

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.





Journal of Medical Imaging and Radiation Sciences 53 (2022) 396-403

Journal of Medical Imaging and Radiation Sciences

Journal de l'imagerie médicale et des sciences de la radiation

www.elsevier.com/locate/jmir

Research Article

Portrait of Filipino healthcare workers' discrimination experiences during the early part of the COVID-19 pandemic

Allan B. de Guzman^{a,b,c,*}, Belinda V. de Castro^{a,b,d}, Salvacion Laguilles-Villafuerte^{a,e}, Julie Ann Clemente-Faustino^{a,f}, Jennifer O. Serrano^{a,g} and Darwin Z. Angcahan^{a,h}

^a The Graduate School, University of Santo Tomas, Philippines

b Research Center for Social Sciences and Education, University of Santo Tomas, 2/F Thomas Aquinas Research Complex, Espana, Boulevard, Manila 1015, Philippines
^c College of Tourism and Hospitality Management, University of Santo Tomas, Philippines

^d College of Commerce and Business Administration, University of Santo Tomas, Philippines

^e Psychology Department, Bicol University, Philippines

^f College of Social Sciences and Philosophy, Bulacan State University, Philippines

g Quirino State University-Cabarroguis, Philippines

h Rizal Medical Center, Pasig, Philippines

ABSTRACT

Background: At the core of a global health crisis, healthcare workers are tasked to perform crucial and life-threatening roles. Despite the heavy-laden responsibilities amid COVID-19 pandemic, these workers are subjected to various forms of stigma and discrimination.

Objectives: The primary intent of this paper is to investigate the existence of discrimination among healthcare workers during COVID-19 pandemic in the Philippines. Further, it aims to test the following hypotheses: (1) Discrimination experiences among Filipino healthcare workers are dependent on certain demographic characteristics; and (2) Discrimination experiences vary significantly according to the type of healthcare workers.

Methods: This exploratory study used a two-part survey question-naire consisting of the baseline data of the respondents and an 8-point Likert-type scale to identify the different forms of discrimination experienced by Filipino healthcare workers. Data yielded by the instruments were descriptively (frequency, mean and percentage) and inferentially (Pearson R, Kendall tau, t-test, and One-Way Analysis of Variance) treated.

Results: Among the Filipino healthcare workers, the Radiologic Technologists experienced the most forms of discriminatory acts, followed by Nurses and Medical Technologists. Those who work in high-risk duty assignments experienced the most discriminatory incidents such as insulting gestures and physical/social loathing, social media bashing and offensive jokes.

Conclusion: The discrimination experienced by Filipino healthcare workers is a valuable platform for health policy interventions at the local and global levels to safeguard the physical, social and psychological well-being of healthcare workers, especially in battling the COVID-19 pandemic.

RÉSUMÉ

Contexte: Au cœur d'une crise sanitaire mondiale, les travailleurs de la santé sont appelés à jouer des rôles cruciaux qui mettent leur vie en danger. Malgré la lourdeur de leurs responsabilités dans le contexte de la pandémie de COVID-19, ces travailleurs sont soumis à diverses formes de stigmatisation et de discrimination.

Objectifs: L'objectif principal de cet article est d'étudier l'existence de la discrimination parmi les travailleurs de la santé pendant la

Ethical approval: Ethical considerations such as informed consent form, confidentiality of data, and withholding of personal identifiers were complied with.

E-mail address: abdeguzman@ust.edu.ph (A.B. de Guzman).

^{*} Contributors: All authors contributed to the conception or design of the work, the acquisition, analysis, or interpretation of the data. All authors were involved in drafting and commenting on the paper and have approved the final version.

Competing interests: All authors declare no conflict of interest.

^{*} Corresponding author at: Research Center for Social Sciences and Education, University of Santo Tomas, 2/F Thomas Aquinas Research Complex, Espana, Boulevard, Manila 1015, Philippines.

pandémie de COVID-19 aux Philippines. En outre, il vise à tester les hypothèses suivantes: (1) les expériences de discrimination parmi les travailleurs de la santé philippins dépendent de certaines caractéristiques démographiques; et (2) les expériences de discrimination varient de manière significative en fonction du type de travailleurs de la santé.

Méthodologie: Cette étude exploratoire a utilisé un questionnaire d'enquête en deux parties comprenant les données de base des répondants et une échelle de type Likert en 8 points pour identifier les différentes formes de discrimination subies par les travailleurs de la santé philippins. Les données produites par les instruments ont été traitées de manière descriptive (fréquence, moyenne et pourcentage) et inférentielle (R de Pearson, tau de Kendall, test t et analyse de variance à une voie).

Résultats: Parmi les travailleurs de la santé philippins, les technologues en radiologie ont subi le plus d'actes discriminatoires, suivis par les infirmières et les technologues médicaux. Ceux qui travaillent dans des missions à haut risque ont subi le plus d'incidents discriminatoires, tels que des gestes insultants et un dégoût physique/social, des attaques sur les médias sociaux et des blagues offensantes.

Conclusion: La discrimination vécue par les travailleurs de la santé philippins est une plate-forme précieuse pour les interventions de politique de santé aux niveaux local et mondial afin de préserver le bienêtre physique, social et psychologique des travailleurs de la santé, en particulier dans la lutte contre la pandémie de COVID-19.

Keywords: COVID-19 pandemic; Discrimination experiences; Filipino healthcare workers; Psychological health; Vulnerable populations

Introduction

Healthcare workers have emerged as vulnerable populations during the COVID-19 pandemic, [1] as they protect their patients, communities, and themselves from the coronavirus [2]. Though healthcare workers remain steadfast and committed to their sworn duty, [3] vulnerability to diseases and rumors, and incorrect information still increase their anxiety levels [4]. With such circumstances, medical professionals are highly susceptible to physical and psychological vulnerabilities, [5] such as discrimination. Like other psychosocial stressors, discrimination is adversely related to a broad range of mental health outcomes, [6],[7] which can affect psychological well-being, leading to symptoms of distress [8].

Historically, healthcare workers' discrimination and mental health concerns are no different from other health crises in the past. This includes neglecting behavior and rejection [9]; and social and emotional impact [10] during the 2012 MERS-CoV and 2014 Ebola epidemic, respectively. During the early part of the COVID-19 pandemic, numerous reports of ill-treatment of individuals from the local and global settings were documented. Beddoes [11] cited the healthcare workers' experience of getting punched in the face on a Chicago bus and a healthcare worker was doused with bleach by five men in the Philippines [12].

Further, since the outbreak of the pandemic, both cyber and physical attack among healthcare workers and their families were reported across the world [13]. The discrimination experiences of healthcare workers during the early part of the pandemic have been documented in countries like Colombia, [14] Nepal, [15] Indonesia, [16] Egypt [17]. In the Philippines, medical professionals have experienced being evicted from homes, refused rides on buses, and kicked out of restaurants by their fellow citizens due to fear of contracting the virus [18]. These medical professionals were battling mental and emotional pains caused by work-life disruptions and social stigma attached to their profession and roles in this pandemic.

Hence, the primary intent of this paper is to investigate the existence of discrimination among healthcare workers during

COVID-19 pandemic in the Philippines. Further, it aims to test the following hypotheses: (1) Discrimination experiences among Filipino healthcare workers are dependent on certain demographic characteristics; and (2) Discrimination experiences vary significantly according to the type of healthcare workers.

Theoretical background

Theoretical framing

This study draws on the Gelberg-Andersen Behavioral Model for Vulnerable Populations. As an expanded version of Andersen's Behavioral Model of Health Service Use in 1968 [19]. This model is widely used for explaining health care utilization patterns by the general population and suggests that the use of health services is a function of predisposition to use services, factors that enable or impede use, and need for care, thus providing a way to conceptualize variations in utilization. The structural model assessed the impact of predisposing, enabling, and need variables on predicting the use of health services by several vulnerable populations. Demographic profile is usually pre-eminent predisposing variable for most normative populations. Education and age, for instance, are relatively important in leading to the conclusion on healthcare services utilization. Enabling variables include the source of care and barriers to health services utilization. This implies that the more obstacles experienced by an individual indicate lesser utilization of healthcare services. Moreover, the need variables include illness. This suggests that when a person is ill, he does seek medical services, regardless of his economic status.

To the best of our knowledge, no study has empirically extended the model on discrimination experiences of healthcare workers. With the emergence of healthcare workers as a vulnerable group during the pandemic, [20] the model serves as a valuable lens to better understand the dynamics of discrimination as a system and how it is shaped by predisposing, enabling, and need variables. The predisposing factors include the healthcare workers' demographic characteristics. The enabling factors

encompass the healthcare workers' frequency in reporting for work, means of transportation in reporting for work, place of stay during COVID-19, duty assignment, type of social media account use, and sources of information during COVID-19. Further, the perceived "need" factor of the health care workers refers to the respect and support from people in the community.

Methods

Research design

The study employed the descriptive exploratory design in order to surface the diversity on the presence of discrimination among healthcare workers. According to Brink and Wood, [21] the data collected in this type of design either contribute to the development of theory or explain phenomena from the perspective of the persons being studied.

Subjects and study site

To achieve the purpose of the study, healthcare workers from the three main geographical regions of the Philippines participated in a Google form survey questionnaire. To be included in this study, prospective health and allied professionals must be (1) currently employed in a hospital; and (2) 20 years old and above.

Corpus of data

This exploratory study employed a two-part survey questionnaire. The first part sought for the respondents' profile (age, gender, civil status, number of children, religion, place of work and residence). It further supplied the healthcare workers' occupational profile, such as profession, type of hospital, length of service, work schedule, duty assignment, and means of transportation. The second part was an 8-point Likert-type scale ranging from "to a little extent" (1-point) to "to a great extent" (8-point). This 30-item, researcher-made scale (Cronbach reliability coefficient = 0.97) identified the forms of discrimination experienced by Filipino healthcare workers in the country. The forms of discrimination may come from the community (both face to face and virtual) and not from the patients in the hospitals. This instrument was pilot tested to a select group of health and allied professionals (n = 20) to ensure its reliability and validity (Cronbach alpha 94.6%) who were later on included in the actual pool of respondents.

Data collection process and ethical consideration

Ethical considerations such as informed consent form, confidentiality of data, and withholding of personal identifiers were advertently complied with. A two-week data gathering period was observed. Since the data were gathered at the height of the pandemic, snowballing technique was employed to recruit the possible participants who were contacted within their personal capacity. Consent was obtained from each subject through

Google form, considering that movement and face-to-face interaction were prohibited at this time.

Statistical analysis

Gathered data were treated descriptively using the mean and standard deviation (SD) to show the extent and diversity of their discrimination experiences, respectively. Inferentially, Pearson r and Kendall tau were used to show relationship between healthcare workers' discriminatory experiences and their demographic profile for continuous and discrete variables, respectively. Moreover, t-test and one-way analysis of variance were used to surface significant differences in their responses when grouped according to respondents' profile.

Results

Participants' characteristics

Of the 516 respondents (female = 59.9%; male = 40.1%). Most of the respondents were millennials, with age range from 28 to 38 years old (71.5%), single (67.8%), and have no child (67.8%). The majority were Catholics (78.9%), working in the government (51%), for five years or less (54.5%), were from NCR (53.3%), and worked as radiologic technologists (35.1%).

Most of them reported in their work daily (42.2%), with their cars (41.3%) in a high-risk COVID/PUI wards (*Influenza like illness (ILI) tent, Severe Acute Respiratory Infections tent, Triage area, ER/ER isolation ward, OR, Delivery Room, Diagnostic centers, Morgue, Housekeeping areas, other areas where intubation CPR, NPS/OPS swabbing is done) (54.1%). Majority of the respondents stayed in their residences (70.3%) before the COVID-19 pandemic and stayed in the same as before (81.8%) during COVID-19. Most of them used social media platforms such as; Facebook, Messenger, Viber, and Instagram (66.5%), and their sources of information during COVID-19 mainly were television and social media (70.2%).*

Table 1 shows the forms of discrimination experiences rated by the health workers. The top most rated discrimination experiences are: being talked about ($x^- = 3.09$; SD = 2.33), hearing offensive jokes ($x^- = 2.59$; SD = 2.20), forced quarantine ($x^- = 2.26$; SD = 2.01), insulting gestures ($x^- = 2.23$; SD = 2.01) and hearing rants ($x^- = 2.20$; SD = 1.92). Noticeably, on an 8-point scale, these low mean and high SD values indicate positive skewness and diversity in the responses, respectively, that is, most of the healthcare workers are experiencing discrimination to a lesser extent. Items such as experiencing harassment in group chats ($x^- = 1.31$, SD = 0.92), in text ($x^- = 1.21$, SD = 0.81), in tweets ($x^- = 1.21$, SD = 0.74), being attacked physically ($x^- = 1.21$, SD = 0.74) and harassment through calls ($x^- = 1.17$, SD = 0.65) constitute the least rated discriminatory experiences.

From a pool of thirty (30) discriminatory experiences (Table 2), fifteen (15) and twelve (12) situations were found to be negatively correlated to age (values ranging from r = -.204,

Table 1 Forms of discrimination experiences rated by health workers in descending order (from top to least).

Discrimination Experiences		SD	Discrimination Experiences	Mean	SD
1. being talked about	3.09	2.33	16. social loathing	1.57	1.28
2. offensive jokes	2.59	2.20	17. physical loathing	1.54	1.24
3. forced quarantine	2.26	2.01	18. petitioned (ex. for transfer)	1.51	1.31
4. insulting gestures (covering mouth)	2.23	2.01	19. harassment of my family and close friends	1.50	1.26
5. hearing rants	2.20	1.92	20. evicted from the dormitories	1.49	1.28
6. "aloof" treatment	2.14	1.86	21. family and friends are denied of essential service	1.44	1.20
7. shunning away of people	2.00	1.77	22. denied housing	1.41	1.29
8. spreading wrong information about me	1.90	1.59	23. "barricade" my house	1.39	1.16
9. doused on my way to work	1.79	1.69	24. family and friends are denied of health services	1.34	1.01
10. blaming	1.78	1.53	25. cursing	1.32	0.93
11. social media bashing	1.74	1.59	26. being harassed through group chats	1.31	0.92
12. refused rides on buses	1.65	1.46	27. attacked physically	1.21	0.81
13. denial of access to essential services (ex.: haircut, laundry, etc.)	1.63	1.51	28. being harassed through text	1.21	0.74
14. using foul or offensive words	1.60	1.36	29. being harassed through tweets	1.21	0.74
15. creating memes in social media	1.57	1.28	30. being harassed through calls	1.17	0.65

Table 2 Correlations of Discriminatory experiences and demographic characteristics (n = 516).

Discriminatory Experiences	Age	Number of children	Length of service	Frequency of reporting
1. evicted from the dormitories	-0.104*	0.015	-0.092*	0.085*
2. petitioned (ex. For transfer)	-0.113*	-0.002	-0.100*	0.091*
3. doused on my way to work	-0.165**	-0.004	-0.137**	0.080*
4. refused rides on buses	-0.102*	-0.026	-0.074	0.095*
5. attacked physically	-0.002	0.026	-0.057	-0.015
6. being talked about	-0.201**	0.007	-0.161**	0.099**
7. offensive jokes	-0.204**	0.000	-0.164**	0.067
8. denial of access to essential services (ex.: haircut, laundry, etc.)	-0.096*	-0.010	-0.072	0.006
9. social media bashing	-0.115**	0.005	-0.086^*	0.034
10. forced quarantine	-0.049	0.014	-0.046	-0.027
11. "aloof" treatment	-0.039	0.027	-0.032	0.031
12. creating memes in social media	-0.094*	0.021	-0.089*	0.012
13. spreading wrong information about me	-0.073	0.015	-0.056	0.060
14. "barricade" my house	-0.08	-0.018	-0.109*	0.071
15. being harassed through text	-0.028	0.041	-0.031	-0.003
16. being harassed through calls	0.027	0.032	0.017	0.011
17. being harassed through group chats	-0.023	0.085*	-0.017	0.026
18. harassment of my family and close friends	-0.083	0.002	-0.074	0.035
19. blaming	-0.116**	0.007	-0.100*	0.039
20. insulting gestures (covering mouth)	-0.137**	0.000	-0.116**	0.071
21. shunning away of people	-0.092*	0.055	-0.083	0.074
22. hearing rants	-0.184**	0.000	-0.157**	0.088*
23. family and friends are denied of health services	-0.038	0.069	-0.027	0.065
24. family and friends are denied of essential service	-0.048	0.027	-0.044	.085*
25. social loathing	095*	0.032	094*	0.036
26. physical loathing	089*	0.039	-0.083	0.066
27. using foul or offensive words	-0.049	0.031	-0.036	.097*
28. denied housing	-0.084	0.010	-0.075	.108**
29. cursing	-0.072	0.041	-0.073	0.010
30. being harassed through tweets	-0.074	0.000	-0.064	0.051

^{*} Correlation is significant at the 0.05 level (2-tailed).

p < 0.01 to r = -.094, p < 0.05) and length of service (values ranging from r = -.164, p < 0.01 to r = -.086, p < 0.01), respectively. This shows that the more the person ages and has longer working experience in the healthcare service, the less they experience or, the less they bother about these discriminatory situations. In terms of the number of children, only the

experience of being harassed through group chats was found to be positively correlated (r = .085, p < 0.05). This means that the more children they have, the more they are affected by the experience of harassment on the on-line platform. Lastly, seven (7) out of the thirty (30) discriminatory experiences were found to be positively correlated to the frequency of report-

^{**} Correlation is significant at the 0.01 level (2-tailed).

Table 3 Significant differences in Discriminatory experiences when grouped according to some demographic characteristics (n = 516).

Discriminatory Experiences	Gender	Type of hospital	Civil Status	Type of Health Profession	Duty assign	Means of transportation	Place of stay
1. evicted from the	0.51	0.35	2.24	3.01*	1.72	0.44	5.15*
dormitories							
2. petitioned (ex. for	1.38	-1.05	0.05	2.75*	0.85	1.00	4.68*
transfer)							
3. doused on my way to	-0.61	-0.94	0.37	5.06*	1.50	4.63*	1.74
work							
4. refused rides on buses	0.76	-0.80	1.02	2.84*	0.07	5.75*	1.54
5. attacked physically	0.65	0.21	0.78	0.82	0.76	1.39	1.26
6. being talked about	1.55	-0.11	2.16	4.83*	7.52*	1.49	2.38
7. offensive jokes	0.71	-1.02	0.68	7.72*	5.13*	2.60*	2.49*
8. denial of access to	-0.21	-0.29	0.81	2.51*	2.92	1.06	3.24*
essential services (ex.:							
haircut, laundry, etc.)							
9. social media bashing	0.32	0.32	2.12	1.38	1.45	2.60*	3.35*
10. forced quarantine	0.15	0.54	0.86	1.11	3.36*	0.30	2.62*
11. "aloof" treatment	-1.89	-0.65	1.30	3.61*	0.82	0.73	1.72
12. creating memes in	1.53	-1.33	0.28	0.89	0.27	1.01	3.41*
social media							
13. spreading wrong	1.04	1.88	0.98	2.62*	0.49	2.65*	1.39
information about me							
14. "barricade" my house	0.85	0.59	2.25	0.49	0.70	1.26	2.61*
15. being harassed through	-0.38	1.53	0.17	1.60	0.21	0.66	1.39
text		-1,50					-107
16. being harassed through	-0.73	1.37	2.28	1.23	0.29	0.19	0.62
calls	01,0	-107			**->	****	***-
17. being harassed through	-0.76	1.82	2.11	1.84	0.13	1.61	2.49*
group chats					*****	-14-	
18. harassment of my	1.06	0.84	0.40	1.17	0.36	1.35	1.44
family and close friends	1.00	0.01	0.10	1117	0.50	1.57	
19. blaming	-0.60	0.15	0.22	1.18	1.79	1.01	2.60*
20. insulting gestures	-2.03*	-0.43	0.11	3.36*	2.90	1.30	2.49*
(covering mouth)	2.03	0.15	0.11	5.50	2.70	1.50	2.1)
21. shunning away of	-1.64	1.12	0.08	3.29*	2.70	0.68	2.39*
people	1.01	1.12	0.00	5.2)	2.70	0.00	2.37
22. hearing rants	-0.15	0.16	2.33	2.37*	2.61	2.97*	2.74*
23. family and friends are	-0.15 -0.36	-0.72	1.39	1.21	0.39	0.77	1.97
denied of health services	-0.50	-0.72	1.59	1.21	0.39	0.//	1.9/
24. family and friends are	0.07	0.54	0.25	1.90	0.31	1.61	1.18
denied of essential service	0.07	0.74	0.2)	1.90	0.31	1.01	1.10
	0.25	0.27	0.92	1.02	1 22	0.62	2.34
25. social loathing	-0.25	-0.37	0.83 0.70	1.92 2.18	1.33 1.24		2.3 4 1.16
26. physical loathing	-0.38 -0.89	0.02	0.70	2.18 2.66*	0.98	0.53	3.16*
27. using foul or offensive	-0.89	1.15	0.01	2.00	0.70	1.56	3.10
words	0.69	1.00	6.02*	1 02	1 02	1.47	5 62*
28. denied housing	-0.68	1.09	6.02*	1.83	1.82	1.47	5.62*
29. cursing	-0.36	-0.07	0.03	0.77	0.34	1.34	1.57
30. being harassed through	0.49	0.28	0.13	0.31	0.22	0.72	2.45*
tweets							

^{*} significant at p<0.05

ing, with values ranging from r = .080, p < 0.01 to r = .108, p < 0.05. This goes to show that the more frequent they report to work, the more discriminatory situations are bothersome for the healthcare workers.

Significant differences were noted from the 30 identified discriminatory acts (Table 3) when grouped according to selected demographic characteristics. With gender as the criterion, marked difference was evident in "insulting gestures such as covering mouth has a significant difference" (t-value = -2.03), with the female healthcare workers posting a higher mean (x⁻ = 2.19). As regards civil status, a significant difference was

noted in "denied housing" (F-ratio = 6.015) which is highly felt by healthcare workers who are neither single nor married (x^- = 2.29). Despite the spread of wrong information about them having the highest mean difference (0.28) between those working in public (x^- = 1.93; SD = 1.86) and private (x^- = 1.65; SD = 1.49) hospitals, no significant difference in their experiences were noted (t-value = 1.88, p-value = 0.06) nor in any of the discriminatory acts.

When compared according to the type of health professions, receiving offensive jokes (*F*-ratio = 7.72) was strongly experienced by Radiologic Technologists ($x^- = 3.07$), followed

by doused on the way to work (*F*-ratio = 5.06) as most experienced by Nurses ($x^- = 2.13$) and insulting gestures (*F*-ratio = 3.36) by Midwives ($x^- = 2.54$). Further, for duty assignment, the most discriminated healthcare workers are those assigned to high-risk assignments, with marked differences in being talked about (*F*-ratio = 7.52, $x^- = 3.45$), offensive jokes (*F*-ratio = 5.13, $x^- = 2.87$) and forced quarantine (*F*-ratio = 3.36, $x^- = 2.44$). For means of transportation, health workers who were refused rides on buses (*F*-ratio = 5.75, $x^- = 2.78$) and doused on the way to work (*F*-ratio = 4.63, $x^- = 2.83$) used bicycles while hearing rants (*F*-ratio = 2.97, $x^- = 2.67$), spreading wrong information (*F*-ratio = 2.65, $x^- = 2.41$) are experienced most by healthcare workers using their motorcycles.

Finally, in the place of stay, significant differences were noted among those who are not staying in specially designated healthcare facilities who experienced being denied of housing (F-ratio = 5.62, x^- = 2.26), evicted from the dormitories (F-ratio = 5.15, x^- = 2.33), petitioned (F-ratio = 4.68, x^- = 2.03), while those healthcare workers who experienced being created memes in social media (F-ratio = 3.41, x^- = 2.13), and social media bashing (F-ratio = 3.35, x^- = 2.29) are those who are stay-in residents in a hospital dorms.

Discussion

Our first hypothesis, which states that discrimination experiences among Filipino healthcare workers are dependent on certain demographic characteristics was supported. Specifically, results showed a negative correlation between healthcare workers' age and length of service discriminatory experiences. Notably, as health practitioners age and spend more years in service, they become more resilient to discrimination. Similarly, Gooding et al. [22] found that the older the individuals are, the more resilient they become with respect to problem-solving and emotion regulation as compared to the younger generations. Other studies also suggested that resilient personality may counter the negative effects of ill health [23] and predicts mental health in older adults [24]. Thus, hospital administrators must initiate programs that promote resiliency in the workplace, such as stress management techniques, positive mind framing, and finding meaning and value in life.

Regarding the number of children, only the experience of being harassed through group chats was positively correlated. According to Piquero et al. [25], workers in healthcare are more prone to experience verbal harassment and bullying. Many health care workers, who are victims of verbal abuse online, feel that their complaints will not be taken seriously by hospital administrators because of the platform used. Because of this, medical organizations may adopt improved policies that promote psychologically safe interactions among workplace stakeholders and safeguard the psychological well-being of healthcare workers.

Of the thirty (30) discriminatory experiences, seven (7) were positively correlated to reporting frequency. These discrimination scenarios tend to hit the working parents more vulnerable, as they endure sacrifices at work to be able to provide

for the needs of their children. The work-family balance remains critical for employed parents and employers alike [26]. Healthcare workers are forced to stay in safe facilities to prevent the risks to their health and their loved ones, making them obliged to have more frequent and longer hours of hospital duty, changing protocols, and potential medical supply shortages [27]. The unprecedented demand for healthcare services during the COVID-19 pandemic has left family-oriented and overworked health professionals vulnerable to discrimination experiences [28]. The job demands more hours at the healthcare facilities and less time with the family. Although the shortage of medical practitioners at the time of this pandemic is recognized, [29] hospital administrators are encouraged to design a work scheme that enables healthcare workers to have a justifiable and humane number of working hours [30] to minimize the discriminatory experiences.

The second hypothesis, which states that discrimination experiences vary significantly according to type of healthcare workers was supported. Specifically, significant differences were noted when they were grouped according to gender, civil status, type of health profession, duty assignment, means of transportation, and place of stay. The finding that there is a significant difference in the gender criterion is similar to what González-Sanguino et al. [31] redounded about the female gender having more symptomatology of psychological impact. The female healthcare workers in this study experienced more incidents of insulting gestures, such as people covering their mouths when they pass by or in the same room. Experiencing this kind of discrimination, female healthcare workers are more susceptible to stress, anxiety, and depression. In terms of civil status, healthcare workers who are either single parents, separated, or widowed had higher experiences of discriminatory acts, specifically in being denied of housing. This runs counter to Wang et al., [32] where married respondents reported being more affected by distressing events related to COVID-19. Discriminatory acts did not differ among healthcare workers who either worked in public or private hospitals. No marked difference was noted in their discrimination experiences when viewed according to the type of hospital. This is in concordance with the existing literature about work issues in public and private hospitals where healthcare workers experienced discrimination [see [33]].

Alarmingly, the Radiologic Technologists were highly discriminated against in terms of offensive jokes, followed by Nurses and Midwives. The Radiologic technologists are among the largest group of professionals, [34] and their work responsibilities entail stress, [35] which need intervention [36] to avoid being faced with mental and emotional disturbances during this pandemic. Further, healthcare workers with high-risk assignments experience being talked about, receiving offensive jokes and being forced quarantined. This concurs with previous studies [i.e. [37,38]], which looked into healthcare discrimination. Healthcare workers who use their bikes and those who do not stay in designated healthcare facilities were the most discriminated. These people are driven by inherently negative thoughts, [39] which revolve around their fears of being exposed to the

virus, being blamed, or displacing their felt helplessness with the present condition.

Conclusion and recommendation

This empirical study yielded a portrait of structural and individual discrimination experienced by Filipino healthcare workers. As COVID-19 frontliners, relevant psychological support programs are needed to promote their well-being. Social media use should be maximized to educate and re-educate the people of the role and contributions of healthcare professionals. The knowledge base on discrimination as a social stressor invites dialogic space where both policymakers and practitioners could enact protective measures and safety nets that could support and ensure the overall well-being of the health workforce. Ultimately, the burdens brought about by any global crisis become bearable if any act of discrimination is addressed promptly and holistically. Such expectation is best facilitated by society's adherence to democratic principles and respect for the dignity of the human person.

Admittedly, there are limitations in the present study. Considering that the data were primarily gathered through an online questionnaire due to face-to-face restrictions in the country, a follow-up study may be conducted through a mixed-method approach. Capturing the narratives of the health professionals may shed light to the nature and the dynamics of discrimination indicators found in the tool. Additionally, this study was limited to testing how discrimination experiences compare and relate to the health professionals' profile. Hence, model development initiative may be conducted through multi-variate analysis, such as, structural equation modeling, canonical correlation and multinomial regression.

Acknowledgments

We thank the Fondazione Gravissimum Educationis for funding this project.

References

- [1] Smith C. The structural vulnerability of healthcare workers during COVID-19: observations on the social context of risk and the equitable distribution of resources. *Soc Sci Med.* 2020;258:113119. doi:10.1016/j. socscimed.2020.113119.
- [2] Ellis E. How Health Care Workers Avoid Bringing COVID-19 Home: What do Frontline Workers do When They Finish Their Shifts? Some Have to Isolate From Their Families to Keep Them Safe. WIRED; 2020 Retrieved from https://www.wired.com/story/coronavirus-covid-19-health-careworkers-families/.
- [3] de Guzman A, Angcahan D. Caeteris paibus: in search for the "lost identity" of Filipino radiologic technologists during the COVID-19 pandemic. *Antoninus J.* 2020;6.
- [4] Schwartz J, King C, Yen M. Protecting healthcare workers during the coronavirus disease 2019 (COVID-19) outbreak: lessons from Taiwan's severe acute respiratory syndrome response. *Clin Infect Dis.* 2020;71:858– 860. doi:10.1093/cid/ciaa255.
- [5] Chong MY, Wang WC, Hsieh CY, Lee NM, Chiu WC, et al. Psychological impact of severe acute respiratory syndrome on health workers in

- a tertiary hospital. Br J Psychiatry. 2004;185:127–133. doi:10.1192/bjp. 185.2.127.
- [6] Anderson KF. Diagnosing discrimination: stress from perceived racism and the mental and physical health effects. *Sociol Inq.* 2013;83:55–81. doi:10.1111/j.1475-682X.2012.00433.x.
- [7] Chen D, Yang TC. The pathways from perceived discrimination to self-rated health: an investigation of the roles of distrust, social capital, and health behaviors. Soc Sci Med. 2014;104:64–73. doi:10.1016/ j.socscimed.2013.12.021.
- [8] William D, Lawrence J, Davis B, Vu C. Understanding how discrimination can affect health. *Health Serv Res.* 2019;54:1374–1388. doi:10.1111/ 1475-6773.13222.
- [9] Almutairi A, Adlan A, Balkhy H, Abbas O, Clark A. It feels like I'm the dirtiest person in the world. *J Infect Public Health*. 2018;11(2):187–191. doi:10.1016/j.jiph.2017.06.011.
- [10] McMahon S, Ho L, Brown H, Miller L, Ansumana R, Kennedy C. Healthcare providers on the frontlines: a qualitative investigation of the social and emotional impact of delivering health services during Sierra Leone's Ebola epidemic. *Health Policy Plan.* 2016;31(9):1232–1239. doi:10.1093/heapol/czw055.
- [11] Beddoes Z. Health Workers Become Unexpected Targets During COVID-19. The Economist; 2020 Retrieved from https://www.economist.com/ international/2020/05/11/health-workers-becomeunexpected-targets-during-covid-19.
- [12] R Shrestha R, Kunwar A. COVID-19 impact on doctors and health workers. Orthod J Nepal. 2020;10(2). doi:10.3126/ojn.v10i2.31060.
- [13] World Health Organization. Attacks on Health Care in the Context of COVID-19,. World Health Organization; 2020 Retrieved from https://www.who.int/news-room/feature-stories/detail/attacks-on-health-care-in-the-context-of-covid-19.
- [14] Campo-Arias A, Jimenez-Villamizar M, Caballero-Domiguez C. Health-care workers' distress and perceived discrimination related to COVID-19 in Colombia. *Nurs Health Sci.* 2020;23(3):763–767. doi:10.1111/nhs. 12854.
- [15] Singh R, Subedi M. COVID-19 and stigma: Social discrimination towards frontline healthcare providers and COVID-19 recovered patients in Nepal. Asian J Psychiatry. 2020;53:102222 10.1016%2Fj.ajp.2020.102222.
- [16] Yufika A, Pratama R, Anwar S, Winardi W, et al. Stigma associated with COVID-19 among health care workers in Indonesia. *Disaster Med Public Health Prep.* 2020. doi:10.1017/dmp.2021.93.
- [17] Mostafa A, Sabry W, Mostafa N. COVID-19-related stigmatization among a sample of Egyptian healthcare workers. *PLoS One*. 2020;15(12):e0244172. doi:10.1371/journal.pone.0244172.
- [18] VOA News. Philippine Health Workers Battle Coronavirus, Harassment. VOA News; 2020 Retrieved from www.voanews.com/a/science-health_coronavirus-outbreak_philippine-health-workers-battle-coronavirus-harassment/6187110.html.
- [19] Andersen R. Revisiting the behavioral model and access to medical care: does it matter? *J Health Soc Behav*. 1995;36(1):1–10. doi:10.2307/
- [20] Smith C. The structural vulnerability of healthcare workers during COVID-19: observations on the social context of risk and the equitable distribution of resources. Soc Sci Med. 2020;258:113119. doi:10.1016/j. socscimed.2020.113119.
- [21] Brink P, Wood M. Advanced Design in Nursing Research. 2nd ed. Sage Publications, Inc; 1998.
- [22] Gooding P, Hurst A, Johnson J, Tarrier N. Psychological resilience in young and older adults. *Int J Geriatr Psychiatry*. 2012;27(3):262–270. doi:10.1002/gps.2712.
- [23] Windle G, Woords R, Markland D. Living with ill-health in older age: the role of a resilient personality. J Happiness Stud. 2010;11(6):763–777. doi:10.1007/s10902-009-9172-3.
- [24] Mehta M, Whyte E, Lenze E, et al. Depressive symptoms in later life: associations with apathy, resilience and disability vary between young-old and old-old. *Int J Geriatr Psychiatry*. 2018;23(3):238–243. doi:10.1002/ gps.1868.

- [25] Piquero N, Piquero A, Craig J, Clipper S. Assessing research on work-place violence. Aggress Violent Behav. 2013;18:383–394. doi:10.1016/j.avb.2013.03.001.
- [26] World of Work Report. Making Markets Work For Jobs. International Labor Organization. Geneva: ILO; 2011 Retrieved from https://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_166021/lang-en/index.htm.
- [27] Thielking M. Coronavirus Cases Among Health Workers Climb, Underscoring the Chaos on an Outbreak's Front Lines. Stat News; 2020 Retrieved from https://www.statnews.com/2020/02/25/coronavirus-cases-health-workers-chaos-outbreak-front-lines/.
- [28] UN News. COVID-19 Highlights Nurses' Vulnerability as Backbone to Health Services Worldwide. UN News Global Perspective Human Stories; 2020 Retrieved from https://news.un.org/en/story/2020/04/1061232.
- [29] World Health Organization. Corona Virus Disease (COVID-19) Pandemic. World Health Organization; 2020 Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019.
- [30] Department of Labor and Employment (DOLE). Occupational Safety and Health Standards. Department of Labor and Employment (DOLE); 2016 Retrieved from https://www.dole.gov.ph/php_assets/uploads/2019/ 04/OSH-Standards-2017-2.pdf.
- [31] González-Sanguino C, Ausína B, Saiz J, López-Gómez A, et al. Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain Behav Immun*. 2020;87:172–176. doi:10.1016/j.bbi.2020.05.040.

- [32] Wang C, Pan R, Wan X, Tan Y, Xua L, McIntyre R, et al. A longitudinal study on the mental health of general population during the COVID- 19 epidemic in China. *Brain Behav Immun*. 2020;87:40–48. doi:10.1016/j. bbi.2020.04.028.
- [33] Tynkkynen L, Vrangbæk K. Comparing public and private providers: a scoping review of hospital services in Europe. BMC Health Serv Res. 2018;18:141. doi:10.1186/s12913-018-2953-9.
- [34] Lee W, Ha M, Hwang S, Lee K, et al. The radiologic technologists' health study in South Korea: study design and baseline results. *Int Arch Occup Environ Health*. 2014;88(6):759–768. doi:10.1007/s00420-014-1002-1.
- [35] Romano J. Stress management for the radiologic technologist. *Radiol Technol*. 2012;84(1):55–71.
- [36] Reingold L. Evaluation of stress and a stress-reduction program among radiologic technologists. *Radiol Technol*. 2015;87(2):150–162.
- [37] Amon J. Ending discrimination in healthcare. J Int AIDS Soc. 2020;23(2):e25471 2020. doi:10.1002/jia2.25471.
- [38] Johnson J, Cameron J, Mitchinson L, Parmar L, Opio-te M, G, et al. An investigation into the relationships between bullying, discrimination, burnout and patient safety in nurses and midwives: is burnout a mediator? J Res Nurs. 2019;24(8):604–619. doi:10.1177/1744987119880329.
- [39] Stangl A, Earnshaw V, Logie C, et al. The health stigma and discrimination framework: a global, crosscutting framework to inform research, intervention development, and policy on health-related stigmas. *BMC Med.* 2019;17(31). doi:10.1186/s12916-019-1271-3.