

Level of participation in public health volunteering and its determinants among ministry of health primary health care workers in Jeddah 2019

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ABSTRACT

Context: Volunteering is an important practice for health care systems globally and contributes to the development of health care services as well. **Aims:** To estimate the level of participation in public health volunteering and its determinants among healthcare workers in ministry of health primary care sector, Jeddah. **Settings and Design:** A randomized quantitative cross-sectional self-administered survey involving all primary healthcare workers in 15 centers. **Methods and Material:** The survey included socio-demographics and 33 determinants of volunteering (values, career development, enhancement, social, and protection) ranked by importance using a seven-point scale. The research committee of the joint program for family medicine in Jeddah validated the survey. Primarily we evaluated the level of participation in public health volunteering. Secondary endpoints were perception of the importance of volunteering determinants among participants, correlation between volunteering and independent socio-demographic variables, and any attribute of volunteering determinants. **Statistical Analysis Used:** Descriptive analyses using the Statistical Package for Social Sciences, version 24. **Results:** 231 consenting participants filled the survey. Most of the participants were Saudi citizens, predominantly female, bachelor or higher degree holders, and married. Out of 227 respondents, 98 (43%) declared volunteering in the previous year. Only the age was positively correlated to volunteering significantly. Respondents significantly perceived the 33 attributes of the questionnaire as “extremely, very, or somewhat important.” Determinants like values, enhancement, and social were significant predictors of volunteering but not career development or protection. **Conclusions:** Volunteering complements healthcare resources in coping with emergent situations like COVID-19 pandemic. More efforts are required to bring awareness toward volunteering opportunities in Saudi healthcare sector.

Keywords: Determinants, public health volunteering, primary healthcare workers, Saudi Arabia

Introduction

“Volunteering is time willingly given for the common good and without financial gain.”^[1] The statistics worldwide for volunteering from 2008–2012 is averaging 37.9% in Australia and

New Zealand, 22.8% in the Americas, 19.7% in Asia, 17.2% in Europe, and 17.0% in Africa.^[2] However, Saudi Arabia ranked in the 88th position with only 14% volunteering in the World giving index, 2013.^[2] Still volunteering work is facing obstacles and limitations^[3,4] and the average and median hours of volunteering are decreasing.^[5,6]

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Received: 13-02-2021

Revised: 06-04-2021

Accepted: 13-05-2021

Published: 05-11-2021

Volunteering is equally important for the mental and social development of a person, especially in adolescents and elderly, since it positively impacts cognitive function, altruism, and sense

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How to cite this article: Kably AA, Almalki RA, AlQarni AM, Bardisi WM. Level of participation in public health volunteering and its determinants among ministry of health primary health care workers in Jeddah 2019. *J Family Med Prim Care* 2021;10:3584-9.

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10.4103/jfmpc.jfmpc_317_21

of belonging.^[7,8] A person involved in volunteerism feels better mentally and physically since it releases mental as well as physical stress.^[9] Observational studies proposed that volunteering may be beneficial to both mental health and survival despite the causal relationships remain uncertain.^[10]

Volunteerism is an important practice for health care systems around the world and it contributes to the development of health care services as well. Volunteering activities include caring for elderly people, patients' education, health care sector awareness campaigns, providing logistic assistance, volunteer in medical research, and fundraising for low income patients. Also, virtual volunteering was implemented during COVID-19 pandemic to reply patients' and caregivers' inquiries.

Primary healthcare workers can contribute greatly to such domain being the first line of national healthcare services with expanded reach all over the Kingdom of Saudi Arabia.

Many of the medical cadres tend to volunteer; however, many others are still reluctant to volunteer,^[11] especially in the Arabic countries. Up to our best knowledge, there are limited studies in Saudi Arabia in this domain except for a recently published online survey focusing on volunteering motivations and barriers among healthcare students.^[12]

Inspired by Saudi Arabia 2030 vision, one million volunteers per year in all working sectors in the Kingdom of Saudi Arabia,^[13] we aimed to encourage public health volunteering among primary health care workers by measuring the level of participation in public health volunteering among the ministry of health (MOH) primary healthcare workers in Jeddah province during 2019 and identify the determinants of public health volunteering among study population.

Subjects and Methods

Study design

We designed this research as a randomized quantitative cross-sectional survey involving primary healthcare workers in MOH primary care centers in Jeddah province, Saudi Arabia during 2019. In randomly selected primary centers, all workers were invited to answer a questionnaire including a consent form, socio-demographic data, and seven-point ranked scale denoting the importance of volunteering determinants. The scale was graded from one to seven where one means extremely important and seven means extremely unimportant. We assessed determinants including values (11 questions), career development (6 questions), enhancement (3 questions), social factors (7 questions), and protectiveness (6 questions). We developed our questionnaire and validated it by three consultants from research committee of the joint program for family medicine in Jeddah. Then, we translated the questionnaire into Arabic language and tested it in a pilot phase including 10% of our participants. The inclusion criteria were participants consent and being a full-time employee in MOH primary care center.

Sample size calculation

We used electronic software RAOSOFT for sample size calculation (<http://www.raosoft.com/samplesize.html>). Assuming 12 healthcare workers per primary care center, for 40 centers in Jeddah, the number of 480 participants was estimated. We postulated a 50% response distribution at 95% confidence interval and the required sample size to reflect the participation level in volunteering was 214 subjects rounded to 235 participants including provided that 10% of invitees may refuse to participate.

Sampling technique

We clustered primary care centers geographically into five sectors according to referral hospital in Jeddah. The referral MOH hospitals were Althager General Hospital, King Fahad General Hospital, King Abdulaziz Hospital and Oncology Center, King Abdullah Medical Complex, and East Jeddah General hospital. Then, we randomly selected 15 out of 40 centers for administering the questionnaire (including two centers for piloting).

Data collection

After approval of selected primary care center administration to distribute the questionnaire during the break time to all workers, we explained the research objectives and invited them to participate by filling the questionnaire. After one hour, we collected back the responses.

Ethical considerations

This study has been approved by research and studies department, Ministry of Health, Jeddah Health Affairs (Approval No. 01146 dated 23 December 2019). Primary care administration clearance, as conditioned by ethical approval, was obtained besides the participants were informed that participation is voluntarily, and a consent form was attached with the questionnaire. All responses were anonymous without any personal identifier to protect participants' privacy.

Research outcomes

The primary endpoint of this study was the proportion of primary healthcare workers who volunteered in the past year. The secondary endpoints were perception of the importance of volunteering determinants among participants, correlation between volunteering and independent socio-demographic variables, and explore if any of determinants can correlate to volunteering.

Statistical analysis

We used descriptive statistics to describe the socio-demographic and determinants of volunteering. Categorical variables were presented by counts and percentages, whereas continuous variables by mean and standard deviation when data were normal, or by median and IQR otherwise.

Linear regression analysis was used to explore correlation between dependent variable (volunteering) and independent variables of socio-demographics and volunteering determinants. All mean

and median values, as well as their measures of variability, were formatted to two decimal places. All percentages were rounded to one decimal place.

The significance level was two-sided, with a type 1 error of 5%. The analysis was performed by the Statistical Package for Social Sciences, version 24 (SPSS-24).

Results

We invited 235 potential participants and 231 of them consented to fill the questionnaire with a response rate of 98.3%. Most of the participants were Saudi citizens, predominantly female, bachelor or higher degree holders, and married. Detailed socio-demographic data are depicted in Table 1.

Primary endpoint

In response to if participant has volunteered in the past year, 98 (43.2%) out of 227 responders declared that they did volunteer in the past year [Figure 1].

Secondary endpoints

Determinants of Volunteering Perception of importance: we analyzed how participants ranked the 33 attributes of the five volunteering determinants by calculating the mean, standard deviation, and significance of outcome score in comparison to $\mu = 4$ (neither agree nor disagree) using one-sample t- test. Responders significantly perceived the 33 attributes of the questionnaire as “extremely, very, or somewhat important.” Table 2 details each statement ranking by responders regarding their importance as determinants of volunteering.

Correlation between volunteering and socio-demographic variables: we analyzed the independent socio-demographic variables and their correlation as predictors to volunteering using linear regression analysis. The independent variables were age, age group, gender, social status, educational degree, income, MOH geographical cluster, and citizenship status. Age and age group are the only two variables that significantly predict volunteering [age, $F(1,219) = 5.40, P = 0.021, R^2 = 0.02$ and age group, $F(1,219) = 5.36, P = 0.022, R^2 = 0.02$]. Other socio-demographic variables were not a significant predictor of volunteering.

Correlation between volunteering and its determinants' variables: we analyzed the independent volunteering determinants' variables and their correlation as predictors to volunteering using linear regression analysis. The independent variables were questionnaire attributes related to values, career development, enhancement, social, and protectiveness.

Within the values division, participants who declared the importance of:

- “I take very good care of my group of patients” were significantly predicted to volunteer $F(1,224) = 7.41, P = 0.007$.

Table 1: Participants socio-demographic characteristics

	Number	(%)
Population	231	
Age in years (n=224)	34.18 (±8.00)	(100)
Mean (±SD)	16-60	
Range		
Age Groups (n=224)		
< 30 years old	87	(38.9)
30-39 years old	108	(48.2)
40-49 years	16	(7.1)
old>50 years old	13	(5.8)
Gender (n=229)	88	(38.4)
Male	141	(61.6)
Female		
Education (n=228)		
High School	16	(7.0)
Bachelor's	109	(47.8)
Masters	15	(6.6)
PhD	16	(7.0)
Diploma	66	(28.9)
Other	6	(2.6)
Social Status (n=229)	53	(23.1)
Single	152	(66.4)
Married	19	(8.3)
Divorced	4	(1.8)
Widowed		
Income (n=227)		
< 3k SR	12	(5.3)
3k-5k SR	15	(6.6)
5k-10k SR	57	(25.1)
10k-20k SR	90	(39.7)
>20K SR	52	(22.9)
Nationality (n=229)		
Saudi	216	(94.3)
Non-Saudi	13	(5.7)

N: number of responses; SD: Standard Deviation; K: thousand (000).

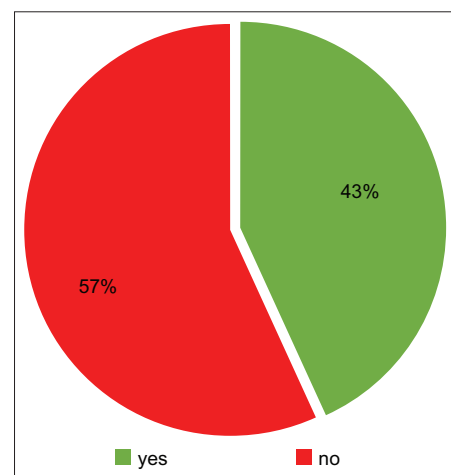


Figure 1: Volunteered last year out of the 227 responders

- “Volunteer work allows me to gain a new perspective on things” were significantly predicted to volunteer $F(1,220) = 9.38, P = 0.002$.
- “I can do something regarding an important case to me” were significantly predicted to volunteer $F(1,218) = 5.26, P = 0.023$.

Table 2: Determinants of Volunteering importance as ranked by participants

	Mean	SD	t	df	P (2 tailed)
Values					
I feel that it's important helping others.	1.94	0.99	-31.52	229	0.001
I take very good care of my group of patients.	2.13	1.13	-25.11	229	0.001
I care about those less lucky than me.	2.43	1.25	-19.14	229	0.001
Volunteer work allows me to gain a new perspective on things.	2.34	1.23	-20.21	225	0.001
I can do something regarding an important case to me.	2.3	1.2	-21.11	222	0.001
I feel sympathy toward those in need.	2.1	1.13	-25.36	228	0.001
I can discover my strength points.	2.35	1.23	-20.28	228	0.001
I can learn to deal with a diversity of people.	2.35	1.23	-20.29	227	0.001
I can learn more about the case I am working on.	2.31	1.11	-23.05	226	0.001
Volunteer work allows me to learn things through experience.	2.26	1.21	-21.74	227	0.001
Volunteer work for me is a mean for helping the environment.	2.38	1.3	-18.95	228	0.001
Career Development					
Volunteer work can help me in setting a foot in a place I would like to work in.	2.46	1.28	-18.19	228	0.001
Volunteer work can help me in developing a network related to my field or work.	2.27	1.22	-21.52	228	0.001
Volunteering experience would look good on my CV.	2.28	1.26	-20.63	226	0.001
Volunteering allows me to discover different professional options.	2.44	1.24	-18.79	224	0.001
Volunteering will help me succeed in the profession I chose.	2.45	1.31	-17.68	223	0.001
Volunteering is a way for developing new friendships.	2.42	1.37	-17.32	225	0.001
Enhancement					
Volunteering makes me feel important.	2.57	1.31	-16.48	227	0.001
Volunteer work increases my self-esteem.	2.44	1.27	-18.46	226	0.001
Volunteering makes me feel better about myself.	2.44	1.37	-17.05	224	0.001
Social					
People close to me want that I participate in volunteering work.	3.23	1.57	-7.4	225	0.001
People around me give importance to community serving.	3.06	1.47	-9.64	226	0.001
My friends participate in volunteering work.	2.89	1.38	-12.08	224	0.001
Volunteering is an important activity for people I know.	2.86	1.41	-12.01	221	0.001
People I know share the same interest in community serving.	2.97	1.47	-10.43	222	0.001
I feel that volunteering work is a religious duty.	2.43	1.27	-18.5	222	0.001
I would like to be a contributing participant to the kingdom's 2030 vision.	2.31	1.25	-20.32	224	0.001
Protectiveness					
Volunteering is a good escape from my personal problems.	3.44	1.63	-5.17	225	0.001
Volunteering helps me work through my personal problems.	3.3	1.63	-6.47	226	0.001
Volunteering has helped in making me feel less lonely.	3.08	1.6	-8.63	222	0.001
Volunteer work makes me feel that there are those who need me.	2.8	1.52	-11.9	224	0.001
Regardless of how bad I feel, volunteering makes me forget.	3.2	1.66	-7.29	226	0.001
Volunteering reduces my feeling of guilt because I am luckier than others.	3.27	1.71	-6.42	225	0.001

SD: standard deviation; t: t-value; df: degree of freedom

- “I can discover my strength points” were significantly predicted to volunteer $F(1,223) = 6.78, P = 0.010$.
- “I can learn dealing with a diversity of people” were significantly predicted to volunteer $F(1,222) = 11.96, P = 0.001$.
- “I can learn more about the case I am working on” were significantly predicted to volunteer $F(1,221) = 7.15, P = 0.008$.
- “Volunteer work allows me to learn things through experience” were significantly predicted to volunteer $F(1,222) = 10.88, P = 0.001$.
- “Volunteer work for me is a mean for helping the environment” were significantly predicted to volunteer $F(1,223) = 10.24, P = 0.002$.

Other values were not significant predictors of volunteering. Regarding the career development division, none of the attributes could significantly predict volunteering. On the other hand, all attributes of enhancement division were significant predictors of volunteering ($P < 0.05$). Social factors' attributes were analyzed also and only two attributes were significant predictors of volunteering:

- “People I know share the same interest in community serving.” $F(1,217) = 5.77, P = 0.017$.
- “I would like to be a contributing participant to the kingdom's 2030 vision.” $F(1,223) = 8.61, P = 0.004$.

Finally, none of the protective attributes could be a significant predictor for volunteering.

Discussion

Our results showed that among randomly selected primary healthcare centers in Jeddah engaging 231 healthcare workers, the participation in public health volunteering was 43%. Compared to nationwide historically reported volunteering as per World giving index, 2013,^[2] there is tremendous three-fold improvement in the level of volunteering among study participants. This can be attributed to the kingdom's 2030 vision with one million volunteers per year in all working sectors in the Kingdom of Saudi Arabia.^[13] Also, the MOH 2030 health care transformation strategy could be a contributor to this increase in level of participation in volunteering.^[14] All attributes of volunteering determinants were ranked as significantly important. Socio-demographics showed that age is a significant predictor of volunteering.

The majority of our participants (87%) were <40 years old which can be the target for public health volunteering promotion campaigns. Also, this matches the world giving index 2013 report of charities aid foundation.^[2]

The United Arab Emirates declared 2017 as a volunteering year. In a similar study published by Al Saraidi *et al.* in 2020,^[15] a total of 667 health volunteers answered a questionnaire about volunteering determinants and barriers; most responders (80%) were less than 40 years old with 63% of female participation, which matches our studied population.^[15]

In a national online survey published by Alomar *et al.* 2021,^[12] among 6016 healthcare students and interns across Saudi Arabia, 1824 (30.31%) have volunteered with the MOH services in response to COVID-19 pandemic.

Apart from age as a determinant for volunteering, all other socio-demographic factors had no predictive significance in being engaged with volunteerism. It seems female gender and being engaged with family commitment are not a barrier for joining volunteering—thanks to women enablement initiatives implemented by kingdom leadership.

In 2007, Ambiee in his graduation thesis examined physicians' motives to volunteer. The values of physicians were significant determinants for volunteering, namely, their belief in the need to expand health care access for all and their work at the free clinic will benefit the community. The spiritual values physicians gained when participating in public health volunteering were an integral part of motivation.^[16]

In a study among college students done by Gage and Thapa (2012),^[17] they recommended that families and teachers can inculcate volunteerism in a majority of students. Moreover, more than half of participants declared giving time as their most important contribution and that their strongest drivers to volunteer were values and understanding dimension.

Despite tremendous improvement in volunteering practice among primary healthcare workers, still there is a room for improvement. It can be done by profiling health care worker who is a potential candidate for volunteering by simply outlining the attributes in volunteering determinants declared by participants such as age, values, enhancement, and social dimensions. Volunteering motivational programs should target primary healthcare workers who are less than 40 years old and enhance building teams of volunteers as this socially enhances volunteering as declared by participants.

This study has few limitations. The cross-sectional design of the study is limited to MOH primary care sector in Jeddah only. Further studies need to be conducted with other healthcare sectors and nationwide survey. Moreover, barriers to volunteering still to be identified.

In conclusion, volunteering has a major added value complementing healthcare resources in meeting demands for activities, especially in emergency situations like COVID-19 pandemic. Volunteering activities include caring for elderly people, patients' education, health care sector awareness campaigns, providing logistic assistance, volunteer in medical research, and fundraising for low income patients. More efforts are required to bring awareness toward voluntary opportunities in the Saudi healthcare sector.

Acknowledgement

We appreciate all our colleagues in the primary healthcare centers for their participations in this survey. Also, we thank the research committee of joint program of family medicine for approving this research and validating the questionnaire, namely, Dr. Majed Al-Ghamdi and Dr. Bakor Kalo. Finally, we appreciate the contribution of Dr. Wesam Ibrahim in statistical analyses.

Key Messages

- Volunteering complements health care resources in coping with emergent situations like COVID-19 pandemic.
- Predictors of volunteering among primary healthcare workers are age, values, enhancement, and social attributes.
- Motivational programs toward volunteering should focus on potential primary healthcare candidates who are less than 40 years old and enhance the development of volunteering teams as they tend to volunteer in groups.
- More efforts are required to bring awareness toward volunteering opportunities in the Saudi healthcare sector.

Financial support and sponsorship

The authors did not receive any financial support for conducting and reporting this study.

Conflicts of interest

There are no conflicts of interest.

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