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## Healthcare Workforce in Saudi Arabia under Saudi Vision 2030

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### Abstract

**Background:** Saudization achieved limited success in private Saudi firms; nevertheless, it can achieve great success in the healthcare sector if there is sustainable graduation and training of Saudi healthcare-providers.

**Objectives:** This study analyzed the structure of the healthcare workforce of some healthcare institutions in Najran city to know the rate of Saudization in the healthcare sector, the healthcare-workers qualification, healthcare-workers mean age, healthcare-workers years of expertise and the rate of hiring of Saudi female healthcare-givers.

**Methods:** Cross sectional data of healthcare-workers from some health institutions in Najran city were collected by a simple questionnaire composed of personal data (such as age, gender, nationality, religion, qualification, major specialization and expertise in years). The questionnaire was distributed to 700 health working staff and the response rate was 73.6% (515 correctly filled questionnaire).

**Results:** This study revealed that the number of Saudi healthcare-givers in the surveyed sample was only 88 (17%); staff with PhD was only 20 (4%); the mean staff's age was  $35.89 \pm 10.17$ ; females were 348 (68%); of which, the Saudi females were only 38 (10.9%).

**Conclusion:** The rate of hiring Saudi healthcare-givers is very low and expatriates with basic healthcare qualification dominate the surveyed sample. In line with the Saudi vision 2030, the study suggests endorsement of hiring polices to ensure hiring of more Saudi healthcare-givers, empower Saudi females in healthcare-sector and hire only highly skilled foreign healthcare-providers with rare specialties and certified practical experience.

**Keywords:** Healthcare workforce; Saudization; hiring females; Saudi vision 2030.

## 1. INTRODUCTION

Health work environment is complex, multidisciplinary and comprises of numerous facets that healthcare-workers, health-officials, central health-administrators and states need to maintain. The Saudi government endorsed a vision for the coming decades that if implemented properly will ensure the welfare for the Saudi society and the future generations. The healthcare-working sector is one of the sectors expected to contribute significantly to Saudi vision 2030. To ensure the contribution of the healthcare-working sector to this vision, specialized Saudi experts backed-up with highly specialized foreign staff should dominate this sector. In Saudi Arabia, ethically Saudi healthcare-givers should

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dominate the healthcare-working community to keep the legacy, ethics and morals of the Saudi society.

Since the discovery of oil in the late 1930s, many expatriates have entered the Kingdom of Saudi Arabia to assist the Saudi authorities in many disciplines necessary for serving the Saudi community, which at that time did not have qualified national cadres to fill these work gaps [1]. Initially, expatriates came to help the kingdom to discover and extract oil [2]. When there was a boom in oil prices, many expatriates entered the Kingdom in order to work and their population increased dramatically [2]. Because of the evolution in all service sectors, massive numbers of expatriates entered the Kingdom from different Arabic and Asian countries. According to official figures in 2012, expatriates' workers filled 66% of jobs in Saudi Arabia [4]. As shown in table 1, the expatriates' number was 10,736,293 in 2017[3].

**Table 1.** The population of expatriates in Saudi Arabia in 2017.

Expatriate's nationality	Number (%)
Syrian	2,480,332 (23)
Indian	1,535,443 (14)
Pakistan	1,062,999 (10)
Egyptian	1,062,999 (10)
Yemeni	0, 944,888 (09)
Bangladeshi	0, 826,777 (08)
Filipino	0, 708,666 (07)
Sri Lankan	0, 649,611 (06)
Indonesian	0, 472,444 (04)
Sudanese	0, 472,444 (04)
Jordanian/Palestinian	0, 307,089 (03)
Turkish	0, 094,489 (01)
Westerners	0, 118,111 (01)
Total expatriates	10,736,293(100)

Despite the educational revolution, which accompanied the flourishing of the petroleum industry and the spread of universities throughout the Kingdom, reliance on foreign workers has persisted, because there is a shortage of skilled Saudis to fill many jobs and Saudis consider many specialties as menial [5]. The Saudi higher education policies partially contributed to the continuation of this dilemma [6; 7]. Therefore, Saudi civil service continued to rely on foreign experts in many specialized jobs, menial job as well as the work that does not require the versatility. Since the initiation of Saudization in 1995, there has

been a reluctance to employ Saudis and generally, some authors considered Saudization as a failure [8].

The Saudi health field is not in isolation from the rest of service sectors and foreign skills dominate this sector. Although the Kingdom has established many governmental and private medical colleges as well as other health colleges, still expatriates' healthcare-givers dominate the working power in most of the Saudi hospitals.

The Saudi vision 2030 [9] was devised to achieve great expectations and goals in all aspects of life in Saudi Arabia. Of these goals, the visions seek to optimize and better utilize the capacity of Saudi hospitals and healthcare centers and enhance the quality of preventive and therapeutic healthcare services. In addition, the vision seeks to train the Saudi doctors to improve treatment for chronic diseases such as heart disease, diabetes and cancer that threaten the nation's health. The kingdom cannot achieve these goals, unless there is enough national staff of different specialties in all healthcare service institutions. Furthermore, the Saudi vision 2030 seeks to empower the Saudi women and to give them more chances to contribute to the development and renaissance of Saudi Arabia.

As reported by Peck [10] many private firms in Saudi Arabia enforced the national hiring quota system, the so-called Nitaqat. The goal of this program was to solve the problems of unemployed Saudis quickly. However, Nitaqat program did not increase native employment and had negative effects on private firms [10; 11]. Peck [10] has linked the problem of hiring nationals with the level of education, training and experience. Graduation of a limited number of healthcare personals and lack of sustainable training are the limiting factors of hiring Saudi nationals in this vital sector.

This study aimed to analyze the health workforce in Najran city to know the rate of Saudization in the healthcare-sector in Najran area, healthcare-workers qualification, expertise, mean age as well as the rate of hiring Saudi females. The study also sought to know the readiness of the healthcare sector for the Saudi vision 2030.

## **2. METHODOLOGY**

A cross-sectional study was carried out in the period from December 2015 to May 2017 to know the depth of knowledge and believes of hepatitis-B transmission, epidemiology and vaccination among healthcare-workers of governmental and private health institutions in Najran area. Ethical approval and permission No. 2921584/49/10 (date 15/11/1436 AH) has been taken from Najran Directorate of Health Affairs to carry out this work. To achieve the desired objectives of the study, the personal data of 515 healthcare-workers who participated

in the above-mentioned study from King Khalid Hospital, Najran General Hospital, Najran New General Hospital, Al-Shorfa Hospital, Maternity and Children Hospital, Hospital of Mental Health, Alzafir Hospital and the Najran Regional Laboratory were analyzed. The personal and demographic data were analyzed with SPSS version 16.1. The variables used to analyze the data were nationality, religion, qualification, specialization, gender, age group and experience in years. The data was presented as numbers and percentages.

## **2.1 Demographic Data Analysis**

Table (2) shows the distribution of the 515 healthcare-workers surveyed. The number of Saudis in the surveyed healthcare-workers was 88 (17%) and the non-Saudis were 427 (82.9%). The number of Muslims was 223 (43.4) and the non-Muslims were 292 (56.6%). Those whose qualification was bachelor were 342 (67.9%); those with undergraduate diploma were 109 (20.2%); those with master were 40 (7.9%) and those with PhD were 21 (4%). Out of the 515 surveyed healthcare-workers 164 (31.8%) were males and 351 (62.2%) were females.

Of the 515-surveyed healthcare-workers 10 (1.9%) did not give their specialization. Of those who gave their specialization 99 (19.6%) were doctors; 17 (3.4%) were dentists; 19 (3.8%) were pharmacists; 55 (10.9%) were lab technologists; 290 (57.4%) were nurses; 32 (6.3%) were radiologists and midwives were two (0.4%).

The number of healthcare-workers who gave their age was 501 (97.3%) out of 515. The age of 317 (63.2%) of them was  $\leq 35$  years; 99 (11.85%) of them were between 36 to 45 years; 53 (10.6%) of them were between 46-55 years; and those whose age was  $\geq 56$  were 32 (6.4%). The number of healthcare-workers who gave their expertise was 429 (83.3%) out of 515. Those whose experience was  $\leq 5$  years were 240 (55.9%); 6-10 years were 100 (23.2%); 11-15 years were 49 (11.4) and those whose expertise was  $\geq 16$  years were 40 (9.4%). Fourteen of the healthcare-workers (2.7%) did not give their age.

**Table 2.** The personal traits of surveyed healthcare workers.

Variable	Frequency (N %)*								
	Medicine	Dentistry	Lab. Tech.	Pharmacy	Nursing	Radiologist	Midwifery	Total	
1) Nationality	Saudi	5 (5.1%)	10 (58.8%)	22 (40.0%)	13 (68.4%)	27 (9.3%)	11 (34.4%)	0 (0.0%)	88 (17.1 %)
	Non-Saudi	94 (94.9%)	7 (41.2%)	33 (60.0%)	6 (31.6%)	263 (90.7%)	21 (65.6%)	2 (100.0%)	427 (82.9 %)
2) Religion	Islam	91 (91.9%)	16 (94.1%)	33 (61.1%)	16 (84.2%)	45 (15.5%)	20 (62.5%)	2 (100.0%)	223 (43.4 %)
	Christianity	4 (4.05%)	0 (0.0%)	16 (29.6%)	2 (10.5%)	199 (68.6%)	11 (34.4%)	0 (0.0%)	232 (45.1%)
	Others	4 (4.05%)	1 (5.9%)	5 (9.3%)	1 (5.3%)	46 (15.9%)	1 (3.1%)	0 (0.0%)	59 (11.5 %)
3) Qualification	Bachelor	43 (44.8%)	8 (47.1%)	21 (38.2%)	10 (52.6%)	240 (83.0%)	20 (62.5%)	0 (0.0%)	342 (67.9%)
	Diploma**	6 (6.2%)	6 (35.3%)	27 (49.1%)	8 (42.1%)	49 (17.0%)	10 (31.2%)	2 (100.0%)	109 (20.2 %)
	Master	33 (34.4%)	3 (17.6%)	4 (7.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40 (7.9 %)
	PhD	14 (14.6%)	0 (0.0%)	3 (5.5%)	1 (5.3%)	0 (0.0%)	2 (6.2%)	0 (0.0%)	21 (4 %)
4) Gender	Male	73 (73.7%)	8 (47.1%)	37 (67.3%)	13 (68.4%)	10 (3.4%)	22 (68.8%)	0 (0.0%)	164 (31.8 %)
	Female	26 (26.3%)	9 (52.9%)	18 (32.7%)	6 (31.6%)	280 (96.6%)	10 (31.2%)	2 (100.0%)	351 (68.2 %)
5) Age groups (years)	< 35	22 (22.7%)	14 (87.5%)	29 (54.7%)	14 (82.4%)	216 (76.1%)	20 (64.5%)	1 (50.0%)	317 (63.2 %)
	36-45	31 (32.0%)	1 (6.2%)	13 (24.5%)	2 (11.8%)	45 (15.8%)	6 (19.4%)	1 (50.0%)	99 (11.8 %)
	46-55	23 (23.7%)	0 (0.0%)	10 (18.9%)	1 (5.9%)	14 (4.9%)	5 (16.1%)	0 (0.0%)	53 (10.6 %)
	> 56	21 (21.6%)	1 (6.2%)	1 (1.9%)	0 (0.0%)	9 (3.2%)	0 (0.0%)	0 (0.0%)	32 (6.4 %)
6) Experience groups (years)	< 5	26 (27.1%)	10 (83.3%)	25 (52.1%)	12 (70.6%)	153 (57.7%)	14 (53.8%)	0 (0.0%)	240 (55.9 %)
	6-10	20 (20.8%)	0 (0.0%)	9 (18.8%)	4 (23.5%)	62 (23.4%)	5 (19.2%)	0 (0.0%)	100 (23.2 %)
	11-15	13 (13.5%)	2 (16.7%)	5 (10.4%)	0 (0.0%)	25 (9.4%)	3 (11.5%)	1 (50.0%)	49 (11.4 %)
	16-20	17 (17.7%)	0 (0.0%)	6 (12.5%)	0 (0.0%)	13 (4.9%)	3 (11.5%)	1 (50.0%)	40 (9.4 %)

\*Mismatch with the total subjects' number means some participants did not answer that question.

\*\*Diploma for medicine and dentistry means higher diploma.

### 3. RESULTS

As in figure 1 and table 2, the percent of Saudis in this surveyed healthcare-working staff was only 17.1%. This percentage included 88 Saudi individuals. The Saudi doctors were only five (5.1%) out of 99 doctors surveyed. The Saudi dentists were 10 (58.8%) out of 17 dentists surveyed. The Saudi pharmacists were 13 (68.4%) out of 19 pharmacists surveyed. The Saudi lab technologists were 22 (40.0%) out of 55 surveyed lab technologists; The Saudi nurses were 27(9.3%) out of 290 nurses surveyed; The Saudi radiologists were 11 (34.4%) out of 32 radiologists surveyed and no Saudi midwives were found (0%) (Table 2, Fig. 4).

From figure 2, the number of Muslim staff was 223 (43.5%) of them 60.5 % (n=135) were expatriates from other countries. The qualification of the Saudi staff who responded to this questionnaire mainly included bachelor or diploma and there was no Saudi staff with PhD (Fig. 3). The Saudi females' healthcare-givers were 38 who represent 10.9% of the total female staff (Fig. 5). The age of 317 (61.6%) of the surveyed staff was  $\leq 35$  years and 75 individuals in this category were Saudis who represent 85.2% of the total Saudis (Fig. 6).

As from fig. 7 the experience of most of the surveyed healthcare-workers (n=343; 66.6%) was  $\leq 10$  years and most of the surveyed Saudis (n=63; 71.6%) belong to this category of expertise.

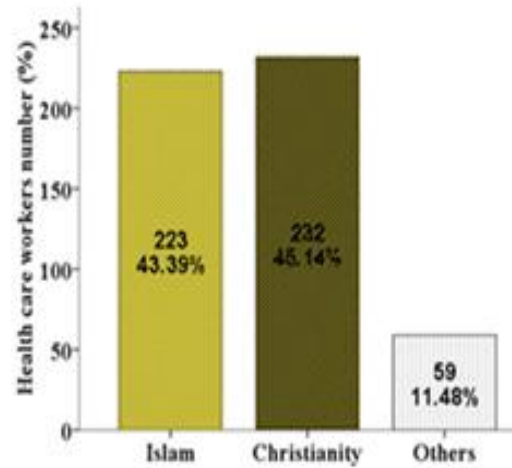
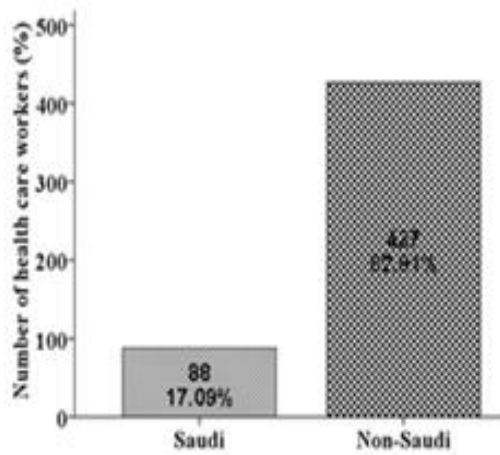


Fig. (1). Ratio of Saudi health care workers to expatriates. Fig. (2). Ratio of muslim staff to non muslim

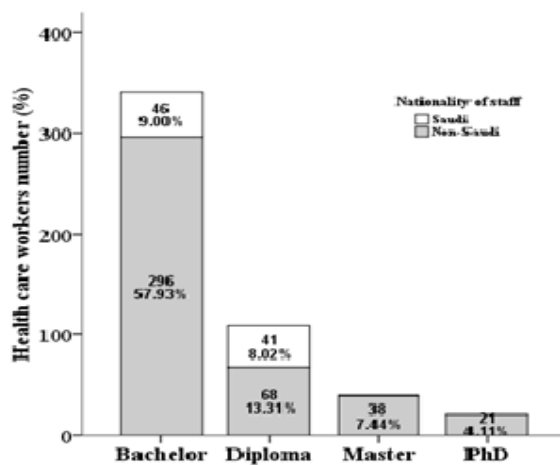


Fig (3). Healthcare workers qualification

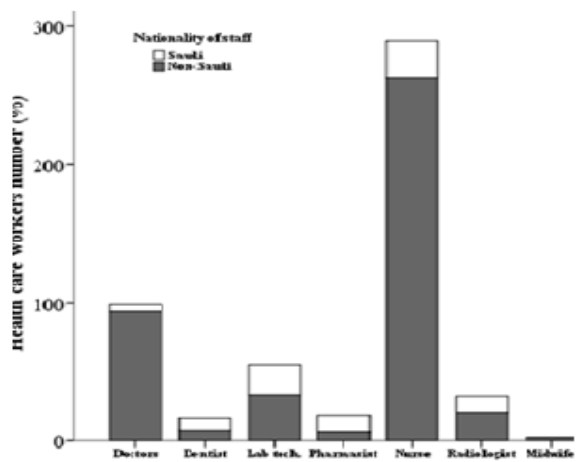


Fig. (4). Health care workers specialty

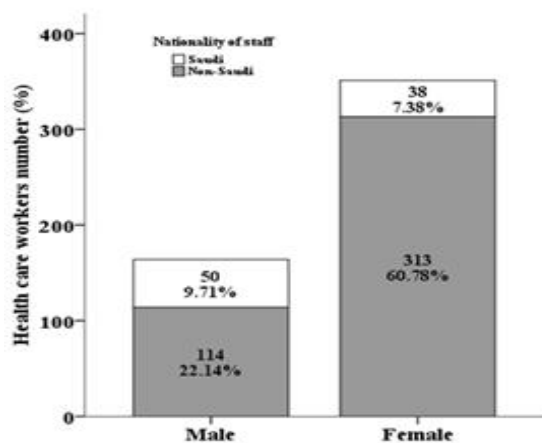


Fig. (5). Health care workers gender ratio

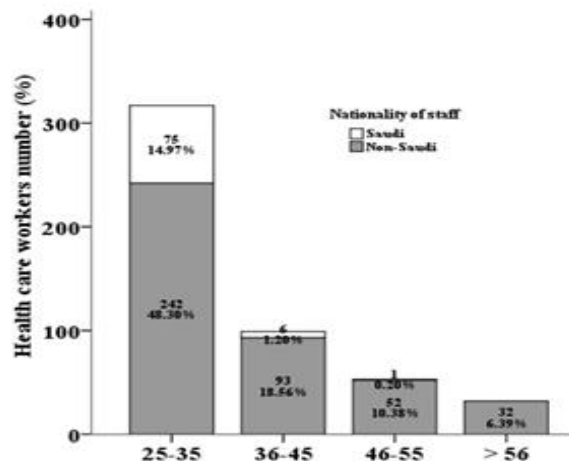


Fig. (6). Health care workers age groups

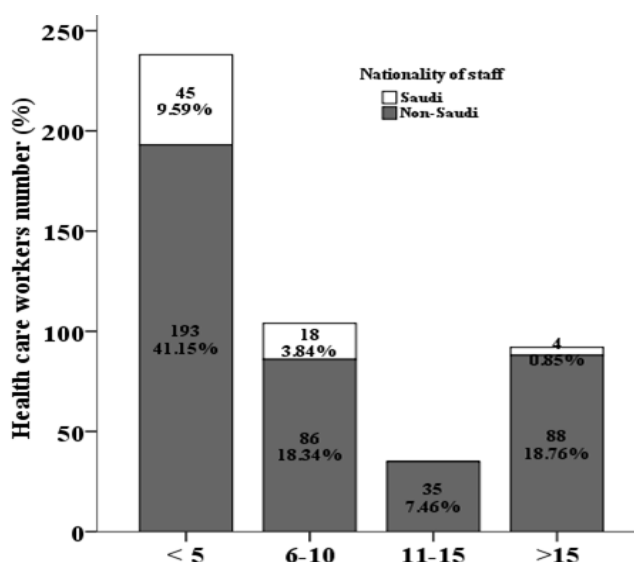


Fig. (7). Health care workers experience in years

#### 4. DISCUSSION

This study clearly shows that the rate of Saudization in the surveyed healthcare institutions is very low and will not achieve the ambition of the Saudi Vision 2030. Most of the surveyed healthcare-workers were young; without higher qualification and the expatriates dominated the surveyed sample. The study also revealed the scarcity of Saudi females in the surveyed healthcare institutions.

Since the rise of the number of unemployed Saudis in the late 1990s, the concerned Saudi Arabia's authorities have taken the lead in formulating and implementing the Kingdom's employment policies, the so-called Saudization program. This program started with the objective to increase the number of employed Saudis in the different civil service

sectors [11, 12]. Under the Saudization program, the Kingdom of Saudi Arabia expected that the rate of Saudis in the workforces might reach 51.5% by the end of 2009; however, this rate was not achieved, despite the creation of more than 2 million jobs by the private sector and the Saudis did not take more than 8.9% of these jobs [11, 13]. Despite the establishment of many governmental and private universities that have many medical and other health colleges, the number of hired Saudi healthcare-providers in the surveyed healthcare facilities is still limited except that of pharmacists (68.4%), dentist (58.8%) and lab technologists (40.0%). The results of this study pose two critical and important questions. First, do enough number of health professionals graduate from the Saudi health colleges? Second, do all the graduates of these institutes find job? The results of the current study can give ostensible answers to these questions. The first answers these institutes graduate enough number of health professionals who find no jobs while the jobs are available for expatriates. The second answer these institutes do not graduate enough number of health professionals and the health authorities fill the gap by hiring expatriate's health professionals. This situation foretells that there are obstacles to graduate, qualify and employ Saudi health professionals in the health sector in the coming decades. To avoid these obstacles and the expected employment problems, the ministry of health, ministry of education and the ministry of finance must combine their efforts to develop carefully thought out strategies; action plans and innovate effective solutions for these obstacles. These strategies and precautionary action plans will help Saudi Arabia to achieve the goals of the Saudi vision 2030 and solve the problems of hiring foreign healthcare-givers with general specialties in the coming decades.

To reduce the steady increase in the unemployment rate among local nationals many countries in the world have adopted the quota-based hiring system [11; 14; 15; 16]. In the gulf region including Saudi Arabia, the quota-based hiring system was enforced to nationalize the labor force because there is an increment in the national unemployment due to reliance on foreign work force [11; 12]. The quota-based hiring system must be strictly applied to assure employment of many Saudis in the healthcare-sector and should be accompanied by well-planned education policies to graduate enough number of highly skilled Saudi healthcare professionals.

In addition, the results of this study showed that the non-Muslims healthcare-workers outnumber the Muslim ones in a Muslim country whose legacy and ethics are based mainly on teachings of Islam. Furthermore, the population of Saudi females in the surveyed healthcare facilities was very little and do not exist in many specialties. To ensure the success of Saudi vision 2030 and to guarantee excellent healthcare service for the Saudi society while



preserving the ethics, legacy and moralities of the Saudi society; the concerned authorities should think of hiring policies that ensure employment of Saudi nationals with high skills. In addition, the health authorities should not ignore to hire and train the female healthcare workers. This could be achieved with cooperation of the concerned authorities with the Saudi Ministry of Education to ensure graduation and training of enough number of Saudi males and females doctors, dentists, pharmacists, lab technologists, nurses, nutritionists, radiologists etc. and there should be schools to graduate midwives as well. The age of most of the surveyed healthcare-working forces was  $\leq 35$  years and their expertise were  $\leq 10$  years. From this finding, most expatriates working in the surveyed healthcare facilities were young and had short experience.

These findings raise many questions; the most important one is why Saudi medical and health colleges that have been working for decades might have not been able to graduate enough national healthcare staff to substitute the young foreign staff whose experience is  $\leq 10$  years. Whatever the real causes and obstacles, the concerned authorities in ministry of education, ministry of finance and ministry of health must cooperate to develop new strategies and plans to train healthcare-givers locally and externally as well as endorse hiring policies compatible with the Saudi vision 2030 to find future solutions for these problems.

## **5. CONCLUSION**

The rate of hiring Saudi healthcare-givers in the surveyed health institutions is very low especially that of females. Furthermore, young expatriates with basic qualification dominate the surveyed healthcare institutions. This indicates that the healthcare-sector is not ready to endorse the Saudi vision for 2030 and needs restructuring to serve the morals, ethics and legacy of the Saudi society. The study suggests cooperation of the concerned authorities to develop new strategies and plans that ensure continuous graduation and sustainable local and external training of Saudi healthcare-givers. Furthermore, the study suggests the endorsement of hiring policies compatible with the Saudi vision 2030 to ensure substitution of the young foreign healthcare-givers of basic qualification with analogous Saudis, empower females in healthcare-sector and hire only high skilled expatriates' healthcare-givers.

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