brought increased burden to the healthcare worker, burnout and psychological distress were already long-standing concerns among health professionals in the region.

The well-being levels in our study were worse compared to health workers in Nigeria and Saudi Arabia, which reported less than 30% of participants with poor well-being [29, 30], as opposed to our observed 53.7 % (n=159) of participants scoring less than 13 on the WHO Well-being Index. Although the Nigerian and Saudi Arabian levels of low well-being were considered high for their respective study populations, one possible explanation for overall difference from our investigation in the Caribbean is that these countries may have had experience managing previous health emergencies such as Ebola and MERS.

The findings of the content analysis also provided valuable insight into what healthcare workers wanted from their workplaces. Key themes related to PPE access, training, compensation, and psychological support services. Access to adequate personal protective equipment was a common theme in previous studies noting inadequate PPE as a risk factor for developing mental health problems in health professionals during the pandemic [21, 31, 32].

Health professionals in the current study also highlighted a need for compensation, whether financial or in the form of time off from work—similar to that identified previously as a form of appreciation and respect [32]. Access to well-being and psychological support services was also frequently mentioned. Staff identified several methods to cope, including formal well-being services and mental health days. Health workers in one UK study also valued psychological support services but noted that barriers to utilization of the service included a lack of awareness of services and access to services when needed [33]. Overall, these staff comments suggest that it is essential for workplaces to protect their health workers, both mentally and physically, while also providing them with the basic resources required to perform their roles.

The consequences of poor well-being and depression in the workplace include absenteeism and poor retention of staff [34]. In healthcare systems, an impaired workforce has the potential to affect all aspects of governance and can have negative effects on service to the community, sustainable delivery of care, and cost containment [35]. Therefore, a competent and healthy workforce is needed to provide high quality care in health systems.

Potential solutions to address low levels of wellbeing in the health workforce begin with an increased awareness and recognition of poor well-being in healthcare organizations. Evaluating levels of resilience amongst healthcare workers may also be useful to determine if this is another area that needs to be addressed [36]. While there is little research on the effectiveness of interventions to support healthcare worker well-being, some actions may be beneficial [37]. Ensuring that the organizational culture of the workplace focuses on well-being and has strong, compassionate leadership is a necessary step.

Healthcare organizations should focus on addressing structural and systemic risk factors such as safe working environments and flexible working hours. Involving staff in decision making related to strategies and solutions to improve well-being is a necessary and important step—which will allow staff to voice concerns and provide feedback.

Developing effective psychological service pathways will be beneficial. This should not be limited to formal counselling services but may include peer support systems within departments [37]. The introduction of psychological first aid training is another area that organizations should explore; this training is openly delivered by accredited bodies and often without direct costs [38]. These courses would build confidence in organizations to approach the subject of mental health and well-being, enabling leaders, managers, and health workers to identify those individuals who require support, as well as how best to aid them [39]. More than ever, there is a need to strengthen health services, including a targeted and measured approach to ensure the preservation of staff well-being.

LIMITATIONS

There were limitations to this study. The small sample size and convenience limits the generalizability of these results. The findings of the free text questionnaire were derived from single sentence or short responses, which may affect the richness of the data. As a result of the online method used to collect data, it was not possible to calculate a response rate . This was because email lists were kept private by associations used for sampling. The cross-sectional nature of this study also limits the results

to one specific point in time. Conducting longitudinal studies may be beneficial in providing trends of psychological distress throughout the pandemic and post pandemic period, providing insight into the long-term mental health impact of the pandemic on healthcare workers. Baseline data on levels of depression, anxiety, and psychological distress are limited for this healthcare worker population. Thus, is it difficult to determine if the levels identified in this study are truly higher than pre-pandemic levels.

CONCLUSION

This study assessed the preparedness and well-being of healthcare workers in Trinidad and Tobago during the early phase of the COVID-19 pandemic. The findings of the study provide insight into the low levels of well-being and the need for basic resources to be provided at the workplace. Prior to the pandemic, there were already high levels of burnout and psychological distress in health professionals in the Caribbean, which were likely exacerbated by the demands of the pandemic.

Workplaces should ensure that well-being and psychological support services are available. There needs to be a concurrent increased awareness among staff to allow access to the services when needed. Collaborative efforts between workplaces and staff should be emphasized during decision making regarding which interventions to implement and how to support staff well-being. This initial study may be used as a foundation for robust longitudinal studies assessing well-being among frontline health workers in the post-pandemic period.

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