



eISSN: 2281-7824

<https://www.pagepressjournals.org/index.php/hls/index>

Publisher's Disclaimer. E-publishing ahead of print is increasingly important for the rapid dissemination of science. The **Early Access** service lets users access peer-reviewed articles well before print / regular issue publication, significantly reducing the time it takes for critical findings to reach the research community.

These articles are searchable and citable by their DOI (Digital Object Identifier).

The **Healthcare in Low-resource Settings** is, therefore, e-publishing PDF files of an early version of manuscripts that undergone a regular peer review and have been accepted for publication, but have not been through the typesetting, pagination and proofreading processes, which may lead to differences between this version and the final one.

The final version of the manuscript will then appear on a regular issue of the journal.

E-publishing of this PDF file has been approved by the authors.

Healthc Low-resour S 2024 [Online ahead of print]

To cite this Article:

Siswadi Y, Saputra BA, Lebdawicaksaputri K. **Correlation between the 4Cs and motivation to become volunteers among nursing students.**

Healthc Low-resour S doi: 10.4081/hls.2024.12100

 ©The Author(s), 2024

Licensee [PAGEPress](https://www.pagepressjournals.org/), Italy

Note: The publisher is not responsible for the content or functionality of any supporting information supplied by the authors. Any queries should be directed to the corresponding author for the article.

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article or claim that may be made by its manufacturer is not guaranteed or endorsed by the publisher.

Correlation between the 4Cs and motivation to become volunteers among nursing students

Yakobus Siswadi, Bima Adi Saputra, Kinanthi Lebdawicaksaputri

Faculty of Nursing, Universitas Pelita Harapan, Jakarta, Indonesia

Correspondence: Bima Adi Saputra, Faculty of Nursing, Universitas Pelita Harapan, Jakarta, Indonesia.
E-mail: bima.saputra@uph.edu

Key words: factor, nursing student, volunteer motivation.

Contributions: YS, resources, supervision, conceptualization, data curation, validation, visualization, writing - original draft, review and editing; BAS, conceptualization, formal analysis, methodology, validation, and writing - original draft, review and editing; KL, validation, and writing - original draft, review and editing.

Conflict of interest: the authors declare no conflict of interest.

Ethics approval and consent to participate: this research has received ethical approval from Mochtar Riady Institute for Nanotechnology Ethics Committee 001/MRIN-EC/ECL/I/2021. During the study, the researchers paid attention to the ethical principles of information to consent, respect for human rights, beneficence, and non-maleficence.

Informed consent: written informed consent was obtained for anonymized respondent information to be published in this article.

Funding: this research was supported by a research grant from LPPM UPH with contract number 497/LPPM-UPH/XI/2020.

Availability of data and materials: all data generated or analyzed during this study are included in this published article.

Acknowledgments: the authors are thankful to LPPM Universitas Pelita Harapan for their valuable insights and contributions to this study.

Abstract

During the COVID-19 pandemic, there was a surge in public enthusiasm for volunteering, including among nursing students from the Faculty of Nursing at Universitas Pelita Harapan (UPH). The UPH nursing faculty has a foundational framework known as competence, compassion, commitment, and character (4Cs), which serves as the basis for shaping each student's personality. This study aimed to explore how the 4Cs foundational framework motivates students to become COVID-19 volunteers. Using a quantitative descriptive design with a cross-sectional approach to data collection, the study focused on UPH nursing students who volunteered for COVID-19 relief efforts, with a sample size of 100 respondents. Data analysis was conducted using Somers Δ . The findings revealed that the majority of respondents exhibited adequate motivation to volunteer, with 60% falling into this category, while 22% showed a high level of motivation. Notably, the factors of commitment ($p=0.004$) and character

($p=0.009$) demonstrated a strong correlation with encouraging nursing students to volunteer. Conversely, competence and compassion did not show a significant correlation with students' motivation to volunteer. Among the four driving factors, only commitment and character were statistically related to students' motivation to become volunteers.

Introduction

The COVID-19 pandemic in Indonesia affected all aspects of life.^{1,2} One of the biggest effects was in healthcare because of the increasing number of cases in a very short time and the spread across various regions.³ Based on data from the COVID-19 handling task force as of October 9, 2020, the confirmed cases in Indonesia were 320,564; positive cases were 64,924 (20.3%); recovery cases were 244,060 (76.1%); and deaths were 11,374 (3.6%). The cases were spread across 34 provinces, with the highest number of cases in Jakarta with 83,372 cases (26.0%), followed by East Java at 46,095 (14.4%); and the least cases in Bangka Belitung at 440 (0.1%).⁴ Moreover, according to the World Health Organization, in April 2020, more than 22,000 health workers worldwide were infected with COVID-19.⁵ Based on Media Indonesia, from March to August 2020, there were 295 healthcare workers who were exposed, and 89 of them died. The Indonesian Doctors Association stated that as of September 13, 2020, 115 doctors had died due to COVID-19.⁶

The increasing number of cases is not equal to the number of available healthcare facilities and workers.⁷ To meet the need, the government took steps by opening an emergency hospital and inviting community participation to be directly involved in dealing with the COVID-19 pandemic by volunteering.^{8,9} Public enthusiasm for volunteering is very high, as evidenced in three days (March 25-28, 2020), when as many as 5816 people, including 4008 (68.9%) non-medical people and 1808 (31.1%) medical personnel have registered themselves as COVID-19 volunteers.¹⁰ According to data from the Indonesian Ministry of Health, as of September 4, 2020, there were 16,247 volunteers from health professionals within the Nusantara Sehat project, which spread all over Indonesia to deal with COVID-19.¹¹

Driving factors for people to become volunteers are altruism and self-interest. The concern altruism is to help others, meanwhile, the need for self-interest or self-serving is to gain experience or learn new things.^{12,13} Other researchers categorized extrinsic (egoistic) as gaining new working experience or meeting the class requirement and intrinsic (altruistic) as the will to help others to create a better community.¹⁴ Medical students play an important part in responding to participation in the COVID-19 diseases.¹²

Volunteering is related to the level of spirituality: the lower the spirituality, the higher the burnout level.¹⁵ Calling plays a significant role in volunteering: someone who is motivated by calling will be able to focus on bigger group goals and not financial needs, ego, or individual career.^{16,17} The Faculty of Nursing Universitas Pelita Harapan (UPH) supports government programs by opening volunteer opportunities for students. The debriefing and explanation about volunteers have been disseminated to all students, including service areas, health protocol procedures, and benefits obtained. Students who are willing and involved as volunteers are low because there are only 162 students (14.7%).¹⁰ This low participation rate in volunteering seems not to be reflected in the implementation of the foundational framework, which consists of the competence, compassion, commitment, and character (4Cs). These frameworks prepare and equip all students to serve God by serving others. If public participation is low, it will cause a personnel shortage, which leads to extra work, fatigue, and finally a reduction in the quality of service. The objective of this study was to investigate how the 4Cs foundational framework influences students' motivation to participate as volunteers during the COVID-19 pandemic.

Materials and Methods

Research design

This quantitative correlational research employed a cross-sectional approach in exploring and describing the factors driving nursing students to become COVID-19 volunteers at a specific point in time. The study was explained to elucidate the relationship between the 4Cs of respondents, and their motivation to engage as COVID-19 volunteers.

Study participants

The sample for this study comprised nursing students who volunteered for COVID-19 initiatives. The sampling method employed probability sampling, specifically total sampling, with a total of 100 respondents.

Variable, instrument, and data collection

Independent variables consist of competence, compassion, commitment, and character. The dependent variable was the respondents' motivation to become COVID-19 volunteers. The questionnaire in this study consisted of the Self-Compassion Scale to measure the compassion of volunteers, the Brief Calling Scale to measure commitment, the Intrinsic Spiritual Scale to measure character, and the Achievement Index to measure competence. Meanwhile, the Volunteer Motivation Inventory instrument is used for measuring volunteers' motivation.

The validity and reliability tests of the instrument were carried out on 31 volunteers from UPH nursing students. Based on the validity and reliability tests, all the question items were declared valid with an r -table value >0.355 and a significance level of 5%. Meanwhile, for the reliability test, Cronbach's α values were obtained for each instrument: the Self-Compassion Scale (0.781), the Brief Calling Scale (0.677), the Intrinsic Spiritual Scale (0.909), and the Volunteer Motivation Inventory (0.913). Because the values of Cronbach's $\alpha >$ the values of the r -table, the whole instrument is declared reliable. Data was collected by distributing online questionnaires using Google Forms to nursing students who volunteered during the COVID-19 pandemic.

Data analysis

The Somers-d (or Somers Δ) statistic test was used to see the relationship between independent and dependent variables.

Ethical clearance

This research has received ethical approval from the Mochtar Riady Institute for Nanotechnology Ethics Committee 001/MRIN-EC/ECL/I/2021. During the study, the researchers paid attention to the ethical principles of information to consent, respect for human rights, beneficence, and non-maleficence.

Results

This study was conducted at a private university in Tangerang, Indonesia. The demographic characteristics of the respondents in this study show that of the 100 respondents, 78% were women, and the mean age was 20.57 (standard deviation=1.827, minimum 18 to maximum 23).

Table 1 indicates that the majority of respondents exhibited moderate motivation to volunteer, with 60 respondents (60%) falling into this category, while 22 respondents (22%) showed high motivation. In terms of competency as a driving factor, 75 respondents (75%) were classified as having good competency. Similarly, with compassion, commitment, and character as driving factors, the majority of respondents fell into the moderate category, with 55 respondents (55%), 56 respondents (56%), and 71 respondents (71%), respectively.

Table 2 presents the relationship between volunteer motivation and the factors of competency, compassion, commitment, and character. In the results of statistical tests using Somers Δ and γ , it was found that only two factors have significant values of <0.05 , namely the commitment factor (0.004) and the character factor (0.009), which indicates that there was a significant relationship between these factors on the motivation of nursing students to become COVID-19 volunteers.

Discussion

Based on the results of this study, it was found that most respondents had moderate motivation. This may be due to the fact that the respondents are in their late teens (18-23 years old). This finding is in line with the previous study, in which the researchers found that younger volunteers tended to be more motivated by career functions than older volunteers.¹⁸ Young people are involved in volunteering in terms of benefits, needs, and reasons.¹⁹ In other words, students are more likely to have good motivation because of their desire to gain experience so that they can develop and progress.²⁰ This is also in line with the self-determination theory, which has the basic assumption that individuals naturally and actively orient themselves toward growth and self-organization.²¹

In this study, the commitment and character factors in students had a strong relationship in motivating nursing students to become healthcare volunteers during the COVID-19 pandemic. The commitment factor has a strong value in driving motivation in nursing students to become volunteers. In this study, the commitment was measured using the Brief Calling Scale. It focuses on two aspects, such as the presence of calling and the search for calling.²² The commitment of nursing students can be in the form of awareness of their calling to serve and help so they can contribute to others. This is in accordance with the value of commitment taught to nursing students, namely how students can demonstrate commitment to serve through service to others. In the foundational framework of the Faculty of Nursing at UPH, commitment means ministering to others with an attitude of service in response to God's grace. Commitment, satisfaction, and motivation are important characteristics for a person to become a volunteer.¹⁸ Calling on medical students to become volunteers during the COVID-19 pandemic is a liaison for medical students' behavior to become volunteers during the COVID-19 pandemic.^{20,23}

Another strong factor that drives nursing students as respondents to volunteer is character. The respondents in this study were educated to be able to have a godly character in words, actions, and attitudes; specifically, what is meant by this godly character is that every word, deed, and attitude is always centered on Christ. Belief in God is a strong predictor of volunteer involvement, influencing individual attitudes, whether voluntary or involuntary, towards service as a volunteer.^{24,25} Spirituality plays an important role in one's coping mechanisms when suffering or witnessing others suffer.²⁶ A person's beliefs or religion can influence someone to become a volunteer. These beliefs will influence a person's values and motives in viewing good relationships between people.^{27,28} Based on this explanation, it can be concluded that the respondents in this study were trained to continue to have a divine character with a passion for serving others. This allows divine character to have a strong relationship to the respondents' motivation to become volunteers during the COVID-19 pandemic.

In this study, competency and compassion factors are not the motivating factors for nursing students to become volunteers. This can be due to several things, including the characteristics of the respondents. In this case, the nursing students who become respondents are quite diverse. The competency factor of nursing students who become respondents can be related to their level of skills, and education, including the academic stage and the nurse's professional education stage. Lack of training and knowledge has become a barrier to volunteering.²⁹ Compassion is something that cannot be separated from the nursing process because the subject of nursing is humans, so by having good compassion, nurses will have good morals and a sense of humanity.³⁰ The significant factors that can predict compassion in students are humanity and mindfulness in nursing students.³¹ Low self-compassion could contribute to worsening the response to participating in volunteer work.³²

The limitation of this study is that the researchers only focused on the 4Cs foundational framework. These aspects may evolve throughout the student's academic journey, and future research might benefit from examining them post-graduation.

Conclusions

In the wake of the COVID-19 pandemic, community health faces significant threats, and the healthcare system grapples with considerable challenges. Nursing students have the opportunity to actively contribute to pandemic response efforts by volunteering, thus bolstering the resilience of the healthcare system. The study revealed that, among the four driving factors, only commitment and character significantly correlate with motivation to volunteer. Therefore, it is crucial for faculties to support and cultivate students' commitment and character. Incorporating activities such as self-reflection into learning sessions can help nurture these qualities in students. Further research could explore additional factors influencing nursing students' decisions to volunteer.

References

1. Djalante R, Lassa J, Setiamarga D, et al. Review and analysis of current responses to COVID-19 in Indonesia: period of January to March 2020. *Prog Disaster Sci* 2020;6:100091.
2. Mistry SK, Ali AM, Yadav UN, et al. COVID-19 related anxiety and its associated factors: a cross-sectional study on older adults in Bangladesh. *BMC Psychiatry* 2022;22:737.
3. Nurlinawati I, Sumiarsih M, Andarwati P, et al. Determinants of risk factors for COVID-19 transmission in densely populated areas: Insights from the first wave of the pandemic. *Electron J Gen Med* 2023;20:em531.
4. Satgas COVID-19. Peta Sebaran COVID-19. 2021. Available from: <https://covid19.go.id/peta-sebaran>
5. WHO. Coronavirus disease 2019 (COVID-19): situation report, 82. Available from: <https://iris.who.int/bitstream/handle/10665/331780/nCoVsitrep11Apr2020-eng.pdf?sequence=1&isAllowed=y>.
6. CNN Indonesia. 295 tenaga kesehatan jatim terjangkit corona, 23 meninggal. Available from: <https://www.cnnindonesia.com/nasional/20200714142414-20-524496/295-tenaga-kesehatan-jatim-positif-corona-23-meninggal>. [Material in Indonesian].
7. Efendi F, Aurizki GE, Auwalin I, McKenna L. The need for speed: a qualitative study on nurse recruitment and management amidst the COVID-19 pandemic in Indonesia. *J Multidiscip Healthc* 2022;15:1809-17.
8. Lazarus G, Findyartini A, Putera AM, et al. Willingness to volunteer and readiness to practice of undergraduate medical students during the COVID-19 pandemic: a cross-sectional survey in Indonesia. *BMC Med Educ* 2021;21:138.
9. Nugraha D, Salamah S, Luke K, et al. Evaluation of health-related quality of life and mental health in 729 medical students in Indonesia during the COVID-19 pandemic. *Med Sci Monit* 2023;29:e938892.
10. Martin B, Kaminski-Ozturk N, O'Hara C, Smiley R. Examining the impact of the COVID-19 pandemic on burnout and stress among US nurses. *J Nurs Regul* 2023;14:4-12.
11. Kominfo. Fasilitas dan tenaga kesehatan berbagai daerah sudah disiapkan menangani pasien covid-19. Available from: https://www.kominfo.go.id/content/detail/29414/fasilitas-dan-tenaga-kesehatan-berbagai-daerah-sudah-disiapkan-menangani-pasien-covid-19/0/virus_corona
12. Tran QA, Nguyen HTT, Bui TV, et al. Factors associated with the intention to participate in coronavirus disease 2019 frontline prevention activities among nursing students in Vietnam: an application of the theory of planned behavior. *Front Public Heal* 2021;9:699079.
13. Perveen S, Laurence C, Mahmood MA. Indicator-activities to apply primary health care principles

in national or large-scale community health worker programs in low-and middle-income countries: a Delphi exercise. *BMC Public Health* 2022;22:1599.

14. Claxton-Oldfield S, Jefferies J, Fawcett C, et al. Palliative care volunteers: why do they do it?. *J Palliat Care* 2004;20:78-84.
15. Scherer LL, Allen JA, Harp ER. Grin and bear it: an examination of volunteers' fit with their organization, burnout and spirituality. *Burn Res* 2016;3:1-10.
16. Faletahan AF, van Burg E, Thompson NA, Wempe J. Called to volunteer and stay longer: the significance of work calling for volunteering motivation and retention. *Volunt Sect Rev* 2021;12:235-55.
17. Alimansur M, Quyumi E. Prevention efforts with compliance to the prevention of transmission Of COVID-19 to COVID-19 volunteers. *J Public Heal Res Community Heal Dev* 2020;4:81-7.
18. Widjaja E. Motivation behind volunteerism. *CMC Senior Theses*; 2010.
19. Hamzah SR, Suandi T, Shah JA, et al. Understanding the reasons for Malaysian youth participation in volunteering activities. *Athens J Soc Sci* 2016;3:39-52.
20. Shi Y, Zhang S e, Fan L, Sun T. What motivates medical students to engage in volunteer behavior during the COVID-19 outbreak? A large cross-sectional survey. *Front Psychol* 2021;11:569765.
21. Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol* 2000;55:68-78.
22. Dik BJ, Eldridge BM, Steger MF, Duffy RD. Development and validation of the calling and vocation questionnaire (CVQ) and brief calling scale (BCS). *J Career Assess* 2012;20:242-63.
23. Wulandari CP, Muthi'Ah AD, Aldhama SA, et al. Analyzing perceived academic stress among first year undergraduate students during online distance learning. *AIP Conf Proc* 2023;2536:040001.
24. Weiss Ozorak E. Commentary: culture, gender, faith. The social construction of the person-god relationship. *Int J Psychol Relig* 2003;13:249-57.
25. Nurtjahyani SD, Amin M, Handajani R. Identification of hepatitis C virus genotypes in volunteer blood donors from blood transfusion center of Tuban, Indonesia. *Malays J Microbiol* 2020;16:29-33.
26. Callister LC, Bond AE, Matsumura G, Mangum S. Threading spirituality throughout nursing education. *Holist Nurs Pract* 2004;18:160-6.
27. Park JZ, Smith C. 'To whom much has been given...': religious capital and community voluntarism among churchgoing protestants. *J Sci Study Relig* 2000;39:272-86.
28. Smidt CE. Religion as social capital: producing the common good. Waco, TX, USA: Baylor University Press; 2003.
29. Tran V De, Pham DT, Dao TNP, et al. Willingness of healthcare students in vietnam to volunteer during the covid-19 pandemic. *J Community Health* 2022;47:108-17.
30. Su JJ, Masika GM, Paguio JT, Redding SR. Defining compassionate nursing care. *Nurs Ethics* 2020;27:480-93.
31. Susanti RD, Yudianto K, Mulyana AM, Amalia IN. A Systematic scoping review of motivations and barriers in COVID-19 volunteering among health students: the potential for future pandemic volunteers. *J Multidiscip Healthc* 2023;1671-81.
32. Gonzalez-Mendez R, Díaz M. Volunteers' compassion fatigue, compassion satisfaction, and post-traumatic growth during the SARS-CoV-2 lockdown in Spain: self-compassion and self-determination as predictors. *PLoS One* 2021;16:e0256854.

Table 1. Description of volunteers' motivation and driving factors of competency, compassion, commitment, and character of the respondents.

	Variable	Frequency	Percentage (%)
Volunteer	Very low	1	1
	Low	17	17
	Moderate	60	60
	High	22	22
Competency	Low	1	1
	Moderate	75	75
	High	24	24
Compassion	Low	29	29
	Moderate	55	55
	High	16	16
Commitment	Very low	1	1
	Low	25	25
	Moderate	56	56
	High	18	18
Character	Very low	4	4
	Low	9	9
	Moderate	71	71
	High	16	16
Total		100	100

Table 2. Relationship of driving factors of competency, compassion, commitment, and character for nursing students to become healthcare volunteers during the COVID-19 pandemic.

Variable		Volunteer					Value	Approx. sig
		Very low	Low	Moderate	High	Total		
Competency	Low	0	0	1	0	1	-0.002	0.968
	Moderate	0	13	46	16	75		
	High	1	4	13	6	25		
Compassion	Low	1	8	15	5	29	0.164	0.063
	Moderate	0	8	34	13	55		
	High	0	1	11	4	16		
Commitment	Very low	1	0	0	0	1	0.459	0.004
	Low	0	8	13	4	25		
	Moderate	0	8	38	10	56		
	High	0	1	9	8	18		
Character	Very low	1	0	3	0	4	0.461	0.009
	Low	0	4	5	0	9		
	Moderate	0	11	44	26	71		
	High	0	2	8	6	16		
Total		1	17	60	22	100		

Submitted: 16 November 2023

Accepted: 16 May 2024

Early access: 21 June 2024