American Journal of Clinical Medicine Research, 2020, Vol. 8, No. 2, 37-42
Available online at http://pubs.sciepub.com/ajcmr/8/2/3
Published by Science and Education Publishing
DOI:10.12691/ajcmr-8-2-3

Factors Influencing Healthcare Professionals' Performance during Hajj Season of 2019 in Al-Madinah

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Received June 16, 2020; Revised July 17, 2020; Accepted July 27, 2020

Abstract **Background:** Pilgrimage (Hajj) is the largest religious gathering worldwide performed yearly in Saudi Arabia. Saudi health authorities have extensive experience in providing a high health care standard to all visitors. Saudi experience successfully developed and is increasing year after year. This study was conducted to assess factors influencing healthcare professionals' performance during Hajj season. **Objective:** To determine factors influencing the performance of healthcare professionals' providing health services to the pilgrims in four major hospitals and two health care centres in Al-Madinah Al-Munawara, Saudi Arabia, focusing on the impact of job satisfaction, organizational commitment and personal characteristics. **Methods:** A cross-sectional study was conducted using the Minnesota Job Satisfaction Questionnaire (MJSQ) and Organizational Commitment Questionnaire (OCQ) to survey 752 healthcare professionals. **Results:** The response rate for this study was 71% (n=536). Male health workers (44.4%, n=238) were more satisfied than females (65.6%, n= 298) ($p<0.001$). There was no evidence for a significant difference between males and females ($p=0.094$) concerning organizational commitment. Regarding the level of occupation in job satisfaction, this study showed a significant difference between nurses and respiratory therapists (highly satisfied) ($p<0.001$). Low job satisfaction among nurses is a bad indicator that needs focusing on its real causes. There was no evidence for a significant difference between males and females for organizational commitment ($p<0.094$). There was a significant difference between different age levels as regard organizational commitment ($p<0.000$). People having more than 42 years significantly differ from all other age groups There was a significant difference ($p<0.000$) between different levels of marital status for organizational commitment but there was no significant difference between different levels of marital status for job satisfaction ($p=0.192$). There was a significant difference between different levels of occupational job satisfaction. There was a significant difference between different levels of experience in job satisfaction ($p=0.008$). The higher the experience period, the higher the job satisfaction. **Conclusion:** This study offers an overview for the way the hospitals of ministry of health (MOH) are managed and for its policies regarding several aspects of human resources to improve the use of healthcare manpower in future Hajj seasons.

Keywords: *professionals' performance, Saudi Arabia, vision 2030, job satisfaction, organizational commitment, health manpower*

Cite This Article: Sabha Theeb Saud Al-Hajri, Kawther Alkaseer, Ahmed Al-Shehri, Hend Mansour Alqaidi Al-Harbi, Hanady Saad Awaad bin Taleb, Abdullaziz Jaber Al-Shehri, Asrar Jan, Bayan Mohamed Kheder, Suzan Talal Al-Juhani, Sara Mesha`al Al-Mutairi, Naser Awad Al-Harthi, Ebrahim Ahmed Khair Allah, Hytham Jameel Altaib, Thoraya Ali Al-Zahrani, Amani Mohamed Al-Qurashi, and Salah Mohamed El Sayed, "Factors Influencing Healthcare Professionals' Performance during Hajj Season of 2019 in Al-Madinah." *American Journal of Clinical Medicine Research*, vol. 8, no. 2 (2020): 37-42. doi: 10.12691/ajcmr-8-2-3.

1. Introduction

Hajj is the fifth pillar of the five Islam pillars. It is a duty that must be done by any capable Muslim. Hajj is a spiritual journey that helps to cleanse the Muslim from sins and connect him with Allah (God most gracious). Muslims from all countries over the world try to perform this journey at least once in their lifetime. For this, Saudi Arabia was honored by having the two holy mosques and for taking the responsibility of the pilgrims. There are many services provided by the Saudi government to the pilgrims including the free of charge health services. All sectors of the Saudi government take part in the hajj season including the ministry of health, ministry of interior and the ministry of Hajj and Umrah. All work in a harmony in order to achieve the strategic goals and targets of Saudi Arabia's 2030 vision. Ministry of Hajj and Umrah has set several strategic initiatives. Such initiatives include the establishment of the electronic control center, Makkah-Al-Madinah train, the train for the holy places and others. Another initiative is the introduction of the Hajj pilgrims' e-bracelet program that stores pilgrim's information and helps to provide them with the necessary support [1]. Some studies found that higher engagement led to better patient-centered care, employee satisfaction, and a better patient safety. Many studies referred to the importance of employees in managing hospital performance [2].

For the fourth consecutive year, the World Health Organization (WHO) is regularly invited by the Saudi ministry of health (MOH) to observe and to provide any required technical assistance during Hajj season. Based on this collaboration, Saudi Arabia has gained a great experience in dealing with large people gatherings for religious, spiritual, cultural and other purposes. These are termed “mass gatherings” by WHO. WHO designated the Saudi centre for mass gathering medicine as a WHO collaborating centre. Together, WHO and Saudi health authorities are exchanging experiences regarding mass gatherings for the benefits of the whole world [3]. The main responsible institution to care for such crisis is the ministry of Hajj & Umrah that organizes the efforts of the governmental and non-governmental sectors working in the field of Hajj and Umrah. Hajj season is an opportunity for healthcare professionals to get the responsibility of a big number of patients and to improve their performances, as shown in a study conducted in 2019 and showed that Hajj season gives healthcare professionals the chance to gain self-confidence and experience via the provision of health-care services for mass gathering sessions [4].

At the end of each Hajj season, there is a comprehensive number of Hajj statistics that are conducted. With regard to the number of manpower that provided services to the pilgrims this season (2019 hajj season), this had witnessed a huge total number of manpower involved in serving the pilgrims. Such manpower was more than 350,830 people, representing more than 47 governmental agencies and private participations in the provision of more than 353 main and subsidiary services. The number of manpower providing supervision and follow-up services on the work of Hajj was 6336 supervisors, while the total number of manpower providing public services for the pilgrims was 257,763 employees, and the total number of manpower in the services of pilgrims’ health and medical care was 30908 employees. The number of manpower in the services of telecommunications and information technology reached 7098 employees. More than 9975 volunteers worked powerfully in serving the elderly and guiding and counselling the pilgrims. They also performed good relations, language translation in addition to services regarding health and media [5]. Improving the role of an employee during a mass gathering and improving the medical services in hospitals and medical centers is quite vital [6]. There were many factors affecting healthcare professionals’ performance such as services design, technical concerns, familiarity with information and communication technologies, and time factor [7]. Job satisfaction occurs when an employee feels he or she is having job stability, career growth and a comfortable work life balance. This implies that the employee is having satisfaction at job as the work meets the expectations of the individual. A satisfied employee is always important for an organization as he/she aims to deliver the best of their capability.

Several issues e.g. personal capabilities and needs, self-consciousness and personal culture may affect people’s satisfaction in job [8]. A number of previous studies have found that there is a strong relationship between job satisfaction and organizational commitment [8,10].

In this study, we investigated many factors that may affect job satisfaction of health care providers during 2019 pilgrimage season in Al-Madinah, Saudi Arabia.

2. Materials and Methods

A cross-sectional descriptive study was conducted during September 2019 at four governmental hospitals providing services for the pilgrims: King Fahad hospital (KFHM), Al-Ansar Hospital, Ohud Hospital, Maternity & children hospital and two primary health care centers; Airport Health Center and Bab Jibril Health Care Center, in Al Madinah Al Munawwarah, Saudi Arabia.

2.1. Study Population

The total number of healthcare professionals working in 2019 season was estimated to be 2668 individuals. A sample size calculation was done using this formula (N= $\frac{Z2p(1-p)}{d2}$) and using (Epi Info application). Suggested sample size was 752 health workers. All healthcare professionals in these facilities were asked to respond anonymously to the questionnaire. Complete surveys were received from 536 (response rate=71%)

Inclusion criteria

Included all physicians, nurses, and staff having bachelor and diploma degree who work with the manpower system during Hajj season of 2019 and had at least one year of experience. Their age ranged from 27 to 50 years old.

Exclusion criteria:

The study excluded all health care professional who was not available at the time of data collection, those who have no experience with hajj duties and those whom their age was less than 27 or more than 50 years.

Measurements:

We used two versions for the questionnaire; the paper version and the online version. The online version survey administration is more convenient for busy professionals

Demographic Data:

The demographic data examined in this study included; age, gender, nationality, marital status, current occupation, time of participation in 2019 Hajj season, current job location and years of experience.

Job satisfaction:

Job satisfaction was measured using the short form of the Minnesota Satisfaction Questionnaire (MSQ) by Weiss et al. This instrument utilized a 25-dimension Likert-type scale, with (not satisfied=1; somewhat satisfied=2; satisfied=3; very satisfied=4, and extremely satisfied=5) having a Cronbach's of (0.87).

Organizational commitment:

Organizational commitment was measured using the Organizational Commitment Questionnaire (OCQ) developed by Mowday et al. It uses 15 items to describe "global" organizational commitment. Responses are obtained using a five-point scale, where (strongly disagree=1; moderately disagree=2; slightly disagree=3; neither disagree nor agree=4; slightly agree=5, moderately agree=6 and strongly agree=7). This measure was found reliable, with a Cronbach's of (0.85).

N.B. A written permission was taken from the authors of the original versions to use the questionnaires. There was no Arabic version for these surveys. So, we translated the questionnaire without any changes in the meaning and it was reviewed by our physicians before distributing it to target persnnel.

2.2. Data Analysis

The statistical data analysis was conducted using the statistics software Statistical Package for the Social Sciences (SPSS) version 25. Basic descriptive statistics such as frequencies, percentages, means and standard deviations were calculated for the study sample. Mean scores were calculated for job satisfaction section by adding up the scores assigned to each answer. Likewise, organizational commitment scores were calculated.

3. Results

A total of 752 respondents agreed to participate in the study. Among them, 536 respondents (response rate was 71%) completed the survey's questionnaires. Demographic and work-related characteristics of study respondents are reported in Table 1. Most of the sample participants (55.6%) were women and only (44.4 %) were male. 66.8 % were married. Most of the respondents (67.0%) were Saudi participants.

The study sample was composed of 22.8% doctors, 50.4% nurses, 6.3% respiratory therapists, 6.2% paramedics and 14.4% were pharmacists. The majority were aged from 27 to 32 with a percentage of 43.1%. 32.5% of the study sample worked in Al-Ansar hospital, 22.8% in king Fahad hospital, 19.4% in Ohud hospital, 14.2% in Airport Medical Centre the lowest Bab Jibril Centre (6.7 per cent). The majority of healthcare personnel (43.0 per cent) had work experience more than five to ten years' experience, (34.9 per cent) more than ten years, (23.1 per cent) less than five years (from two to five years' experience). 59.7% of the investigated personnel participated in Hajj season three times and more while 18.5% had participated two times, and only 16% was their first participation. Male health workers were more satisfied than females while there was no evidence for significant difference between male and female in organizational commitment (p=0.094).

Table 1. Sociodemographic data of health care personnel participating in this study

Professional qualification		
Doctors	122	22.8%
Nurses	270	50.4%
Respiratory therapist	34	6.3%
Paramedics	33	6.2%
Pharmacists	77	14.4%
Total	536	100%
Gender		
Male	238	44.4%
Female	298	55.6%
Total	536	100%
Marital status		
Married	358	66.8%
Unmarried	178	33.2%
Total	536	100%
Nationality		
Saudi	359	67%
Non Saudi	177	33%
Total	536	100%
Age		
27-32 years	231	43.1%
32-37 Years	151	28.2%
37-42 Years	101	18.8%
>42	53	9.9%
Total	536	100%
Years of experience		
2-5 years	124	23.1%
5-10 years	225	42%
>10 years	187	34.9%
Total	536	100%
Current job location		
King Fahad hospital	122	22.8%
Al-Ansar hospital	174	32.5%
Ohoud hospital	104	19.4%
Maternity & children hospital	24	4.5%
Airport health center	76	14.2%
Bab Jibril health center	36	6.7%
Total	536	100%
Number of participations in previous hajj seasons		
This is the first time	86	16%
I participated once	31	5.8%
I participated twice	99	18.5%
I participated three times	320	59.7%
Total	536	100%

Table 2. Organizational Commitment

Post Hoc Tests

Multiple Comparisons

LSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
[27 - 32]	[32 - 37]	.32998*	.10600	.002	.1217	.5382
	[37 - 42]	.08566	.12083	.479	-.1517-	.3230
	42 <More	-.58425-*	.15672	.000	-.8921-	-.2764-
[32 - 37]	[27 - 32]	-.32998-*	.10600	.002	-.5382-	-.1217-
	[37 - 42]	-.24432-	.13021	.061	-.5001-	.0115
	42 <More	-.91424-*	.16405	.000	-1.2365-	-.5920-
[37 - 42]	[27 - 32]	-.08566-	.12083	.479	-.3230-	.1517
	[32 - 37]	.24432	.13021	.061	-.0115-	.5001
	42 <More	-.66991-*	.17401	.000	-1.0117-	-.3281-
42 <More	[27 - 32]	.58425*	.15672	.000	.2764	.8921
	[32 - 37]	.91424*	.16405	.000	.5920	1.2365
	[37 - 42]	.66991*	.17401	.000	.3281	1.0117

*. The mean difference is significant at the 0.05 level.

Table 3. Current occupation with job satisfaction: Kruskal-Wallis Test

Ranks			
	Current occupation	N	Mean Rank
job satisfaction	Doctor	122	323.90
	Nurse	270	212.86
	Respiratory Therapist	34	345.35
	Paramedic	33	322.56
	Pharmacist	77	318.73

Table 4. Job satisfaction between different types of location

(I) Current job "location"	(J) Current job "location"	Mean Difference (I-J)	Std. Error	Sig.
King Fahad Hospital	Al-Ansar hospital in Al-Madinah, Saudi Arabia	.08322	.07677	.279
	Ohoud Hospital	-.14749-	.08676	.090
	Maternity and Children	-.43740-*	.14517	.003
	Medical Health Center in Airport	-.34891-*	.09500	.000
	Health Center Bab Jibril	-.36309-*	.12330	.003
Al-Ansar hospital in Al-Madinah, Saudi Arabia	King Fahad Hospital	-.08322-	.07677	.279
	Ohoud Hospital	-.23071-*	.08058	.004
	Maternity and Children	-.52062-*	.14156	.000
	Medical Health Center in Airport	-.43213-*	.08939	.000
	Health Center Bab Jibril	-.44631-*	.11903	.000
Ohoud Hospital	King Fahad Hospital	.14749	.08676	.090
	Al Ansar hospital in Al-Madinah, Saudi Arabia	.23071*	.08058	.004
	Maternity and Children	-.28990-*	.14722	.049
	Medical Health Center in Airport	-.20142-*	.09811	.041
	Health Center Bab Jibril	-.21560-	.12571	.087
Maternity and Children	King Fahad Hospital	.43740*	.14517	.003
	Al-Ansar hospital in Al-Madinah, Saudi Arabia	.52062*	.14156	.000
	Ohoud Hospital	.28990*	.14722	.049
	Medical Health Center in Airport	.08849	.15222	.561
	Health Center Bab Jibril	.07431	.17132	.665
Medical Center Health in Airport	King Fahad Hospital	.34891*	.09500	.000
	Al Ansar hospital in Al-Madinah, Saudi Arabia	.43213*	.08939	.000
	Ohoud Hospital	.20142*	.09811	.041
	Maternity and Children	-.08849-	.15222	.561
	Health Center Bab Jibril	-.01418-	.13153	.914
Health Center Bab Jibril	King Fahad Hospital	.36309*	.12330	.003
	Al Ansar hospital in Al-Madinah, Saudi Arabia	.44631*	.11903	.000
	Ohoud Hospital	.21560	.12571	.087
	Maternity and Children	-.07431-	.17132	.665
	Medical Health Center in Airport	.01418	.13153	.914

*. The mean difference is significant at the 0.05 level.

Chi-square statistics for job satisfaction indicated that there was a significant difference between different levels of job satisfaction (directly proportional to increase with level of age) ($p < 0.000$), which may reflect the work experience. As for organizational commitment, there was no evidence for a significant difference between males and females for organizational commitment ($p<0.094$). Moreover, there was a significant difference between different age levels as regard organizational commitment ($p<0.000$). According to post-Hoc test, there was a significant difference between the age group (27 - 32 years) and the age group (32 - 37 years) ($p<0.002$) and the age group (27-32 years) and the age group (more than 42 years) ($p<0.000$). People having more than 42 years significantly differ from all other age groups (Table 2). Independent t test was used to examine the effects of marital status on organizational commitment. There was a significant difference ($p<0.000$) between different levels of marital status for organizational commitment but there was no significant difference between different levels of marital status for job satisfaction ($p=0.192$) according to p value of Kruskal-Wallis chi-square statistics for job satisfaction. Moreover, there was a significant difference between different levels of occupational job satisfaction, the lower mean rank for Nurses was as shown in Table 3. There was a significant difference between different levels of experience in job satisfaction ($p=0.008$). The higher the experience period, the higher the job satisfaction.

According to p.value (0.000) of Kruskal-Wallis chi-square statistics for job satisfaction there was significant difference between different level of participation during Hajj season in job satisfaction. The higher participation the higher satisfaction.

There is a significant difference of satisfaction between health care personnel in different locations (hospitals). There are multiple differences for job satisfaction for organizational commitment between different locations as shown in Table 4 ($p<0.000$). Also, there was significant difference of organizational commitment between job locations.

4. Discussion

This study aims at focusing on an important issue for health organization nowadays, which is the healthcare performance of personnel working during the hajj seasons in 1440 Higri calendar (2019 Gregorian calendar) (Table 1). Both job satisfaction and organizational commitment were found to be strong predictors for healthcare performance. Job satisfaction for nurses varies between moderate to high regarding gender in general, but in this study it was found that male nurses are more job satisfied when we compared them to female nurses. This is consistent with the study conducted in France and Jordan [11,12].

Many researchers have concluded that employees' job satisfaction generally correlated with age [13,14]. This study confirmed a positive relationship existing between job satisfaction and age of nurses. Findings revealed that nurses who were more satisfied with their jobs had a higher age than their colleges (Table 2). This finding is consistent with the findings of other previous studies in health-care settings by Clark et.al. [15]. In terms of organizational commitment, the study concluded that there are no differences in organizational commitment between male and female nurses. Some research studies recommended that commitment is differentially related to personal variables e.g. marital status [16]. Consistent with this study was the difference between different levels of marital status and commitment. Regarding the relationship between job satisfaction and marital status, no significant differences were detected by this study.

There may be a set of hidden factors among health care providers that affect job satisfaction negatively or positively. In this study, the results indicated a difference in job satisfaction among health care providers in which nurses occupied the lowest degree while respiratory therapists occupied the highest degree (Table 3). Some other studies pointed to other issues as security risks in the workplace that affect job satisfaction and health status of nurses [17]. Low job satisfaction among nurses is a bad indicator that needs focusing on its real causes. Current shortage in nursing services and the high turnover is of great concern in many countries [18]. There is no doubt that long work experience plays an essential role in job satisfaction (Table 2). In this study, our data revealed that there is a positive relationship between years of work experience and job satisfaction. The more years of experience, the greater the job satisfaction. This may be due to increased income for people who have more years of experience [19]. In terms of job satisfaction, this study showed that job satisfaction is positively related to times of participation (Table 1).

This study confirmed a positive relationship existing between job satisfaction and organizational commitment and job location. Both job satisfaction and organizational commitment have a strong relationship with job location (Table 4). This finding is consistent with other studies that had shown that job location affects job satisfaction [20,21,22].

5. Limitations

Findings of this study could not be generalized to other regions in Saudi Arabia except Al-Madinah. Future studies are recommended to make professional healthcare workers be participating in the development and improvement of healthcare services. Further improvements should be updated every year aiming at getting a successful season.

6. Conclusion

This study categorized job satisfaction across different specializations and identified factors that affect job satisfaction. These factors should be addressed in strategic planning aiming at improving the healthcare system and patient care. This study has important implications for the way that Ministry of Health hospitals are managed and for its policies regarding several aspects of human resources including efficient and effective use of healthcare manpower to satisfy the needs of Hajj season.

7. Recommendations

We recommend that other studies focus on other key factors in order to improve recruitment and retention into the profession and overcome shortages in qualified nurses and increase the awareness of dealing with hajj season by applying competencies to these categories. Although the study has been conducted in Al-Madinah, Saudi Arabia, it provides valuable insights that may be generalized to all healthcare personnel working in this vital sector of the Saudi healthcare system.

Source of Funding

The authors declared that this article has not funded by any organization or person.

Conflict of Interests

The authors have no conflict of interest to declare.

Ethics Approval

An ethical committee permission was taken from the administration department of the four hospitals and the two healthcare centers where the study was conducted. A written consent was taken from each participant after explaining to them the study objectives, procedures and types of data collected. Collected data was coded and only the researchers have access to it.

Consent

The authors declared that this article has not published in any journal or conference.

Acknowledgments

The authors acknowledge the support department of Ministry of Health in Al-Madinah region, Saudi Arabia. The authors also acknowledge the support gained from all the four hospitals and the two health centers mentioned in the study for their great help, patience and support during all the research process.

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