

Nursing Students' Willingness and Confidence to Volunteer in a Pandemic

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Hassan Al Gharash, RN, BSN , Morgan Smith, RN, M.Ed, PhD
and Lynette Cusack, RN, MHA, PhD

Abstract

Introduction: The current coronavirus disease 2019 pandemic may result in shortages of health care workers in some areas of the health care system. With adequate support, nursing students could potentially play a role in easing health worker shortages.

Objective: To describe and explore nursing students' willingness and confidence to contribute to the health care workforce during a pandemic.

Methods: A mixed-methods descriptive survey design was used to explore the perspectives of second-year nursing students at an Australian University. Quantitative data were analyzed using descriptive statistics. Qualitative data were analyzed using directed content analysis.

Results: A total of 280 nursing students were invited to complete the survey with a response rate of 32%. The majority of the participants showed moderate to high levels of willingness to volunteer in a pandemic. Of the participants, 50% reported slight confidence that their knowledge and skills would assist them during their volunteering. Reasons that influenced students' willingness to volunteer included perception of lack of personal protective equipment, need for incentives, fear of transmitting infection to family members, barriers to volunteering, inadequate knowledge and skills to handle a pandemic situation, study and clinical placement arrangements, and disease hazardousness.

Conclusion: Most nursing students have a level of willingness to volunteer but low confidence that their knowledge and skills would assist them while volunteering in pandemic situations. Universities and health care organizations can benefit from these findings by developing strategies to increase students' willingness to volunteer, as well as their confidence in their knowledge and skills.

Keywords

nursing students, pandemic, volunteer, volunteerism

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Introduction

The world is currently experiencing a coronavirus disease 2019 (COVID-19) pandemic. A pandemic occurs when a new disease spreads globally (World Health Organization [WHO], 2010). In the last two decades the world's citizens have witnessed various pandemic events such as the spread of the severe acute respiratory syndrome in 2003, the swine flu (H1N1 virus) in 2009, and very recently the COVID-19 from late 2019, which led to millions of deaths worldwide (WHO, 2021). The current COVID-19 pandemic is likely to continue for a period of time yet with implications for health services globally.

Pandemic events lead to an increasing demand for health care services as a result of the high rates of mortality and morbidity, potentially creating a shortage of health care

workers. Because nurses are on the front line in providing care to patients, they can be at high risk of contracting the infection, which could lead to a shortage of nurses (Choi et al., 2020). A shortage of such essential health care providers may severely hamper efforts to meet surges in demand for health services during a pandemic (Poortaghi et al., 2021). To alleviate any such shortages, recruiting volunteers with a nursing background might be required.

Adelaide Nursing School, The University of Adelaide, Adelaide, Australia

Corresponding Author:

Hassan Al Gharash, Adelaide Nursing School, The University of Adelaide, 4 North Terrace, SA 5000, Adelaide, Australia.
Email: hassansamia.algharash@student.adelaide.edu.au



Nursing schools/colleges are a potential source of volunteers during a pandemic. Nursing students, especially those who have completed a period of clinical placement in their nursing program, should have some of the necessary nursing knowledge and skills to assist the nursing workforce in a range of health care settings. Therefore, volunteer nursing students could play a valuable support role to nursing colleagues in the unprecedented times of a pandemic.

Review of Literature

Variability is evident in the literature on the level of willingness of nursing students to participate in pandemic situations. Inal and Kaya (2021) found that while 54% of the sampled nursing students were willing to volunteer during a non-biological disaster, far fewer students were willing to volunteer during pandemic events. Other studies on the willingness of nursing students to volunteer during a pandemic reported that 63% (Adejumo et al., 2021) and 68% (Yonge et al., 2010) of students were likely to volunteer during a pandemic with even higher number of students, about 77%, willing to volunteer if protective measures were provided (Yonge et al., 2010). Students were found to have about similar levels of willingness to volunteer in hospital and in community health (Yonge et al., 2010). Two different studies suggested a lower level of willingness to volunteer in the event of a pandemic; both reported that about 49% of the students sampled were willing to work during a pandemic (Natan et al., 2015; Patel et al., 2017). The extent that nursing students are willing to volunteer during a pandemic, therefore, is unclear.

Some evidence indicates why nursing students may be reluctant to volunteer during a pandemic. The results of Yonge et al. (2010) and Natan et al. (2015) suggest that lack of personal protective equipment (PPE), such as masks, gowns, eye protection, face shields, and gloves; need for incentives; and concern about their family's health were factors that could impact the willingness of the students to volunteer. Further understanding these issues from a nursing student's perspective could result in the development of strategies that could increase their willingness to volunteer.

How students' confidence in their knowledge and skills influences their willingness to participate during a pandemic is potentially important. Bandura's (1988) self-efficacy theory indicates that the level of confidence in knowledge and skills can impact a person's willingness to accomplish tasks. Thus, it can be important to identify nursing students' confidence in their knowledge as that might be a factor influencing their willingness to volunteer. Research into this aspect of willingness to volunteer during a pandemic is limited.

As nursing students' level of willingness to participate in a pandemic event varies and because there have been no studies about nursing students' confidence in their knowledge and skills for assisting in a pandemic, this study aimed to further describe and explore and understand

nursing students' willingness and confidence to assist during the pandemic in Australia by answering the following questions:

1. What influences nursing students' willingness to volunteer in a pandemic?
2. Are nursing students confident that their nursing knowledge and skills will assist them while volunteering in a pandemic?

Methods

Design

This study involved a mixed-methods descriptive survey. Second-year nursing students enrolled in a three-year bachelor of nursing program at one Australian university were invited to participate in the survey. The total number of second-year nursing students in the program was 280. Second-year nursing students have basic clinical nursing knowledge, skills, and experience of clinical placement, positioning them appropriately to be the sample for the study. First-year students were insufficiently prepared for the nursing workplace, and third-year students had greater study commitments and research related involvement, given their impending program completion, and so were excluded from participation in the study.

Data Collection Tool

The survey questions were based on Yonge et al.'s (2010) survey, which comprised 42 questions related to demographic data, sources of reliable health care information, general knowledge about pandemics, willingness to volunteer, and allocation of health care resources. To make the survey appropriate for the Australian context, some changes were made to the questionnaire. Changes were made to demographic questions, the general knowledge section and allocation of health care resources were deleted, and questions related to confidence level were added.

The questionnaire was divided into four sections. The first section addressed participant demographics. The second section addressed willingness to volunteer in a pandemic situation, and the third section addressed confidence in knowledge and skills. A four-point Likert scale was used to measure students' willingness to volunteer in a pandemic, as well as their confidence in their knowledge and skills. The last section related to other reasons that influence students' willingness to volunteer in a pandemic as expressed in answers to an open-ended question.

An e-mail with the survey's Uniform Resource Locator was sent to the students inviting them to participate in the study, and a reminder email was sent 10 days later. The period of data collection was 3 weeks, starting from early July 2020.

Data Analysis

The quantitative data were analyzed using the Statistical Package for Social Science software (SPSS) version 26. Descriptive statistics, including frequencies and percentages, were used to summarize the demographic data and for identifying the students' level of willingness to volunteer and level of confidence in their nursing knowledge and skills.

The qualitative data from the open-ended question were analyzed using directed content analysis, as described by Hsieh and Shannon (2005). In a directed content analysis, the initial themes are identified from previous research (Hsieh & Shannon, 2005). In this study, initial themes were identified from research by Yonge et al. (2010) and Natan, et al. (2015). The initial themes were: (1) lack of PPE, (2) the need for an incentive, (3) concern about one's own or family's health, and (4) convenient transportation.

Ethical Consideration

Ethics approval was obtained, number H-2020-105, from the Human Research Ethics Committee at the university where the study was conducted. The students were invited to participate in the study by a person uninvolved in the study, and no potential participants were students of the researchers.

Results

Demographic Data

There were 90 valid responses; thus, the response rate in the study was 32.14%. Female participants represented 94.4% ($n=85$), while male respondents represented 5.6% ($n=5$). A majority of the participants, 85.6% ($n=77$), were younger than 26 years old; a small proportion, 14.4%

($n=13$), were 26 years of age and older. Most of the participants, 62.2% ($n=56$), were single, while 36.7% ($n=33$) were married or in a relationship; only 1.1% were divorced or separated. Among the participants, 85.6% ($n=77$) were local students, and 14.4% ($n=13$) were international students.

Willingness to Volunteer in a Pandemic

Among the participants, 42.2% ($n=38$) had past volunteering experience, but only 7.8% ($n=7$) were currently volunteering. Most of the participants 65.6% ($n=59$) were not working as health care or nursing assistants; 34.4% ($n=31$) were working as health care or nursing assistants. Concerning the settings for volunteering, the largest number of participants, 41.1% ($n=37$), reported that it was very likely they would volunteer in a hospital. As for volunteering in community-based health services, the largest number of participants, 34.4% ($n=31$), reported that it was moderately likely they would (Figure 1).

Of the participants, 46.7% ($n=42$) reported they were moderately likely to volunteer if they were healthy, while 41.1% ($n=37$), 7.8% ($n=7$), and 4.4% ($n=4$) reported they would be very likely, slightly likely, and unlikely to volunteer, respectively. In terms of the willingness to volunteer if PPE were provided, 47.8% ($n=43$) reported they were moderately likely to volunteer, while 44.4% ($n=40$), 4.4% ($n=4$), and 3.3% ($n=3$) reported they were very likely, slightly likely, and unlikely to volunteer, respectively.

Confidence in Knowledge and Skills

The results of nursing students' confidence in their knowledge and skills show that 57.8% ($n=52$) of the participants

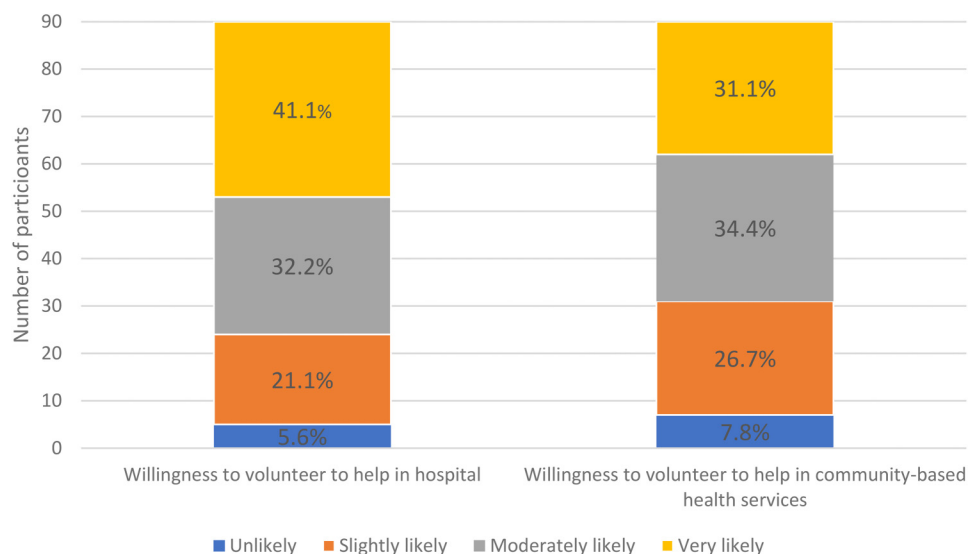


Figure 1. Nursing students' willingness to volunteer in hospitals and community health services.

Table 1. Nursing Student Confidence in Current Knowledge and Skills.

Question	Frequency (%)
Confidence in current knowledge and skills	
No confidence	0 (0%)
Slight confidence	9 (10%)
Moderate confidence	52 (57.8%)
High confidence	29 (32.3%)
Confidence that current knowledge and skills would assist during a pandemic	
No confidence	0 (0%)
Slight confidence	45 (50%)
Moderate confidence	35 (38.9%)
High confidence	10 (11.1%)

had moderate confidence in their current knowledge and skills, while 50% ($n=45$) had slight confidence that their current knowledge and skills would assist them while volunteering in a pandemic (Table 1).

Reasons Influencing Willingness to Volunteer

Among the participants, 21 responded to the open-ended question about students' willingness to volunteer. The directed content analysis (Hsieh & Shannon, 2005) of the free-response section suggests various reasons that may influence nursing students' willingness to volunteer. These reasons were categorized into seven main themes. Consistent with Hsieh and Shannon's (2005) directed content analysis three themes closely reflected the original analysis framework from previous studies of Yonge et al. (2010) and Natan et al. (2015). That is perception of lack of PPE, need for incentives, and fear of transmitting infection to family members. New themes included additional barriers to volunteer arrangements, perceived inadequate knowledge and skills to handle a pandemic situation, study and clinical placement arrangements, and disease hazardousness.

Perception of lack of PPE. Comments suggest participants considered PPE-related issues might impact their willingness to volunteer. PPE can reduce the risk of contracting the infection and protect those working on the pandemic front line. Comments from participants included:

- [Availability of] PPE (comment 3).
- Lack of PPE (comment 5).
- Lack of protective equipment (comment 16).

Need for incentives. Comments suggest incentives were important motivators, and absence of incentives could impact nursing students' willingness to volunteer. Participants who already engaged in unpaid placements

may have found it unappealing to engage in further unpaid work. Comments from participants included:

- Some sort of incentive, such as credit towards degree (comment 8).
- More time unpaid is unlikely in a hospital (comment 9).

Fear of transmitting infection to family members. Comments indicate that living with family and having elderly and/or high-risk family members are among the reasons that might influence participants' willingness to volunteer. Working in the front line during pandemic events increases the risk of contracting the infection. Living with family members who could potentially acquire the infection from the student may impact their willingness to volunteer. Comments from participants included:

- A few of my family members are high risk (comment 3).
- A few members of my direct family are high risk (comment 11).
- Living with elderly family (comment 12).
- I still live with my family, therefore I would be risking their health as well (comment 13).

Barriers to Volunteering. Comments suggest that barriers to volunteering might be related to the place of volunteering, co-workers' attitudes, or even linguistic obstacles. Volunteer arrangements, including access to appropriate transportation, could be a barrier to volunteering. Comments from participants included:

- Transport to the hospital, location of hospital/ care facility (comment 7).
- Nursing staff often make it seem as though having students around is a chore rather than a good/helpful thing (comment 10).
- As I'm an international student, I think I have a language barrier (comment 14).

Inadequate Knowledge and Skills to Handle a Pandemic Situation. Comments suggest participants' level of knowledge and skills, as well as uncertainty around their ability to handle a pandemic situation, can impact their willingness to volunteer. To handle a pandemic situation, adequate knowledge and skills related to pandemic events are required. Comments from participants included:

- Not sure if we are well prepared to work in this kind of situation (comment 2).
- Skills and knowledge for a particular area to volunteer in (comment 11).
- The required duties from us as volunteers (comment 15).
- How to protect our own safety (comment 20).

Knowledge and skills for the area of volunteering (Comment 21).

Study and Clinical Placement Arrangements. Comments mention arrangements or plans related to the participants' study agenda. Course assignments and/or exams, and clinical placement requirements may impact nursing students' willingness to volunteer during pandemic events. Comments from participants included:

Time involved in volunteering because we have to attend clinical placements (comment 1).

Depending on the amount of schoolwork and exams at the time requested to volunteer (comment 4).

Exposure to COVID may have a negative impact on placement opportunities for a university degree (comment 6).

Disease Hazardousness. Comments suggest participants' willingness to volunteer is influenced by reported death rates from the disease and disease-related issues. The type of disease and the risks posed to health are significant considerations. Comments from participants included:

COVID-19 does not seem very deadly to the youth/healthy (I note there have been cases of healthy people dying, but a small %). However, if it had the same death rate for young and old, it would be worrying and off-putting (comment 17).

Chronic health conditions making me more concerned about the outcomes of my own health should I get sick (Comment 18).

Disease severity (Comment 21).

Discussion

Nursing students are a potential and important human resource for supporting the nursing workforce during a pandemic. The findings of this study provide insight into nursing students' willingness to volunteer in a pandemic. These findings are consistent with previous studies in that the perception of a lack of PPE, need for incentives, and concern for their family's health are reasons that may influence the willingness of nursing students to volunteer during a pandemic (Natan et al., 2015; Yonge et al., 2010). Other possible reasons not previously reported include level of knowledge and skills, volunteering arrangements, the demands of study and clinical placements, and disease hazardousness.

The study's findings revealed that most nursing students would be moderately likely or very likely to volunteer during a pandemic if they were healthy and they were assured that PPE would be provided. These findings vary from the reported findings of two previous studies, conducted in Israeli universities and a university in the United States, in terms of nursing students having a moderate level of willingness to volunteer in a pandemic (Natan et al., 2015; Patel

et al., 2017). The findings of this study, however, are supported by previous studies conducted in Canadian and Nigerian universities, where it was reported that nursing students had a high level of willingness to volunteer in pandemic events if they were able to do so and they knew PPE would be provided (Adejumo et al., 2021; Yonge et al., 2010).

This study's findings indicated that despite most nursing students having a moderate level of confidence in their nursing knowledge and skills, they had lower confidence that their second-year nursing knowledge and skills would assist them in volunteering during a pandemic. A correlation was found between the level of knowledge of evidence-based practice and confidence in applying evidence-based practice knowledge in the clinical settings for occupational therapy students (Huber et al., 2015). Therefore, the low level of confidence in knowledge and skills for assisting during a pandemic could also be due to students' perceived lack of specific preparation for such a situation, which in turn could influence their willingness to volunteer in a pandemic. This may indicate that Bandura's (1988) theory for self-efficacy is applicable to nursing students' confidence in their knowledge and skills and their willingness to volunteer in the event of a pandemic. Moreover, while the result of Adejumo et al. (2021) suggested that the level of knowledge did not influence the students' willingness to volunteer during COVID-19 pandemic, this study suggests the level of knowledge and skills needed to cope with a pandemic could be an important consideration influencing nursing students' willingness to volunteer. This issue may be due to the absence of pandemic preparedness courses in Australian nursing curricula (Cusack et al., 2010; Usher & Mayner, 2011).

The findings of this study indicated that the majority of nursing students have an interest in volunteering in a hospital, rather than in community-based health services during a pandemic. This finding is different from a study conducted in a Canadian university where nursing students reported a similar level of willingness to volunteer in a hospital and in community-based health services in the event of a pandemic (Yonge et al., 2010). Although the exact factors for preferring hospital settings rather than community settings were not investigated, there could be some reasons for a preference for the hospital setting. One reason for this preference could be the nature of nursing curricula, which can include more knowledge and skills related to hospital settings than community ones (Van Iersel et al., 2019). Moreover, nursing students believe they receive more professional experience in hospital settings than in community settings (Toren et al., 2012).

Limitations

The study has several limitations that can influence the generalizability of its results. One limitation is the use of a

convenience sample from one Australian university, suggesting the sample may not be representative of other universities' nursing students. Another limitation of the study was the fairly low sample size and response rate. The inclusion of first-year and third-year nursing students may have resulted in the identification of additional issues. In addition, the study did not examine the associations among the data; thus, no conclusion can be drawn regarding the relationship between the level of willingness to volunteer and reasons that can influence that willingness. Moreover, this study employed a self-reported survey for data collection, which may limit the validity of the results because some participants might have inaccurately presented their perceptions.

Implications for Practice

Universities and health care providers need to work together if health care services are to benefit from volunteer nursing students during a pandemic. Universities could integrate pandemic preparedness content early in their nursing curricula, which could increase all year students' knowledge and skills for a pandemic, resulting in an increased confidence in their abilities and thus willingness to volunteer. Universities and health care organizations should create protocols for the recruitment and protection of nursing volunteers, including access to appropriate PPE and adequate incentives. Such protocols could assist in organizing the volunteering process and in attracting volunteers.

Future research can repeat the study with a larger sample size from various universities in Australia and in different countries since students from different cultures and/or religions may have different levels of willingness to volunteer and different reasons that could influence that willingness. Furthermore, future research could compare the level of confidence in specific knowledge and skills that will assist in volunteering between nursing students and other students in the health sciences, such as medical and public health students, which may assist in developing integrated pandemic preparedness courses for health care students.

Conclusion

In this study, the vast majority of nursing students demonstrated a moderately likely or a very likely willingness to volunteer during a pandemic if their particular issues and concerns were addressed. Thus, in the event of a pandemic, nursing students could be willing to support a nursing workforce under threat. Although most nursing students have a moderate to high level of willingness to volunteer, they have low confidence that their current knowledge and skills would assist them in providing the necessary patient care while volunteering, which may negatively impact their willingness to volunteer. Therefore, pandemic preparedness courses could improve students' confidence in their nursing

knowledge and skills as well as their willingness to volunteer.

Uncertainty about what would be required of a student volunteering during a pandemic event given their level of knowledge and skills is an important issue. Therefore, more attention could be given to a coordinated collaboration between universities and health care organizations. The aim of these collaborations would be to gain clarity around the types of roles nursing students would undertake in their local health service, if they were required, the level of students' preparation on understanding health care responses to a pandemic, and the resources that would be available for students, such as PPE. These joint activities could increase students' willingness to help and would attract more volunteers to support the nursing workforce during a pandemic.

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ORCID iD

Hassan Al Gharash  <https://orcid.org/0000-0003-3728-4839>

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