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Enhancing frontline workforce volunteerism through exploration of motivations and impact during the COVID-19 pandemic

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ABSTRACT

Objectives: During a pandemic, healthcare workers are requested to volunteer for potentially high-risk frontline duties outside of usual hospital and primary care clinic settings in order to better serve vulnerable communities. Examination of volunteer motivations and impact of such experiences can drive more effective pandemic response efforts with regards to volunteer recruitment and retention. This study aims to explore the motivational factors underlying healthcare worker volunteerism in COVID-19 pandemic response operations in the community, and to describe the impact of such operations on volunteers, in order to highlight important volunteer recruitment strategies and ensure volunteer sustainability.

Methods: A qualitative phenomenological approach is taken in this study through the use of semi-structured individual interviews of healthcare staff, to provide in-depth exploration of personal experiences. Staff were purposefully sampled to ensure diversity of personal and professional backgrounds.

Results: A total of 35 staff, consisting of 17 males and 18 females from medical, nursing, allied health, and administrative backgrounds, who participated in COVID-19 community-based operations in migrant worker dormitories and swab isolation facilities were interviewed. The main motivational factors were volunteer functions of values, understanding and enhancement. Participants were positively impacted on personal and professional levels, including self-growth, societal awareness, as well as skills development in leadership and team management.

Conclusions: Healthcare organizations should consider volunteer functions in matching individual motivations to volunteer opportunities. Additionally, personal narratives and role-modelling by senior staff can serve as useful adjunct strategies to volunteer recruitment, while providing pre-pandemic preparedness, reassurance of safety, support, and recognition.

1. Introduction

The ongoing Coronavirus Disease 2019 (COVID-19) pandemic has reached unprecedented rates of morbidity and mortality even in the most developed nations [1]. Although Singapore’s national strategy and pandemic response have resulted in relatively low case rates compared to worldwide statistics, April 2020 saw a rapid surge in cases within the large migrant worker population [2]. Approximately one-fifth of Singapore’s population of 5.5 million people are migrant workers working predominantly in construction, marine and blue-collar work sectors, with 300,000 housed in dormitories and each resident having only 4.5 square metres of living space [3]. During Singapore’s three-month period of lockdown, termed locally as ‘circuit breaker’, the close proximity of the dormitory-housed workers contributed significantly to the rapid increase in positive cases, with a peak of more than 1000 new daily cases [4]. By the end of April 2020, there was a call for volunteers from public healthcare institutions to staff medical posts in 43 purpose-built dormitories and 8 medical posts serving factory-converted dormitories and temporary quarters at construction sites [3]. This government-initiated effort provided medical care for workers who had

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Volunteer staff at off-site medical posts included physicians, nurses, allied health professionals and hospital administrators. During the period of deployment, they encountered situations beyond their usual job scope or training. For example, they had to work closely with personnel from various government ministries, the police, and the armed forces. Due to the extremely high prevalence of the Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV2) in the working environment, they had to practise enhanced infection control measures such as donning personal protective equipment (PPE). Under such high-risk environments, some staff also took on new leadership roles and demonstrated adaptability and resilience while providing medical care to the vulnerable migrant worker population. By the end of August 2020, the nation was able to successfully clear the dormitories of COVID-19 through mass serology testing and interval routine rostered tests, phasing out medical posts and allowing volunteers to return to resume their usual jobs [5].

Given the important contribution of volunteers in such high-risk settings, understanding volunteer motivations and impact can inform more sustainable practices in volunteer recruitment. In studies that explore volunteerism during pandemics, personal factors such as perception of personal safety and feeling of moral responsibility or patriotic duty were associated with increased willingness to volunteer [6,7]. In addition, other factors related to work and educational experience such as awareness and knowledge of pandemic risks, prior pandemic response training and confidence in personal skills were similarly associated. From a social perspective, volunteering was also viewed as an opportunity to gain personal growth and community recognition [7]. The COVID-19 pandemic has seen an increase in volunteering behaviours, contributed by individuals of higher socio-economic status, with strong social support networks and past volunteer experiences, as well as extraverted, open, and agreeable personal characteristics [8,9]. Similar to past pandemics, social responsibility remained an important motivational factor for healthcare volunteerism [10]. Benefits of healthcare volunteerism during the COVID-19 pandemic include personal satisfaction and gains in professional experience, especially for those in junior or trainee positions [11].

### 1.1. Conceptual theoretical framework

Volunteerism generally refers to activities that are performed freely, usually on an unpaid basis, to benefit another individual, group, or cause [12,13]. In the context of formal healthcare volunteerism, volunteerism refers to healthcare workers who voluntary relocate from their regular jobs to participate in jobs that are of heightened risk, often involving activities outside their usual job scope [7,8,10]).

Despite its effortful, non-remunerative and occasionally risky nature, many individuals continue to devote significant amount of time and energy to engage in volunteer activities [14]. It has been theorized that although different individuals may engage in a similar volunteer activity, this same behaviour can serve different psychological functions [15]. These psychological functions, or, motivations, that drive individuals into volunteerism can be categorized into the following volunteer functions: values, understanding, enhancement, career, social relationships, and self-protection [16]. In this framework, an individual participates in volunteerism for the functions of: (1) Values, an expression of personal values such as humanitarianism; (2) Understanding, to develop or exercise skills; (3) Enhancement, to promote psychological growth and self-worth; (4) Career, for career advancement; (5) Social relationships, to build and strengthen social bonds and (6) Self-protection, to reduce guilt or address personal issues. This functional approach is selected for this study as it broadly encompasses important intrinsic motivations at both individual and societal levels, including personal gains that are not traditionally associated with the altruistic nature of volunteerism. This framework is used to characterize the motivational factors that drive healthcare workers to volunteer in potentially high-risk environments, with its associated inherent uncertainties and challenges. These volunteer functions also serve as a foundation on which individuals perceive the impact of their volunteer experiences. While most studies have explored individual factors associated with willingness to work during a pandemic using primarily quantitative methods [6-8,17,18], little is known about the impact of such work on the individuals themselves [12,19]. A deeper understanding of this impact through the potentially inspiring and meaningful stories from past volunteers is a form of narrative medicine that could inspire future volunteers [20]. This could in turn positively impact on volunteer recruitment, especially for individuals without prior similar volunteer experience [15].

As the pandemic continues to evolve, the need to deploy healthcare staff in unfamiliar settings will likely persist in the coming years. The objectives of this study are to describe the factors that motivate healthcare workers to volunteer during a pandemic and the impact that frontline volunteering has on healthcare workers. Through a clearer understanding of the motivational factors and impact of volunteer experiences, this study’s findings can highlight sustainable practices in volunteer recruitment, support, and retention especially in high-risk environments.

### 2. Materials and methods

#### 2.1. Setting, participants and study design

A qualitative phenomenological approach, using in-depth exploration of experiences, is used in this study to focus on healthcare workers’ interpersonal relationships and individual reflections on their lived experiences including personal challenges, learning and growth [21]. Potential participants from different healthcare institutions were iteratively and purposefully sampled to ensure diversity in professional and personal backgrounds. Participants were recruited via an email invitation from four sites involved in community-based COVID-19 operations including two large tertiary hospitals, one women’s and children’s hospital and outpatient primary care clinics. This study was approved by the SingHealth Centralised Institutional Review Board.

To elicit experiential descriptions from participants, in-depth semi-structured individual interviews were utilized and conducted via videoconferencing following informed consent using electronic signatures. Interviewers were authors CC and RS who are physicians and not involved in the professional evaluation of the participants.

#### 2.2. Interview guide

The interview guide was developed using literature on healthcare volunteerism and reporting to duty during previous pandemics [6,7,17-19,22]. In line with study objectives, questions encouraged exploration of key experiences and associated personal reflections (Table 1).

Participants were also requested to provide suggestions on measures to boost volunteerism for future initiatives. In addition, general demographic information, existing job scope and details on volunteer responsibilities were collected.

#### 2.3. Qualitative analysis

Interviews were offered until adequate saturation was reached for thematic content analysis. All sessions were audio recorded, with recordings subsequently deidentified and transcribed verbatim. Using thematic analysis, authors CC and RS independently reviewed the transcripts by hand to identify themes through descriptive phrases utilized by participants during interviews. Initial codes for volunteer motivations were generated based on the conceptual framework and the basis of each participant’s volunteer functions was determined. This was followed by detailed data analysis to explore the interactions between volunteer functions, past experiences, key memorable events during
3. Results

A total of thirty-five healthcare workers (9 physicians, 13 nurses, 7 allied health practitioners and 6 administrators) were interviewed. Eighteen (51.4%) were women. Participants were aged between 26 and 57 years with a median age of 35 years. A total of 12 (37.2%) participants reported having similar volunteer experiences either in social causes or overseas medical missions (8-22.9%) or while serving in the armed forces (5-14.3%). A few participants (4-11.4%) were actively involved in healthcare operations during previous infectious disease outbreaks, namely H1N1 influenza and SARS.

Participants worked in migrant worker dormitories as on-site or mobile medical teams, and in swab-and-isolation facilities that quarantined workers awaiting swab results. Types of responsibilities ranged from clinical (consultation, swabbing, nursing procedures, medication dispensing, and health counselling) to administrative (workflow planning, transport, and logistics). All participants were involved in direct patient contact and donned PPE when on-site.

In the following sections, quotations are attributed to participants who are physicians (‘P’), nurses (‘N’), allied health professionals (‘AHP’) or administrators (‘A’). The adjacent number corresponds to a randomly assigned numeral to the participant in their job category.

3.1. Motivation to volunteer

3.1.1. Intrinsic volunteer functions

The majority of participants described their main volunteer function as values: altruism with an intrinsic desire to help others especially the neglected and vulnerable, to give back to society especially migrant workers who contributed to nation-building, and a sense of moral duty as healthcare workers. A physician reflected: “it was largely a sense of duty when we signed up to be healthcare workers ... we signed up to be healthcare workers for fellow citizens” (P1). Similarly, an AHP shared his concern about the lack of other individuals volunteering, as “these people have no one that is there to help them” (AHP5). Although some participants experienced initial fear and uncertainty about volunteering, their concerns eventually diminished as they gained work experience and confidence.

Participants also reflected on a sense of duty to their colleagues, as they did not want certain fellow workers (e.g., those who were pregnant, with young families or caring for elderly parents) to be assigned to COVID-19 operations, which influenced their personal decision to volunteer. This was despite some of them also staying in the same residence as immunocompromised individuals, citing faith in infection control practices.

Similarly, participants holding senior positions in their usual workplace saw their decision to volunteer as role-modelling for more junior staff - a sense of duty to the healthcare system. Experienced individuals felt that their work experiences, personal skills, and previous training either in the armed forces or in prior outbreak responses would provide an advantage in the field.

Additionally, participants also described understanding and enhancement as an important volunteer function, as they sought to learn from the novel and direct hands-on experience. Some wanted to “look into what the migrant workers actually do ... because they are always in the background, and for once you can really see how they have contributed to our country” (P2), while others wanted to derive personal growth, as it was perceived that one can “learn a lot of things from (a) situation like this” (A2).

3.1.2. Extrinsic sources of motivation

While most participants cited self-motivation as the main driver for their decision to volunteer, few also mentioned extrinsic sources that enhanced this decision-making process. Two physicians had family members who were also volunteering in COVID-19 frontline efforts, one in China and one locally, and these experiences served as sources of inspiration to them.

Having had personal experiences with Severe Acute Respiratory Syndrome (SARS), the H1N1 influenza pandemic, and local disasters with significant mortality, some participants felt inspired by these events and the healthcare workers who contributed to them. A nurse shared: “I used to work through SARS ... I’ve seen it, I know what it looks like (N7).” One physician who had a classmate who contracted SARS recalled his medical school interview: “... the interviewer said, ‘if SARS comes back, would you be willing to go out there and risk your life?’ I remember telling him very confidently, ‘Yes!’ (P5)”

External events such as the media coverage of the rising infection rate in the migrant worker dormitories also played a role in their decision to volunteer. In particular, the stark difference between the number of migrant workers and locals affected served to enhance their awareness of social injustice and fuelled their desire to contribute to their health and welfare.

3.2. Impact of the volunteer experience – learning points and challenges

3.2.1. Individual impact

Many participants felt the experience enabled self-growth in many areas. They learnt the importance of patience, especially when faced with language barriers or when communicating with external teams such as the armed forces. They became more attuned that communication goes beyond verbal and facial expressions, due to PPE restricting their self-expression. A nurse described her observation of the paid, purpose-trained “swabbers”: “they are just like commanders, just tell the patient to sit, there, they don’t explain anything, they just directly swab – so inside my heart, it’s like, actually they can be treated better” (N3).

As the volunteers were taken out of their comfort zone, they were cast into unfamiliar roles and in the “eye-opening” (AHP1, N1, P3, P6, N11) process felt that they had gained significant leadership and interpersonal skills as well as practical experience, including conflict and team management. Due to the constantly changing workflows, they also learnt how to embrace change and become more adaptable and open-minded in order to improvise solutions. A nurse reflected: “I think it was good...
exposure for me because it’s not (part of) my usual job and it’s really something that I can, on the job, be constantly learning new things, and being able to challenge myself to catch up with everyday changes in the policy … so we have to really learn to adapt” (N5). Similarly, an administrator shared: “to learn how to deal with situations that change … how to deal with many voices … how to really think on your feet and how you are going to change as the situation evolves” (A2). Wearing PPE in a hot, humid climate was physically strenuous and demanding but participants found methods to cope including adequate pre-hydration and monitoring themselves and teammates for symptoms of dehydration. While personal sacrifices such as missing special occasions of family and friends or reduced physical contact with loved ones had to be made, participants prioritized their role in the national pandemic effort. They reflected upon their growth in resilience through learning to work despite trying conditions.

The experience also brought broader perspectives, with participants understanding more about ministerial level policy-making decisions, medical service administration and seeing beyond their immediate goals, as a medical resident shared: “it’s always good to have a bigger perspective … in the day to day work we are so worried about like getting through the postings and passing exams and things like that … but it’s only in these times that you’re reminded of that there are so many things outside your job …” (P3).

The volunteer experience also provided an opportunity for self-reflection. They appreciated their privileged personal circumstances and good health more, “… even a small canned drink can bring joy … I reflected … I appreciated how blessed we are” (AHP 4). They also collectively felt the importance of showing compassion to others: “Science is fluid, human life is fragile, and it’s important to have an open and big heart and to love one another” (P4). Many participants also felt a sense of self-satisfaction for their contributions, that they remained safe and healthy, and for the positive experiences gleaned. They felt that they were more in touch with humanity: “it’s not about fever, it’s not about cough” (N2), and the experience also provided affirmation for their career choice in healthcare. A nurse had also decided to change his career from inpatient to community nursing following the volunteer experience. The participants also felt deep appreciation from the migrant workers, as a physician shared: “Even behind their mask, they will really look you in the eye and say, ‘Thank You Doctor’” (P5).

3.2.2. Team impact

All participants mentioned the importance of teamwork. As an administrator shared, “It’s very interesting to see how everyone of different backgrounds all come together, with one heart one mind, just to really make sure the workers are fine” (A6). There was peer recognition of the efforts made by their colleagues, who went above and beyond the call of duty to ensure the wellbeing of the migrant workers and fellow team members. Given the nature of clinical work, primary care physicians felt respected and appreciated by their colleagues for their ability to provide holistic care compared to specialists. Participants also acknowledged the importance of supporting external teams, especially parties unfamiliar with pandemic preparedness such as hotel staff in isolation facilities: “(the hotel staff) didn’t sign up for something like this … (it was important) giving them the confidence that we looked after and cared about their health” (P1).

3.2.3. Societal impact

The experience of working with migrant workers enabled participants to interact with them on a much more personal level, allowing them to empathize with their collective worries and challenges. They were reminded about the importance of being mindful of societal inequalities, to acknowledge and respect cultural differences, and to ensure health equity. Participants were aware of their personal bias against the migrant worker community: “There was some intrinsic bias, I do view them differently … I had to struggle with how to reconcile this” (P8). However, this opportunity shed light on the reality of the migrant workers’ struggles: “… it might have been a bit hard for me to identify with their living conditions, or their difficulties in living in Singapore, and I wondered why some people were always so (driven) about social justice, but after this I realized that a lot of what was said is true, and it’s just hidden from the public” (P9). There was reflection upon how society-at-large should have anticipated and seen the migrant workers as the weakest link in controlling the country’s pandemic, “It’s a bit shameful, because we use them so much in our conservancy, cleaning, building, labour … but when it came to saving ourselves, we … forgot about them” (AHP1).

3.3. Considerations in promoting volunteerism

Participants recognized that volunteerism is primarily self-driven. While acknowledging that there are individuals who will consistently refuse to volunteer due to their own obligations or safety concerns, personal narratives could serve as powerful tools to provide reassurance to individuals considering volunteering: “Whatever the news they get it’s all from the news, they don’t really experience (it themselves), so I feel that all these lived experiences from us … is really very important they know this is going on, this is real, this is not just stories” (N9). Additionally, reminders of the importance of their role as healthcare workers may also spur volunteerism: “Sometimes it’s reminding them of why they joined medicine to begin with and why are they in the hospital … in public service to start with …” (A1).

Participants felt that the reassurance of strict and effective safety measures from senior leadership and healthcare management was crucial to volunteer recruitment. The provision of measures such as alternative accommodation and adequate PPE would safeguard volunteers’ health and build volunteer confidence.

Most participants received pre-assignment briefings and on-the-job training for physical preparedness. However, some felt that more information could have been provided for psychological preparedness, such as the anticipated workload and mental wellness support. A nurse shared that some administrators were only trained on infection control and PPE donning on-site, which was inappropriate given the high infectivity risk, potentially compromising personal and team safety. From a longer-term perspective, peace-time pandemic response training especially for younger staff would boost volunteer confidence in true healthcare crises if and when they arise.

While most participants felt supported by their families to volunteer, they felt that increased support from senior management would encourage more volunteerism from their clinical service, such as providing substitute manpower to cover their usual duties and “making sure that people have adequate resources when they need them and have a sounding board to come back to, and they can opt out when they want to” (P2).

For specialist trainees, deployment to off-site operations would have disrupted compulsory training rotations and attachments. Hence, recognition of working in COVID-19 operations as part of residency training requirements could further enhance resident volunteerism. While most participants felt that incentivizing volunteerism contradicts its premise, many were supportive of recognition of their contributions through non-financial means, such as official certificates or special mentions by senior management.

4. Discussion

This study adds to the existing literature on healthcare staff volunteerism during pandemics, enhancing current understanding of individual motivations and impact of volunteer experiences through qualitative data. A summary of the study findings and their associated implications for volunteer recruitment can be found in Table 2.

Healthcare worker motivations in previous pandemics, similar to this study, centred largely on a sense of responsibility and altruism [7,17]. This is understandable as altruistic and self-driven individuals often
pursue healthcare-related careers [23]. Seeking personal development is an important motivational factor for lay volunteers [19,9,24], which in this study is reflected through participants’ interest in gaining useful hands-on experience in a different healthcare setting, embracing its associated challenges as individual skills development. Role-modelling was a unique motivation in this study, which could potentially encourage volunteerism especially early in pandemics when safety concerns are likely to be paramount. Interestingly, there was little mention of career and social volunteer functions which are featured in other studies [7,9,24]. This is likely due to initial uncertainty of the impact of the volunteer experience on career advancement and social interactions. However, participants shared that these experiences provided avenues for career re-evaluation and appreciated the value of teamwork especially with mixed team compositions and unfamiliar team members.

Matching an individual’s motivations to the volunteer opportunities is a key recruitment strategy [16]. When persuasive messages tailored to an individual’s specific volunteer functions are used, not only are individuals more likely to express an intention to volunteer, but also derive greater satisfaction than those whose concerns are not met [25]. This study adds to the functional approach to volunteerism through contemporaneous examples of the six volunteer functions and illustrates how individuals motivated by such functions could be impacted by the volunteer experience.

Most literature focuses on the psychosocial impact of pandemic deployment on volunteers, with recommendations to support volunteer stressors and mental wellness [19,24]. Similarly, participants shared their physical and psychological challenges, and although most received support from teammates, they similarly valued organizational efforts to ensure adequate resources were made available. There are studies linking volunteerism to positive wellbeing [26,27], and this study further demonstrates that volunteers benefited additionally from gains in individual skills, attributes, and reaffirmation of personal values.

Studies that examine factors affecting staff willingness to work recommend national pandemic preparedness educational activities and measures for safeguarding staff health [6,7,15]. While these interventions would enhance volunteer confidence and provide safety reassurance, this study also demonstrates that personal narratives can also enhance volunteer recruitment. In this context, narrative medicine through personal stories and anecdotes of individuals working on the ground at the coalface, can provide even more powerful insights above and beyond the coverage of these volunteer efforts by the mass media and senior management, hence value-adding to existing volunteer recruitment strategies. Sustainability is also key in volunteer recruitment, and similar to previous pandemics, provision of high-quality training and information as the pandemic develops is crucial [7].

The main limitation of this study is context, as the Singapore healthcare system has remained relatively resilient throughout the pandemic [2], hence volunteerism instead of obligatory willingness to work was studied. However, in the context of the worldwide setting of essential workers shortfall with increased patient care demands [17], hospital restructuring would require staff to take on various high-risk roles including emergency triage and intensive care. Another limitation was the lack of data triangulation as interviewing participants’ superiors about the impact of the volunteer experiences on their daily work may be deemed unethical with breaching of confidentiality.

Future studies should consider the longer-term impact of staff volunteerism in high-risk areas, especially to determine if specific implementations to enhance volunteer recruitment have resulted in adequate operational manpower, staff satisfaction and wellness.

5. Conclusions

Healthcare volunteerism is driven by the functions of values, understanding and enhancement. Volunteerism can positively impact staff personally through self-growth and societal awareness, and professionally through skills development including leadership and team management. Volunteer recruitment can be enhanced through personal narratives of past volunteers, role-modelling by senior staff, pre-pandemic preparedness, and reassurance of safety, support, and recognition by healthcare management.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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