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### RESEARCH ARTICLE

#### FACTORS AFFECTING THE CHOICE OF PRIMARY HEALTH CARE CENTERS IN WESTERN REGION OF KINGDOM OF SAUDI ARABIA.

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##### Key words:-

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#### Abstract

**Background:** Primary healthcare centers (PHCCs) play critical role in providing effective and economical healthcare services at large scale. PHCCs in Kingdom of Saudi Arabia (KSA) provides an access to primary healthcare services.

**Objectives:** To assess the factors which compel people not to attend the healthcare services at PHCCs.

**Methods:** It is a cross-sectional study carried out in PHCCs in 4 major cities in the Western regions of Saudi Arabia (Makkah, Jeddah, Taif and Madinah). Information regarding age, gender, reasons for visiting/not visiting to PHCCs etc. was collected through electronic surveys. The data were analyzed by using SPSS version 23 software.

**Results:** The majority of respondents were male residents of Makkah. Out of 618 Saudi origin respondents, most of them preferred private hospitals (37.5%) over PHCs. On the other hand, only 15.5% respondent have preferred PHCs. Sex, age groups, city and health insurance status all showed significant effects ( $p < 0.001$ ) on selection of PHCs to attend medical facility.

**Conclusion:** The PHCs facilities need to be well managed and equipped with advanced instruments and specialized staff to handle medical emergency and chronic disease, which will attract the attention of public toward PHCs.

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#### Introduction:-

Primary Health Care (PHC) is an approach to health beyond the traditional health care system that focuses on health equity-producing social policy. PHC includes all areas that play a role in health, such as access to health services, environment and lifestyle. PHC has main role in health promotion and prevent the illness<sup>(1)</sup>. PHC help in developing countries and evolve around socio- economic conditions<sup>(2,3)</sup>.

In both developed and developing countries, patients' satisfaction has long been considered as an important component when measuring health outcome and quality of care<sup>(4)</sup> and in addition. It constitutes a significant indicator of the health care quality<sup>(5)</sup>. Previous studies showed that satisfied patients were more likely to develop a

good relationship with the health system, leading to improve compliance, continuity of care and ultimately better health outcome <sup>(6)</sup>.

In Saudi Arabia, the Ministry of Health (MOH) provides health services at the primary, secondary and tertiary levels. PHC centers provide preventive and curative primary care services. The MOH provides health services through 2037 primary health care (PHC) centers. These services comprise 60% of the total health services in the country <sup>(7)</sup>.

Despite the importance of studying the factors influencing acceptance of patients to attend PHC center's services, few studies assessed this issue in Saudi Arabia over the last few years <sup>(8)</sup>. Therefore, this study was carried out to determine the causes and barriers that prevent Saudi population from visiting PHC centers.

### Subjects and methods:-

It is a cross-sectional study carried out between 15<sup>th</sup> August and 1<sup>st</sup> November, 2017 in PHC centers in 4 major main cities in the Western regions of Saudi Arabia (Makkah, Jeddah, Taif and Madinah). Information was collected through electronic surveys. They included age, gender, nationality, region, inquiry about if the patient is visiting PHCCs and what are the reason for that (vaccination, sick leave, antenatal care, chronic illness or acute event), inquiry about if the patient is not visiting PHCs and what are the reason for that (old building, long time of waiting, unqualified waiting area, lack of hygiene, lack of required medical devices, lack of time spent with the doctor, lack of specialized medical clinic). Finally, they were asked that in case of emergency, do they go to PHCs and if he/she trust the offered service? A convenient sample of 618 patients was selected for the study. The data were analyzed by using SPSS version 23 software.

### Results:-

The study included 635 participants, 17 were excluded as they were not of Saudi nationality representing only 2.7% of the total. Thus, the analysis was performed on 618 patients. The characteristics are presented in table (1). Majority of them (90%) were females. Almost one-third of them (37.4%) are in the age group 18-28 years, 28.2% are in the age group 40-50 years. Majority of them (75.4%) are from Makkah. The most preferred place for receiving healthcare services was the private hospitals in 37.5% of the cases, followed by the governmental hospitals in 24%, then the private polyclinics in 23% and the least preferred place is the primary healthcare centers in 15.5% of cases. Only 23% of the participants had medical insurance and only 39.5% said that they visit the primary healthcare centers. Of this group who said that they visit the primary healthcare centers, 37.7% visited it once in the last year and only 8.6% said that they didn't visit it during the last year.

Participants who visited the primary healthcare centers (N= 244) were asked about the purpose of visiting giving them some options. The result is shown in Figure (1). The most common purpose was the vaccination (72.5%), followed by when feeling sick (68%), and the least common purpose was antenatal care (23%). Participants who didn't visit the primary healthcare centers (N= 374) were asked about the reason for not visiting them giving them some options. The result is shown in figure (2). The most common reason was that there is no specialized clinics (82.6%), followed by the long waiting time (78.3%) and the center is not well equipped (76.2%). The least common causes are that the center is far (21.9%), and the building is old (36.4%).

Only 22.2% of the participants said that they will go to primary healthcare centers In case of emergency like severe chest pain or respiratory distress, and 31.4% said that they thrust the service provided in those emergency situations as shown in table (2).

Table (3) shows the relationship between visiting the primary healthcare centers and other factors. There is no significant difference in the percentage of participants who are visiting the primary healthcare centers regarding sex, age group or city of residence,  $p > 0.05$ . However, there is significant difference in the percentage of participants who visit the primary healthcare centers in the group who have medical insurance (28%) and those who don't have medical insurance (43%),  $p < 0.001$ .

Table (4) shows the relationship between the preferred place for receiving healthcare and other factors. The female participants preferred the governmental hospitals and the private polyclinics in percentages higher than the males whereas the private hospitals and primary healthcare centers were more preferred by the males,  $p < 0.001$ . The preferences also differ in different age groups.  $p = 0.003$ , the primary healthcare centers were most favored by

participants in the age group 51 to 60 years (24.4%), the governmental hospitals were favored more by the age group 18 to 28 years (32.5%), the private hospitals were favored by the age group 29 to 39 years (44.3%) and the private polyclinics were also favored by the age group 29 to 39 years (28.2%). The preferences also differed in different cities,  $p=0.003$ , the private hospitals were favored by participants from Madinah (76.9%) and the private polyclinics were favored by participants from Taif (29.4%). The presence of health insurance had a significant association with the choice,  $p<0.001$ , those who have health insurance chose the private hospitals in 57.3% of cases, while those who don't have insurance preferred more the primary healthcare centers, the governmental hospitals and the private polyclinics.

### Discussion:-

Primary Health Care (PHC) centers are first step and delivery point for providing effective, regular, and economical healthcare to public. Besides providing primary healthcare services, these PHCs also help to implement public health policy and make aware public about disease and healthy life practices. PHCs with strong supports and integrated efforts also help to ensure healthy life to majority of people in a cost effective manner <sup>(9)</sup>. This cross-sectional study was carried out to find the reasons of public not to visit the primary healthcare center in KSA. It was also observed from this study that most of the respondent did not have medical insurance and were under their 40s (58.6%). Only 244 (39.4%) persons visited PHCs and out of these 21 had not visited PHC last year. However, the common frequency of visit for respondents was one to four times (70.9%). Only 50 (20.5%) respondents visited the PHCs more than four times. Our results are similar to study carried out by Alzaied and Alshammar (2016) in KSA <sup>(10)</sup> in which 76.03% of the people visited less than five times.

In the current study, females were not very much inclined to avail the service provided and prefer private hospital or health clinics. Referral to government hospitals, vaccination and feeling sickness were major factors which made respondents to visit their nearby PHC. This shows that PHCs are only used by respondent to avail only basic health services and they prefer to visit government hospital for treatment purpose. Least visit for antenatal care and follow-up of chronic disease were reported. In prior study, it was reported that PHCs were efficient in handling to immunization and other primary level care of health; however, centers were not well equipped to deal with chronic disease, organizing and managing the health centers. <sup>(11)</sup> Therefore, these health centers need more support and training to improve their services.

Through the survey, we found the important reasons which compel respondents not to visit PHCs. Out of these, the lack of proper equipment and specialization, the long waiting time and bad condition of waiting area were the main repelling factors for patients. Moreover, other factors such as conditions of building, cleanliness, expertise and specialty of staff, level of health education and interaction time spend with doctor were common attributes which hindered respondents to avail primary health facility at PHCs. In another study, overcrowding and distance were reported as least encouraging factors for attending the PHCs. <sup>(12)</sup> Our study found out that the distance of PHC was not a barrier to reach the PHCs which is in coherence with another recent study, <sup>(10)</sup> which may be due to an improved transportation facility or increase in personal vehicles in recent years. The study also shows that in case of emergency situation PHCs are not preferred destination for primary treatments, the respondents showed lack of faith in PHCs to dealing of emergency situations. Similar facts were also reported about the ability of PHCs to manage the situation of chronic disease and medical emergency in other studies too. <sup>(10, 11, 13)</sup>

The faith of respondents can be improved by strengthening the PHCs facility and in providing sufficient training to staff to handle the emergency situation. However, more studies are needed to be conducted to develop essential facilities at PHCs to handle the emergency situation at primary level. Further analysis of the data shows there was no significant difference was observed between female and male to visit to PHCs. Similarly, different age groups did not show any significance difference on the choice of assessing the facilities of PHCs and most of the people of each age groups were not willing to attend the PHCs. Having health insurance showed very significant affect on choice to attend the PHCs for medical care and it was observed that most of the medically insured respondents had preferred private hospitals over PHCs. Sex, age groups, city and health insurance status all showed significant effects on the preference of availing medical facility among PHCs, government hospitals, private polyclinics and private hospital. Further, it was observed that males preferred to visit PHCs more as compared to female respondents, however private hospitals were most preferred destination for both gender to attain medical facilities. A study carried out by Alsubaie et al. (2016) also reported that factors such as health insurance, chronic health problems and self health perception significantly affects the choice to attend the PHCs. <sup>(14)</sup> It was found that private hospitals were most preferred than PHCs among all sections of the study groups. However, people of age group of 51-60 had equally

preferred to avail medical attention at PHCs (24.4%) or government hospitals (20.7%) over private polyclinic (18.3%).

The healthcare services have significantly improved in KSA, which proves its capability to cater specific needs of patients such as dental care.<sup>(15)</sup> Since last decade, more advanced medical devices and expertise has already been introduced to improvise medical services.<sup>(16)</sup> PHCs are important mean to serve the medical care and these centers need to be able to manage patients to provide initial diagnosis, treatments and follow-up in case of chronic disease.

To make health services of Makkah more effective, the condition of PHCs need to be improve and more specialized infrastructure must be developed along with properly trained staff to deal with emergency situation and chronic disease.

**Table (1):-** Characteristics of participants and attitude towards primary healthcare centers in numbers and percentages

Variables	Frequency	Percent
<b>Sex</b>		
Female	555	89.8
Male	63	10.2
<b>Age group</b>		
18 - 28 years	231	37.4
29 - 39 years	131	21.2
40 - 50 years	174	28.2
51 - 60 years	82	13.3
<b>City</b>		
Taif	17	2.8
Madinah	13	2.1
Jeddah	122	19.7
Makkah	466	75.4
<b>Which place do you prefer to receive your medical service?</b>		
primary healthcare centers	96	15.5
governmental hospital	148	23.9
private hospital	232	37.5
private polyclinic	142	23.0
<b>Do you have medical insurance?</b>		
No	475	76.9
Yes	143	23.1
<b>Do you visit primary healthcare centers?</b>		
No	374	60.5
Yes	244	39.5
<b>Did you visit your primary healthcare center during last year? (N= 244)</b>		
No	21	8.6
yes , once	91	37.3
yes , 2- 4 times	82	33.6
yes , more than 4 times	50	20.5

**Table (2):-** Attitude towards primary health centers in cases of emergency

	N	%
<b>In case of emergency like severe chest pain or respiratory distress, do you go to primary health care centers?</b>		
No	481	77.8
Yes	137	22.2
<b>In case of emergency like severe chest pain or respiratory distress, do you trust the service provided in primary health care centers?</b>		
No	424	68.6
Yes	194	31.4

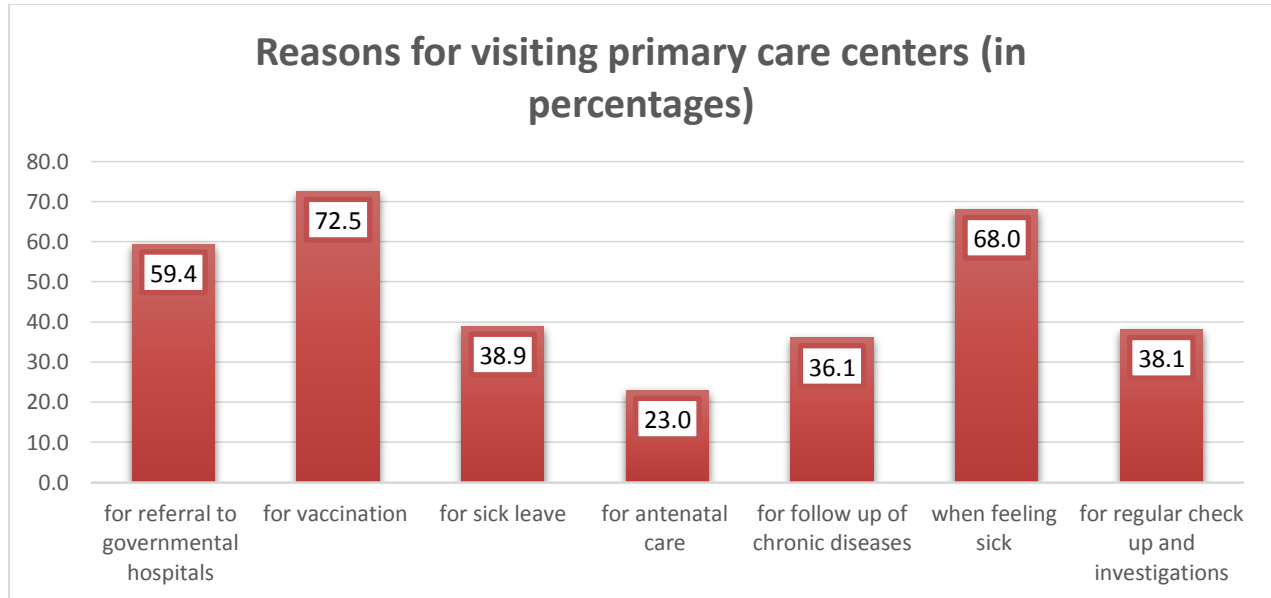
**Table (3):-**Relationship between visiting the primary healthcare centers and other factors

			visiting the primary healthcare center		p value (Chi Square test)
			No	Yes	
<b>Sex</b>	Female	N	341	214	0.16
		%	61.4%	38.6%	
	Male	N	33	30	
		%	52.4%	47.6%	
<b>Age group</b>	18 - 28 years	N	139	92	0.99
		%	60.2%	39.8%	
	29 - 39 years	N	79	52	
		%	60.3%	39.7%	
	40 - 50 years	N	107	67	
		%	61.5%	38.5%	
	51 - 60 years	N	49	33	
		%	59.8%	40.2%	
<b>city</b>	Taif	N	11	6	0.65
		%	64.7%	35.3%	
	Madinah	N	6	7	
		%	46.2%	53.8%	
	Jeddah	N	77	45	
		%	63.1%	36.9%	
	Makkah	N	280	186	
		%	60.1%	39.9%	
<b>Do you have health insurance</b>	No	N	271	204	< 0.001
		%	57.1%	42.9%	
	Yes	N	103	40	
		%	72.0%	28.0%	

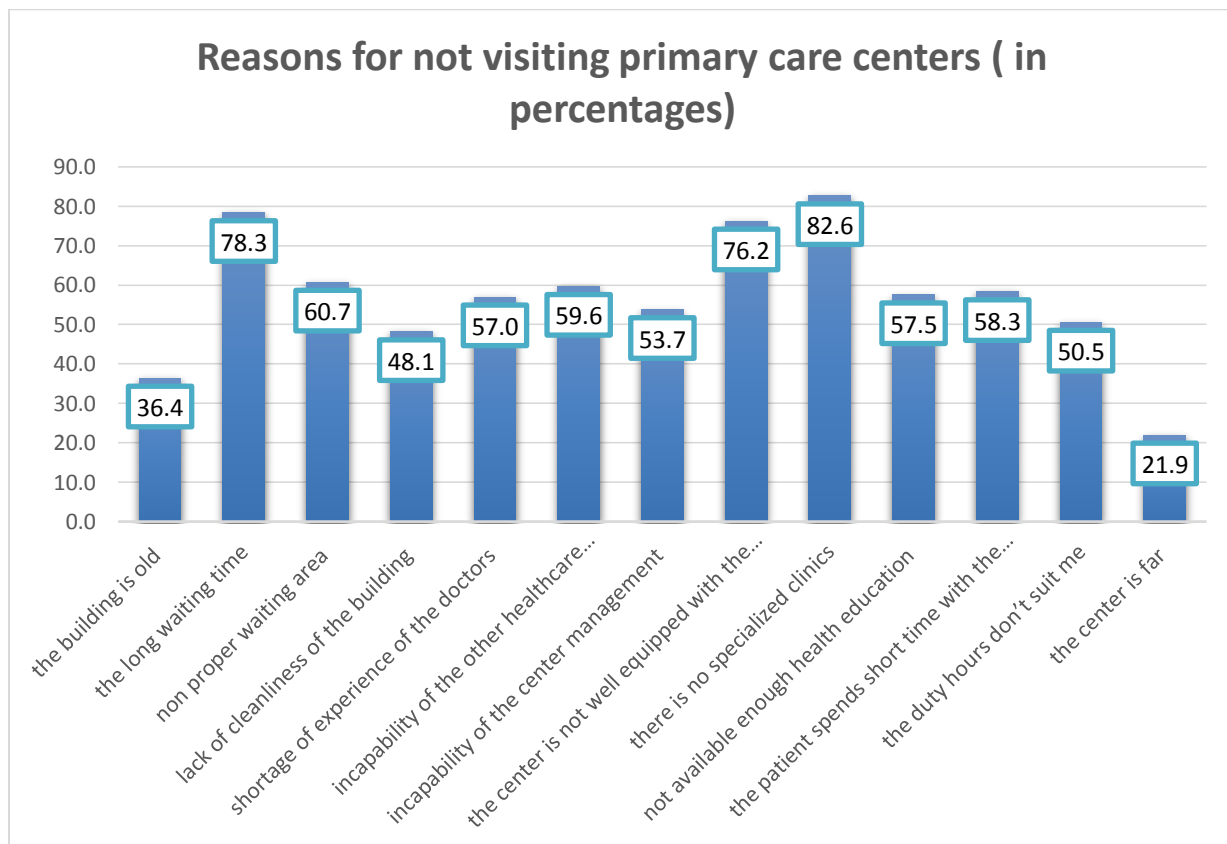
**Table (4):-** Relationship between the preferred place for receiving healthcare and other factors

			Which place do you prefer to receive your medical service?				p value (Chi Square test)
			primary healthcare centers	governmental hospital	private hospital	private polyclinic	
<b>Sex</b>	Female	N	75	142	204	134	< 0.001
		%	13.5%	25.6%	36.8%	24.1%	
	Male	N	21	6	28	8	
		%	33.3%	9.5%	44.4%	12.7%	
<b>Age group</b>	18 - 28 years	N	34	75	72	50	0.003
		%	14.7%	32.5%	31.2%	21.6%	
	29 - 39 years	N	17	19	58	37	
		%	13.0%	14.5%	44.3%	28.2%	
	40 - 50 years	N	25	37	72	40	
		%	14.4%	21.3%	41.4%	23.0%	
	51 - 60 years	N	20	17	30	15	
		%	24.4%	20.7%	36.6%	18.3%	
<b>city</b>	Taif	N	3	5	4	5	0.003
		%	17.6%	29.4%	23.5%	29.4%	
	Madinah	N	1	2	10	0	
		%	7.7%	15.4%	76.9%	0.0%	
	Jeddah	N	14	19	62	27	
		%	11.5%	15.6%	50.8%	22.1%	
	Makkah	N	78	122	156	110	
		%					

		%	16.7%	26.2%	33.5%	23.6%	
<b>Do you have health insurance</b>	No	N	86	124	150	115	< 0.001
		%	18.1%	26.1%	31.6%	24.2%	
	Yes	N	10	24	82	27	
		%	7.0%	16.8%	57.3%	18.9%	



**Figure (1):-**Reasons for visiting primary healthcare centers.



**Figure (2):-** Reasons for not visiting primary healthcare centers.

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