ASSESSMENT OF QUALITY OF HEALTH CARE IN SAUDI ARABIAN PERCEPTION TO PATIENT SATISFACTION IN PRIMARY HEALTHCARE CENTERS IN SAUDI ARABIAN , 2022

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Abstract

Background

Assessment the quality of medical services is a crucial strategy to identify the strengths and weaknesses providing actionable insights to improve the healthcare services provided to patients. In Saudi Arabian, the challenge of medical facilities and treatment in healthcare systems of patients is of high importance, this study was the first to be conducted among patients in Saudi Arabia to determine patient satisfaction with healthcare services. Patient satisfaction is a measure of the extent to which patients are content with the healthcare they receive from their healthcare provider. Patient satisfaction is an important factor in determining the success of a healthcare facility. It is an individual's cognitive evaluation of and emotional reaction to their healthcare experience. Modifiable factors that contribute to satisfaction include physician-patient communication, setting appropriate expectations, minimizing waiting times, and providing continuity of care. Medical care is often the first port of call for people in need of acute care, the level of satisfaction with care can serve as a measure of its quality. A key policy being implemented as a part of the development plan in KSA of the Saudi Vision (2030) .

Aim of the study: To assessment of quality of health care in Saudi Arabian perception to patient satisfaction in primary healthcare centers in Saudi Arabian, 2022.

Method: cross-sectional study to determine the relationship between quality of health care system on the quality of services providing in primary healthcare center and the satisfaction of Saudi patient .The study was conducted at primary healthcare centers in the Saudi and more specifically in Makah, Medina, Riyadh, Total of 300 eligible patients participated in this study .

Results: shows that most of the participants were (31.0%) in the age group 36-47 years, regarding gender the majority of them were male (75.0%), regarding the marital stats most of participants married were(63.0%), regarding level of education the majority of participant are eelementary were (28.0%), followed by secondary education were (27.0%) , regarding the Family income the majority of participant from 5000-10000 SR were (57.0%) while >10000 SR were(24.0%).

Conclusion: Patient satisfaction was influenced by health service quality, with the empathy dimension as the greatest influence on patient satisfaction. Therefore, it should be considered a priority by government primary healthcare centers to train doctors in relationship skills to enhance the quality of health care patient relationship and satisfaction levels.

Keywords: assessment, quality, health, care, perception, patient, satisfaction, primary healthcare centers, Makah, Medina, Riyadh.

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Introduction

Primary Health Care (PHC) is the backbone of the strong healthcare systems, contributing to improve population health and health equity as reported [1]. Recently, international health policy has paid increased attention to the role of PHC as a strategic policy approach to change healthcare systems" orientation from disease-focused systems to person, family and population-focused systems as documented [2]. Such a paradigm shift has put primary healthcare at the forefront of international health policies. The recent report of the, "PHC: now more than ever", is a case in point by World Health Organization (WHO) [3].

Service providers are progressively facing a wide range of social, financial, political, regulatory and cultural challenges, associating with demands for greater efficiency, better quality, and lower costs.[4] Health care institutions have to go beyond a medical view and replace it with a holistic social approach to healthcare. Precise diagnosis and treatment are not enough, patients will be looking for performance for services they are rendered. It is argued that the focus on the patients is the first among 5 attributes of healthcare quality.[5] Some studies have been conducted to examine the impact of service quality in healthcare settings in Saudi Arabia on patient satisfaction; however, Patient satisfaction has long been considered an important component when measuring health outcomes and quality of care [6]. It is a complex relationship between their perceived needs, expectations from the health services received [7]. So, satisfaction is one of the variables affecting the outcomes of health care and use of services. In order to improve the provision of care, predictors of dissatisfaction must be identified and eliminated [8]. User satisfaction with the health care is a basic component in evaluating health care quality [9]. The importance primary healthcare centers of the patient's opinion and his perception of treatment and care at health facilities are now recognized in all developed systems of health care [10]. The primary health care approach is a relatively new concept in the kingdom of Saudi Arabia. In 1978, the concept in the kingdom of Saudi Arabia . [11]

Measuring patient satisfaction quality of healthcare services has grown noticeably in recent years. Patient satisfaction is a subjective assessment that represents patients' cognitive and emotional responses triggered by the interaction of their expectations of ideal nursing care with perceived actual nursing care.[12] Such an assessment is being used to plan health care

services.[13] Measuring the level of satisfaction provides actionable insights to improve the healthcare system [14] . The fact that patient satisfaction is positively related to nursing care has impacted organizations to offer respective individuals nursing care[15]. High quality levels of medical care for patients are an overarching goal of all healthcare systems throughout the entire world. Already in the 1980s, determining the quality of services and products became a key objective for service providers. Service quality has many dimensions, thus its assessment is really challenging. [16]

The quality of provided services is assessed through the dimensions of tangibility, assurance, empathy, responsiveness, and reliability. The size of this gap/dimension exerts a relatively significant impact on the final quality of the service [17].

Literature review:

In the USA, the UK, and other countries, the measurement of patient satisfaction with nursing care services has been widely researched [18]. Most of such works were focused on patient satisfaction with hospitalization services, while there is a lacking of research that measured both patients' perceptions and nurses' attitudes simultaneously [19]

Ghadi et al (2021) addressed seven ways to improve quality and safety in any health care as the following: (1) 'Align organizational processes with external pressure. (2) Put quality high on the agenda. (3) Implement supportive organization-wide systems for quality improvement. (4) Assure responsibilities and team expertise at departmental level. (5) Organize care pathways based on evidence of quality and safety interventions. (6) Implement pathway-oriented information systems. (7) Conduct regular assessment and provide feedback'.[20]

The health system in Saudi Arabia (SA) has three sectors: the Ministry of Health sector (MOH), the private sector and other government sectors. The MOH is the major government provider of health services in Saudi Arabian .[21]

Some studies have been conducted to examine the impact of service quality in healthcare settings in Saudi Arabia on patient satisfaction. Evaluated the satisfaction of 400 inpatients with health services in Riyadh, and found that the highest mean satisfaction score was admission, and the lowest was communication.[22]

Another study was conducted to examine patient satisfaction in primary health care centers in different regions of Saudi Arabia. It indicated that

77.5% of the primary health care patients were satisfied with the services.[23] the most important factor in the choosing was medical services followed by accessibility and administrative services. Since the Saudi government provides 64.5% of healthcare and the rest is provided by the private sector .[24]

Perceived it as imperative that most objective quality measures were introduced in all provided services, including medical ones . On the basis of their own observations and research, they designed and developed a Seroquel questionnaire in which discrepancies between customer expectations and the service provided were identified by analyzing five gaps/dimensions.[25]

The World Health Organization (WHO) recommends the use of patient satisfaction scores in treatment programmes to guide efforts to improve the quality of provided healthcare, significant relationships among patient satisfaction, the therapy process, and the maintenance of treatment outcomes [26].

Rationale
We also observed that among the patients, the most common factors associated with their poor satisfaction were the low clarity the extent of participation in decision-making, and the clarity of safety procedures that must be followed; the Kingdom of Saudi Arabia (KSA) is the largest country in the Middle East. The government is now ardently pursuing private sector development and has initiated privatization and marketization as a core strategy of reforms in its health system. that the current economic conditions of the KSA and local and global market dynamics are the primary drivers for these reforms in the Saudi health care system, following the announcement of the Saudi Vision 2030. Has impacted the development of the Saudi health system quality of health care in Saudi Arabian perception to patient satisfaction and to know the impact of healthcare system on the quality of services providing in primary healthcare centers, although there are several studies about the relationship between nurse care and patient care satisfaction, in Saudi Arabian , the majority focus on the relationship between treatment and patient satisfaction. However, only very few studies were found regarding the relationship between the attitude of with cancer patient satisfaction.

Aim of the study :
To assessment of quality of health care in Saudi Arabian perception to patient satisfaction in primary healthcare centers in Saudi Arabian , 2022

Objectives:
➢ Patient satisfaction to primary health care providers.
➢ To assessment of quality of health care in Saudi Arabian perception to patient satisfaction in primary healthcare centers in in Saudi Arabian, 2022.

Methodology:
This was a Cross-sectional descriptive study, a predesigned questionnaire was used that consisted of close-ended questions and specific questions on Socio demographic background (Age, gender, nationality, were married, marital status, occupation, education and income) characteristics. The questionnaire is divided into six students.

Study design:
A cross-sectional study to assessment of quality of health care in Saudi Arabian perception to patient satisfaction in makkah, Medina and Riyadh .

Study setting:
The present study has been conducted at in primary healthcare centers in makkah, Medina and Riyadh.

Study Sampling:
The current study has been conducted at makkah, Medina and Riyadh the study randomly sampled. They has been collected throe the Saudi healthcare system and more specifically in according to the inclusion, exclusion criteria shown below.

Inclusion criteria:
➢ Adult age 18 -or above
➢ Male and female.
➢ Visiting primary health care seeking health services in the past 2 months .

Exclusion criteria:
➢ The Primary healthcare centers refused to participate in the research.
➢ The participates refused to answer the questionnaire.

Sample size:
Sample size was calculator by Raosoft Online sample size calculator. It was 300 participant, based on assumption that during the last 2 month , the total number of patients who visited the one clinic the primary health care clinic at makkah, Medina and Riyadh PHCC was 300 patients,

adding 10% for non-respondent, 300 participants were invited to participate in the study.

Tool of Data Collection:

A questionnaire was developed by the researcher to collect the needed data. It included two parts:

Tool (I) Questionnaire the first part deals with demographic data such as. Gender, marital status, age

The second part concerns with

Tool (II): consisted of close-ended questions will be assessed by a questionnaire that was previously assesses to have good reliability examines how satisfied the Saudi People are with their public sector healthcare services .

Data Collection technique

• During the study period the researcher was available at the involved primary healthcare centers five days in the week to clarify any issue.
• The researcher distributed the questionnaire in the waiting area by themself to the selected patients.
• The questionnaires were collected at the same time.

Pilot study/pretesting

An exploratory sample was drawn and the stability of each was calculated reliability target value were 0.8 pilot study conducted on 10% of sample size; and modification made according

Ethical Considerations:

This study was conducted under the approval from the administrator's in Saudi Arabic and more specifically at makkah, Medina and Riyadh. Participants were given explanations about the purpose of the study, Confidentiality of participants' information was assured, and the data were accessed only by the investigators involved in the study.

Data Analysis:

Collected data will be coded and tabulated using a personal computer, then will be statistical package for social science (SPSS) version 24 was used to analyse these data. chi- square to compare t test and ANOVA level was considered at p value>0.5.

Budget

It has be self- funded.

Result

Table (1) Distribution of Socio-demographic data in study group (n=300)

Demographic variables	N	%
Age		
18-23	57	19
24-35	81	27
36-47	93	31
48-57	69	23
Gender		
Male	225	75
Female	75	25
Marital Status		
Single	111	37
Married	189	63
Level of education		
Illiterate	39	13
Elementary	84	28
Intermediate	39	13
Secondary	81	27
University	57	19
Family income		
<5000 SR	57	19
5000 – 10000 SR	171	57
>10000SR	72	24

Table 1 shows that most of the participants were (31.0%) in the age group 36-47 years, followed by age 24-35 were (27.0%), regarding gender the majority of them were male (75.0%) while female (25.0%), regarding the marital stats most of participants married were(63.0%)while single

were(37.0%), regarding level of education the majority of participant are eelementary were (28.0%), followed by secondary education were (27.0%) , regarding the Family income the majority of participant from 5000-10000 SR were (57.0%) while >10000 SR were(24.0%).

Table 2: Distribution of the Patient Satisfaction to quality of primary health care according to their perceptions about Accessibility to health care

Items			Disagree	don't know	Agree	% Of Agreement	Chi-square X^2	P-value
Accessibility								
1	The distance from home to the health center is acceptable	N	45	66	189	82.67	121.020	<0.001*
		%	15%	22%	63%			
2	Working hours at the clinic is suitable for all	N	45	78	177	81.33	94.380	<0.001*
		%	15%	26%	59%			
3	Time spent in the waiting room for a routine visit is very long	N	33	93	174	82.33	100.140	<0.001*
		%	11%	31%	58%			
4	I find it difficult to get an appointment for health care	N	54	60	186	81.33	111.120	<0.001*
		%	18%	20%	62%			
5	The clinic gives me access to medical care at any time I need it	N	146	60	95	61.00	37.282	<0.001*
		%	49%	20%	32%			
Continuity								
1	The clinic contact me if I didn't come to the follow-up appointment	N	45	51	204	84.33	162.420	<0.001*
		%	15%	17%	68%			
2	I find it easier to transfer a patient from the clinic to the hospital	N	81	51	168	76.33	73.860	<0.001*
		%	27%	17%	56%			
3	I see the same doctor at each visit	N	72	57	171	77.67	76.740	<0.001*
		%	24%	19%	57%			
4	The clinic provides vaccinations necessary for all members of my family	N	24	6	270	94.00	435.120	<0.001*
		%	8%	2%	90%			
5	Doctor can easily access to my medical records	N	39	57	204	85.00	163.860	<0.001*
		%	13%	19%	68%			
Communication								
1	Doctor listens to me well	N	30	39	231	89.00	257.820	<0.001*
		%	10%	13%	77%			
2	The doctor does not answer all my questions.	N	228	33	39	45.67	245.940	<0.001*
		%	76%	11%	13%			
3	Doctor sometimes makes me feel like I'm an idiot.	N	87	60	153	74.00	45.780	<0.001*
		%	29%	20%	51%			
4	doctor treating me in a friendly and very nice way	N	30	39	231	89.00	257.820	<0.001*
		%	10%	13%	77%			
5	Time I spent it together with the doctor is enough	N	69	57	174	78.33	82.860	<0.001*
		%	23%	19%	58%			

Table 2 shows demonstrates the patient perception about the accessibility to health care services Regarding The distance from home to the health center is acceptable the most of participant Agree were (63.0%), followed by don't know were (22.0%) while disagree were (15.0%), while is a significant correlation were p-value =0.001 and X^2 121.020. Regarding working hours at the clinic is suitable for all the most of participant Agree were (59.0%), followed by don't know were (26.0%), while disagree were (15.0%), while is a significant correlation were p-value =0.001 and X^2 94.380.

Regarding the time spent in the waiting room for a routine visit is very long the most of participant Agree were (58.0%), followed by don't know (31.0%) while disagree were (11.0%), while is a significant correlation were p-value =0.001 and X^2 100.020. Regarding I find it difficult to get an appointment for health care most of the participants agree were (62.0%) while don't know were (20.0%), followed by Disagree were (18.0%), while a significant correlation were p-value =0.001 and X^2 111.120, regarding The clinic gives me access to medical care at any time I need

it most of the participants disagree were (49.0%) while don't know were (20.0%), followed by agree were (32.0%), while a significant correlation were p-value =0.001 and X^2 37.282

Regarding the clinic contact me if I didn't come to the follow-up appointment the most of participant agree were (68.0%), followed by don't know were (17.0%) while disagree were (15.0%), while is a significant correlation were p-value =0.001 and X^2 162.420, regarding I find it easier to transfer a patient from the clinic to the hospital the most of participant agree were (56.0%), followed by disagree were (27.0%) while don't know were (17.0%), while is a significant correlation were p-value =0.001 and X^2 73.360, regarding I see the same doctor at each visit the most of participant Agree were (57.0%), followed by don't know (19.0%) while disagree were (24.0%), while is a significant correlation were p-value =0.001 and X^2 76.740. Regarding The clinic provides vaccinations necessary for all members of my family most of the participants agree were (90.0%) while don't know were (2.0%), followed by Disagree were (8.0%), while a significant correlation were p-value =0.001 and X^2 435.120, regarding Doctor can easily access to my medical records most of the participants disagree were (68.0%) while don't know were (19.0%), followed

by agree were (13.0%), while a significant correlation were p-value =0.001 and X^2 163.860.

In table 2 regarding the communication shows regarding Doctor listens to me well the most of participant agree were (77.0%), followed by don't know were (13.0%) while disagree were (10.0%), while is a significant correlation were p-value =0.001 and X^2 257.820, regarding the doctor does not answer all my questions the most of participant disagree were (76.0%), while agree were (13.0%) while don't know were (11.0%), while is a significant correlation were p-value =0.001 and X^2 245.940. Regarding Doctor sometimes makes me feel like I'm an idiot the most of participant Agree were (51.0%), but don't know (20.0%) while disagree were (29.0%), while is a significant correlation were p-value =0.001 and X^2 45.780, regarding doctor treating me in a friendly and very nice way most of the participants agree were (77.0%) while don't know were (13.0%), followed by Disagree were (10.0%), while a significant correlation were p-value =0.001 and X^2 257.820, regarding Time I spent it together with the doctor is enough most of the participants disagree were (58.0%) while don't know were (19.0%), followed by agree were (23.0%), while a significant correlation were p-value =0.001 and X^2 82.860.

Table 3 : Distribution of the Patient Satisfaction to quality of primary health care according to their perceptions about humanness in health care .

Items			Disagree	don't know	Agree	% Of Agreement	Chi-square	
							X^2	P-value
Humanness								
1	The clinic's reception treat me well	N	21	24	255	92.67	360.420	<0.001*
		%	7%	8%	85%			
2	Doctors at the clinic treat me with respect.	N	39	27	234	88.33	270.060	<0.001*
		%	13%	9%	78%			
3	Nurses, specialists and laboratory staff treat me well.	N	18	36	246	92.00	321.360	<0.001*
		%	6%	12%	82%			
4	Officials at the clinic listening to the complaints of the patients.	N	81	120	99	68.67	7.620	0.022*
		%	27%	40%	33%			
5	The staff at the clinic keeps my health information confidential.	N	48	123	129	75.67	40.740	<0.001*
		%	16%	41%	43%			
6	Health Center provides health services in emergency situations.	N	201	69	30	47.67	160.620	<0.001*
		%	67%	23%	10%			
Comprehensiveness								
1	All members of my family have a medical file and they are screened routinely in the clinic.	N	81	39	180	77.67	104.820	<0.001*
		%	27%	13%	60%			
2	The data in the medical file are comprehensive and accurate.	N	111	132	57	60.67	29.940	<0.001*
		%	37%	44%	19%			
3	In each medical visit they measured (weight, height, blood pressure, temperature).	N	123	63	114	65.67	20.940	<0.001*
		%	41%	21%	38%			
4	The doctor provides me a comprehensive medical examination when I need it.	N	111	54	135	69.33	34.620	<0.001*
		%	37%	18%	45%			
5	the results of laboratory tests attached immediately to the file	N	48	93	159	79.00	62.340	<0.001*
		%	16%	31%	53%			
6	The medical staffs at the clinic are familiar with the latest medical developments.	N	40	107	52	45.56	38.482	<0.001*
		%	16%	67%	17%			

	Overall Satisfaction							
1	The Centre is always tidy.	**N**	57	45	198	82.33	144.780	<0.001*
		%	19%	15%	66%			
2	Instruments and equipment in the center is working correctly.	**N**	93	87	120	69.67	6.180	0.046*
		%	31%	29%	40%			
3	I think that the services provided at the center can be better than it is right now.	**N**	57	48	195	82.00	135.780	<0.001*
		%	19%	16%	65%			

In table 3 Demonstrates the patient perception about the humanness in health care services regarding the clinic's reception treat me well the most of participant agree were (85.0%), followed by don't know were (8.0%) while disagree were (7.0%), while is a significant correlation were p-value =0.001 and X^2 360.820, regarding Doctors at the clinic treat me with respect the most of participant agree were (78.0%), while disagree were (13.0%) while don't know were (9.0%), while is a significant correlation were p-value =0.001 and X^2 270.060, regarding Nurses, specialists and laboratory staff treat me well the most of participant Agree were (82.0%), but don't know (12.0%) while disagree were (6.0%), while is a significant correlation were p-value =0.001 and X^2 321.360, regarding Officials at the clinic listening to the complaints of the patients most of the participants don't know were (40.0%), while agree were (33.0%) followed by Disagree were (27.0%), while a significant correlation were p-value =0.001 and X^2 7.620, regarding The staff at the clinic keeps my health information confidential most of the participants disagree were (43.0%) while don't know were (41.0%), followed by agree were (16.0%), while a significant correlation were p-value =0.001 and X^2 40.740, regarding Health Center provides health services in emergency situations most of the participants disagree were (67.0%) while don't know were (23.0%), followed by agree were (10.0%), while a significant correlation were p-value =0.001 and X^2 160.620.

Also in table 3 Demonstrates the patient perception about the Comprehensiveness in health care services regarding All members of my family have a medical file and they are screened routinely in the clinic the most of participant agree were (60.0%), but don't know were (13.0%) while disagree were (27.0%), while is a significant correlation were p-value =0.001 and X^2 104.820, regarding the data in the medical file are comprehensive and accurate.the most of participant don't know were (44.0%), while

disagree were (37.0%), while agree were (19.0%) while is a significant correlation were p-value =0.001 and X^2 29.940, regarding In each medical visit they measured (weight, height, blood pressure, temperature).the most of participant disagree were (41.0%), but don't know (21.0%) while agree were (38.0%), while is a significant correlation were p-value =0.001 and X^2 34.620, regarding The doctor provides me a comprehensive medical examination when I need it most of the participants agree were (45.0%) while don't know were (18.0%), while Disagree were (37.0%), while a significant correlation were p-value =0.001 and X^2 34.620, regarding the results of laboratory tests attached immediately to the file most of the participants agree were (53.0%) while don't know were (31.0%), followed by disagree were (16.0%), while a significant correlation were p-value =0.001 and X^2 62.340, regarding The medical staffs at the clinic are familiar with the latest medical developments most of the participants don't know were (67.0%), but agree were (17.0%) while disagree were (16.0%), while a significant correlation were p-value =0.001 and X^2 38.480.

Also in table 3 Demonstrates the patient perception about the Overall Satisfaction in health care services regarding The Centre is always tidy the most of participant agree were (66.0%), but don't know were (15.0%) while disagree were (19.0%), while a significant correlation were p-value =0.001 and X^2 144.780, regarding the Instruments and equipment in the center is working correctly the most of participant agree were (40.0%) while don't know were (29.0%), while disagree were (31.0%), while a significant correlation were p-value =0.001 and X^2 6.180, regarding I think that the services provided at the center can be better than it is right now the most of participant agree were (65.0%), but don't know (16.0%) while disagree were (19.0%), while a significant correlation were p-value =0.001 and X^2 135.780.

Table 4: Distribution of the Patient Satisfaction to quality of primary health care according to their overall satisfaction about health care center .

		No of Items	Weak	Average	High	Score	
						Range	Mean±SD
Accessibility	N	5	57	87	156	2-14.	11.54±2.15
	%		19%	29%	52%		
Continuity	N	5	60	54	186	3-14.	12.42±1.057
	%		20%	18%	62%		
Communication	N	5	51	111	138	1-15.	11.46±2.011
	%		17%	37%	46%		
Humanness	N	6	33	57	210	4-16.	15.540±1.87
	%		11%	19%	70%		
Comprehensiveness	N	6	111	99	90	2-14.	11.581±1.637
	%		37%	33%	30%		
Overall Satisfaction	N	3	63	57	180	0-9.	7.170±0.899
	%		21%	19%	60%		
Total satisfaction	N	30	72	111	117	12-72.	64.518±15.267
	%		24%	37%	39%		

In table 4 Patient Satisfaction to quality of primary health care according to their overall satisfaction about health care center, regarding accessibility the most of participant high were (52.0%), but average were (29.0%) while weak were (19.0%), while Range were(2-14) while Mean ± SD were (11.54±2.15), regarding Continuity the most of participant high were (62.0%), but average were (18.0%) while weak were (20.0%), while Range were(3-14) while Mean ± SD were (12.42±1.057), regarding Communication the most of participant high were (46.0%), but average were (37.0%) while weak were (17.0%), while Range were(1-15) while Mean ± SD were (11.46±2.011), regarding Humanness the most of participant high were (70.0%), but average were (19.0%) while

weak were (11.0%), while Range were(4-16) while Mean ± SD were (15.540±1.87), regarding Comprehensiveness the most of participant weak were (37.0%), but average were (33.0%) while high were (30.0%), while Range were(2-14) while Mean ± SD were (11.581±1.637), regarding Overall Satisfactions the most of participant high were (60.0%), but average were (19.0%) while weak were (21.0%), while Range were(0-9) while Mean ± SD were (7.170±0.899), regarding Total satisfaction the most of participant high were (39.0%), but average were (37.0%) while weak were (24.0%), while Range were(12-72) while Mean ± SD were (64.518±15.267)

Figure 1 Distribution of the Patient Satisfaction to quality of primary health care according to their overall satisfaction about health care center .
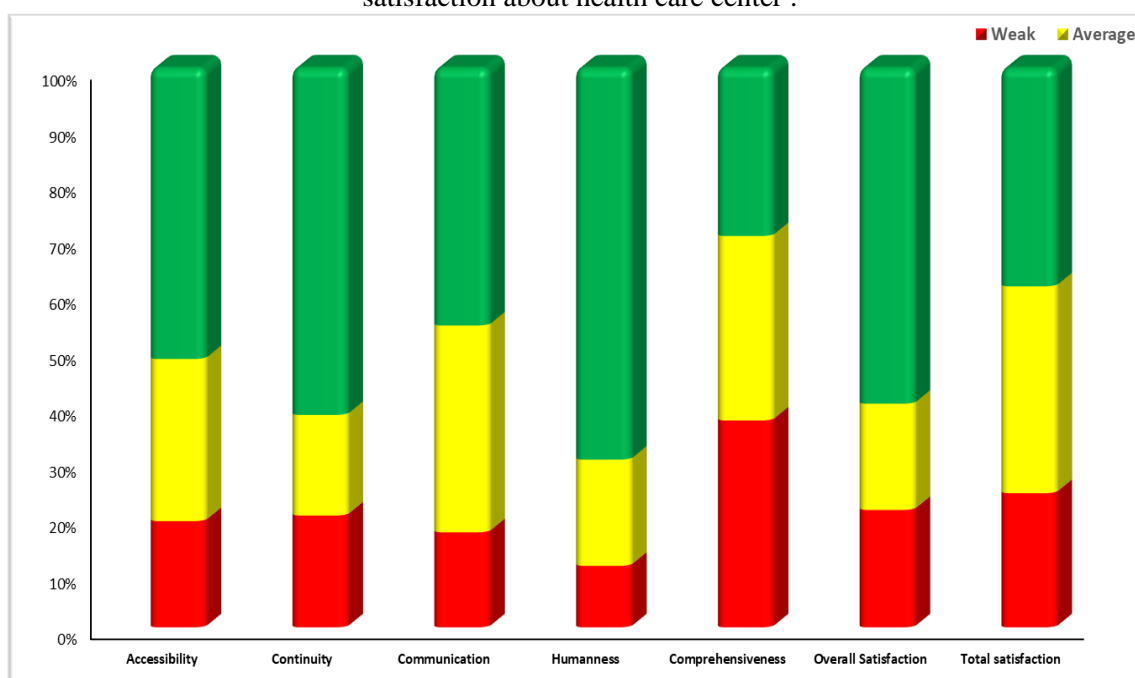
Discussion

he effect of quality of health care in Saudi Arabian perception to patient satisfaction in Saudi Arabian health care center this study aims to assessment of quality of health care in Saudi Arabian perception to patient satisfaction in primary healthcare centers in Saudi Arabian , 2022. During June 2022 to August 2022, on 300 patients the results of the current study support the emerging literature regarding health service quality and patient satisfaction, especially in Saudi Arabia.[27]

The recent efforts made by the Saudi government to improve health care quality may, to some extent, contribute to the study results. Patients rendered a high level of service quality would report a high satisfaction rate when filling out a survey and [28]. Overall Satisfaction had the greatest influence on patient satisfaction, followed by tangible and responsiveness dimensions. This study suggested that when patients perceived that the healthcare provider cares for them and pays special attention to them, there would be a higher level of satisfaction.[29]

regarding Socio-demographic data shows that most of the participants were (31.0%) in the age group 36-47 years, followed by age 24-35 were (27.0%), regarding gender the majority of them were male (75.0%) while female (25.0%), regarding the marital stats most of participants married were(63.0%)while single were(37.0%), regarding level of education the majority of participant are elementary were (28.0%), followed by secondary education were (27.0%) , regarding the Family income the majority of participant from 5000-10000 SR were (57.0%) while >10000 SR were(24.0%).(See table 1).

Previous studies report that Physical facilities, equipment, and appearance of the doctors and other staff also contribute to patient satisfaction. As study proposed, the willingness to help patients and provide prompt services would make patients more satisfied with health services. [30] Interestingly, knowledge, courtesy, and ability of doctors and other staff to convey trust and confidence (assurance dimension), as well as the ability to provide the promised services dependably and accurately (reliability dimension), had the lowest influence on patient satisfaction. This result is in line with the study carried out in group versus solo practice clinics.[29] While the effects of assurance and reliability dimensions were comparatively lower than the effects of empathy and tangible dimensions, this does not imply that they are not important and should be ignored in improving service quality in the

hospitals. [27] This only proposes that greater gains in patient satisfaction can be realized through attending to empathy and tangible dimensions in the government hospitals' environment. [30]

Conclusion

The descriptive analysis revealed that the levels of care patient satisfaction, and PHC service quality are all generally at a high level. However, the attitude and patient attitude are at a lower level and need to be improved. Employing statistical tests showed there is a positive relationship between patient satisfaction and nurse care on an overall basis. However, results show there is no relationship between interpersonal skills of nurse care and efficiency of nurse care with patient satisfaction, in order to improve patient satisfaction in the PHC , more understanding and apperception of these factors are essential. Also, we recommend implanting programs that improve communication skills for healthcare providers. On the other hand, it is important to improve the health education of consumers so that they can have a better understanding of healthcare services. Further studies to examine the patient' satisfactions regarding the facilities of PHC are recommended.

References

1. Sorato, M. M., Davari, M., Kebriaeezadeh, A., Sarrafzadegan, N., Shibru, T., & Fatemi, B. (2021). Reasons for poor blood pressure control in eastern sub-Saharan Africa: looking into 4P's (primary care, professional, patient, and public health policy) for improving blood pressure control: a scoping review. *BMC cardiovascular disorders*, *21*(1), 1-15.
2. Pagliari, C. (2021). Digital health and primary care: Past, pandemic and prospects. *Journal of global health*, *11*.
3. Wakiaga, J. M., & Nalugala, R. (2021). An examination of the structural linkages between households and community health services in realization of accelerated primary healthcare delivery in Kisumu County, Kenya: a systematic review. *F1000Research*, *10*(1082), 1082.
4. Nembhard, I. M., Buta, E., Lee, Y. S., Anderson, D., Zlateva, I., & Cleary, P. D. (2020). A quasi-experiment assessing the six-months effects of a nurse care coordination program on patient care experiences and clinician teamwork in community health centers. *BMC health services research*, *20*(1), 1-14.

5. Hermes, S., Riasanow, T., Clemons, E. K., Böhm, M., & Krcmar, H. (2020). The digital transformation of the healthcare industry: exploring the rise of emerging platform ecosystems and their influence on the role of patients. *Business Research*, *13*(3), 1033-1069.

6. World Health Organization. (2020). Achieving quality health services for all, through better water, sanitation and hygiene: lessons from three African countries.

7. Kovacs, R. J., Powell-Jackson, T., Kristensen, S. R., Singh, N., & Borghi, J. (2020). How are pay-for-performance schemes in healthcare designed in low-and middle-income countries? Typology and systematic literature review. *BMC Health Services Research*, *20*(1), 1-14.

8. Baugh, C. M., Kroshus, E., Lanser, B. L., Lindley, T. R., & Meehan, W. P. (2020). Sports medicine staffing across National Collegiate Athletic Association Division I, II, and III schools: evidence for the medical model. *Journal of athletic training*, *55*(6), 573-579.

9. AlOmari, F. (2020). Measuring gaps in healthcare quality using SERVQUAL model: challenges and opportunities in developing countries. *Measuring Business Excellence*.

10. Ampaw, E. M., Chai, J., Liang, B., Tsai, S. B., & Frempong, J. (2020). Assessment on health care service quality and patients' satisfaction in Ghana. *Kybernetes*.

11. Verma, P., Kumar, S., & Sharma, S. K. (2021). Evaluating the total quality and its role in measuring consumer satisfaction with e-healthcare services using the 5Qs model: a structure equation modeling approach. *Benchmarking: An International Journal*.

12. Getachew, T., Abebe, S. M., Yitayal, M., Persson, L. Å., & Berhanu, D. (2020). Assessing the quality of care in sick child services at health facilities in Ethiopia. *BMC health services research*, *20*(1), 1-12.

13. Dimitrios Theofanidis, R. N. (2021). Patient Satisfaction and Quality of Care. *International Journal of Caring Sciences*, *14*(2), 800.

14. Chung, K., Yoo, H., & Choe, D. E. (2020). Ambient context-based modeling for health risk assessment using deep neural network. *Journal of Ambient Intelligence and Humanized Computing*, *11*(4), 1387-1395.

15. Fontecha, J., González, I., & Bravo, J. (2019). A usability study of a mHealth system for diabetes self-management based on framework analysis and usability problem taxonomy methods. *Journal of Ambient Intelligence and Humanized Computing*, 1-11.

16. Shah, A. M., Yan, X., Shah, S. A. A., & Mamirkulova, G. (2020). Mining patient opinion to evaluate the service quality in healthcare: a deep-learning approach. *Journal of Ambient Intelligence and Humanized Computing*, *11*(7), 2925-2942.

17. Chen, T., Peng, L., Yin, X., Rong, J., Yang, J., & Cong, G. (2020, July). Analysis of user satisfaction with online education platforms in China during the COVID-19 pandemic. In *Healthcare* (Vol. 8, No. 3, p. 200). MDPI.

18. Khomami, H. M. (2018). The dataset for relationship between the nurses to patients ratio and patients satisfaction with nursing care. *Data in brief*, *21*, 2149-2154.

19. Dhanasekaran, R., Muthusamy, H., & Li, X. (2020). Special issue on "Brain computing for healthcare and wellness applications". *Journal of Ambient Intelligence and Humanized Computing*, *11*(3), 1045-1045.

20. Ghadi, M., Sali, Á., Szalay, Z., & Török, Á. (2021). A new methodology for analyzing vehicle network topologies for critical hacking. *Journal of Ambient Intelligence and Humanized Computing*, *12*(7), 7923-7934.

21. Chowdhury, S., Mok, D., & Leenen, L. (2021). Transformation of health care and the new model of care in Saudi Arabia: Kingdom's Vision 2030. *Journal of Medicine and Life*, *14*(3), 347.

22. Puteh, S. E. W., Aizuddin, A. N., & Al Salem, A. A. (2020). Comparison of Patient's Satisfaction Level with the Provided Health Services in Primary Healthcare Centers-PHCCs in Ten Cities-Saudi Arabia.

23. Alsaqri, S. (2016). Patient satisfaction with quality of nursing care at governmental hospitals, Ha'il City, Saudi Arabia. *Journal of Biology, Agriculture and Healthcare*, *6*(10), 128-142.

24. Alkhalaileh, M., Hasan, A. A., Al-Kariri, N. S., & Ibaid, A. A. (2017). Assessing patients' satisfaction with the quality of ophthalmic services at Saint John Gaza Eye Clinic. *American Journal of Public Health Research*, *5*(1), 15-22.

25. Jonkisz, A., Karniej, P., & Krasowska, D. (2022). The servqual method as an assessment tool of the quality of medical services in selected asian countries. *International journal of environmental research and public health*, *19*(13), 7831.

26. Aiken, L. H., Sloane, D. M., Ball, J., Bruyneel, L., Rafferty, A. M., & Griffiths, P. (2021).

Patient satisfaction with hospital care and nurses in England: an observational study. *BMJ open*, *8*(1), e019189.

27. Zaid, A. A., Arqawi, S. M., Mwais, R. M. A., Al Shobaki, M. J., & Abu-Naser, S. S. (2020). The impact of Total quality management and perceived service quality on patient satisfaction and behavior intention in Palestinian healthcare organizations. *Technology Reports of Kansai University*, *62*(03), 221-232.

28. Wali, R. M., Alqahtani, R. M., Alharazi, S. K., Bukhari, S. A., & Quqandi, S. M. (2020). Patient satisfaction with the implementation of electronic medical Records in the Western Region, Saudi Arabia, 2018. *BMC family practice*, *21*(1), 1-6.

29. Ali, B. J., Gardi, B., Jabbar Othman, B., Ali Ahmed, S., Burhan Ismael, N., Abdalla Hamza, P., ... & Anwar, G. (2021). Hotel service quality: The impact of service quality on customer satisfaction in hospitality. *Ali, BJ, Gardi, B., Othman, BJ, Ahmed, SA, Ismael, NB, Hamza, PA, Aziz, HM, Sabir, BY, Anwar, G.(2021). Hotel Service Quality: The Impact of Service Quality on Customer Satisfaction in Hospitality. International Journal of Engineering, Business and Management*, *5*(3), 14-28.

30. Shah, A. M., Yan, X., Tariq, S., & Ali, M. (2021). What patients like or dislike in physicians: Analyzing drivers of patient satisfaction and dissatisfaction using a digital topic modeling approach. *Information Processing & Management*, *58*(3), 102516.