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ASSESSMENT OF PRIMARY HEALTH-CARE CENTERS IN DAMMAM AND KHOBAR, SAUDI ARABIA. A COMPARISON BETWEEN CBAHI AND NON-CBAHI ACCREDITED CENTERS.

General Medicine

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ABSTRACT

OBJECTIVES: Primary care fundamentally contributes to Saudi Arabia's health-care system. Saudi Vision 2030 targets high-quality primary health care. Knowing where we stand to fulfill this is important. This study assesses primary health-care centers and compares accredited centers with nonaccredited centers in Dammam and Khobar, Saudi Arabia.(1)

METHOD: Cross-sectional study was used as a primary care assessment tool (PCAT) through direct interviews with directors of primary health-care centers (PHCCs). The PHCCs were studied as groups A (CBAHI-accredited) and B (non–CBAHI-accredited).

RESULTS: The total mean of PCAT score for group B (247) was poorer than that for group A (287), with a p-value of 0.100. Most of the statistical variability between the two groups was in the domain (community orientation), with a p-value of 0.083.

CONCLUSION: Most of the non–CBAHI-accredited PHCCs had poorer scores for primary health-care domains when compared with CBAHI-accredited centers, largely because of limited comprehensive care and community orientation. However, we found that the difference of the total PCAT scores between the two groups was statistically insignificant.

The results may raise a question regarding the validity and the impact of CBAHI accreditation on the actual services provided

KEYWORDS

INTRODUCTION

Primary health care (PHC) is fundamental in the health-care systems of both low- and high-income countries, and potentially, primary care is closely related to the improvement of health outcomes, identifying the four core domains of primary care (first contact, continuity, comprehensiveness, and coordination).(1)(2)

PHC is essential and should be available in all levels of a community, with a wide range of services appropriate for common health problems and continuous care to ensure longer health, and be coordinated with other specialists. The concept is elaborated in the 1978 Declaration of Alma-Ata, which is based on equity, participation, intersectoral action, appropriate technology, and the central role of the health system.

The Alma-Ata conference in 1978 encouraged all countries to adapt the PHC approach to promote health. This rapid expansion of PHC created the need for structured frameworks to evaluate the processes and outcomes of these services.(3)(4)

Family medicine (FM) is one of the most important medical specialties in the world as its wide range of health services are delivered to all populations, regardless of gender, age, and affected system or organ. Its principles include coordination, continuity, comprehensiveness, and accessibility.(5)

Health systems based on a strong primary health-care system are more efficient and effective than those based on subspecialty and tertiary care. (6)Evaluation processes and tools are necessary to assess the impact of PHC.(7)

“My primary goal is to be an exemplary and leading nation in all aspects, and I will work with you in achieving this endeavor,” King Salman bin Abdulaziz Al Saud, the custodian of the two holy mosques, said.

Saudi Arabia is moving toward an even brighter and more promising future, with all aspects of the country, especially the health-care system, developing. The National Transformation Program 2020 was launched to build the necessary and vital capabilities to achieve Saudi Vision 2030. The health transformation program is considering PHC as its foundation, fundamentally contributing to the health-care system. They aim to improve health-care services in PHCCs and public health services, focusing on obesity and smoking.

A few studies have been conducted to evaluate FM in Saudi Arabia. However, a more comprehensive national survey should investigate the current situation of FM in Saudi Arabia and strategically plan to achieve national transformation and the vision accordingly.(8)

Some previous studies done in Saudi Arabia have shown that more effort is required in FM. An adequate number of family physicians must be produced, and both the services and academics provided by FM in the country must be improved.(9)

Early in 2001, the Makkah Region Quality Program initiated the quality improvement of the health-care system for Makkah City, Saudi Arabia. In 2005, the Ministry of Health changed its name to the Central Board for Accreditation of Healthcare Institutions (CBAHI) and expanded its jurisdiction to the entire kingdom. The agency also grants accreditation certificates to all public and private health-care facilities. CBAHI mainly set national health-care and patient-safety standards, the compliance of which all health-care facilities in the kingdom, both private and public, will be evaluated.

In 2006, CBAHI developed the first set of national standards for hospitals. In late 2013, CBAHI mandated all health-care facilities to undergo CBAHI accreditation for the renewal of their working licenses—a move of this national agency toward more participation. This accreditation potentially promotes quality and safety and helps the nation further standardize health-care facilities.(10)

In 1994, Muneera H. AI-Osimy conducted a descriptive evaluation of PHC in Riyadh, Saudi Arabia, in terms of resource availability and quality in a sample of three PHCCs. The results showed that the centers' human resources did not measure up to the ideal standards. The clinical support areas were underequipped in two of the three centers tested, and the facilities in all three centers were inadequate.(11)

In 2016, a study was conducted to evaluate the services of PHCCs from the patients' view. The study mainly aimed to assess the effectiveness and accessibility of the provided health services in Riyadh City, Saudi Arabia. The study participants—people who visited PHCCs in Riyadh—were obtained using stratified random sampling through a self-administered electronic questionnaire.

The results showed that the PHCCs in Riyadh City were accessible and effective. However, the reason patients did not first choose PHCCs should be further investigated, with a strong recommendation on community-awareness campaigns on the important role of primary care.(12)

A comprehensive and systematic review about the quality of PHC in Saudi Arabia was done in 2005. They collected their data from published literature regarding the quality of PHCCs and the barriers from achieving high-quality care. They concluded that the quality of Saudi primary care services profoundly varied.(13)

A systemic review of studies discussing the quality of care in the primary health-care facilities of the Eastern Mediterranean Region was done in 2015. Using electronic databases, they investigated the processes, structures, and outcomes of care. Most of the reviewed studies were naturally cross-sectional. This systemic review revealed that the quality in terms of doctor–patient relationships and clinical practice is an area of major concern.(14)

This study mainly aims to analyze the current situation of PHCCs in Dammam and Khobar in Saudi Arabia and suggest some strategic solutions for improvement. The specific objectives are to assess and compare the primary PHCCs with CBAHI-accredited PHCCs.

RESEARCH DESIGN AND METHODOLOGY

Study Area and Time

This study was conducted in Dammam and Khobar, Saudi Arabia, from 2017 to 2018.

Study Subjects

The sampling involved all PHCCs in Dammam and Khobar, Saudi Arabia.

Study Design

The study used analytic cross-sectional study.

Sample Size

The control group labelled as group A had five PHCCs, while group B had ten PHCCs, totalling 15 study centers.

Sampling Technique

We acquired a sample through simple stratified random sampling. The centers were divided into groups A (five CBAHI centers) and B (ten non-CBAHI centers).

In group A, two centers were located in Khobar City, and three centers were located in Dammam City. In group B, we doubled these numbers, having four centers from Khobar City and six centers from Dammam City.

Data Collection Methods

We collected data from PHCCs through directly interviewing their directors or people on duty by using a primary care assessment tool (PCAT).(15)

Data Management and Analysis Plan

Data were entered and analysed using SPSS software.

Data Collection Tool

A PCAT is received courtesy of the developer, Barbara Starfield MD, MPH from Johns Hopkins University, Baltimore. This tool measures and reports confidence levels using the Likert scale for multiple primary health-care dimensions listed in Table 1

Table 1. Conceptual Definition of Core Dimensions of Primary Health Care

Definition of Concept	Aim and Scaling
First-contact (accessibility) care means the ability of a person to obtain needed care. The primary health-care provider serves as the entry point to the health system when a problem arises except during serious emergencies. The primary care provider either provides or facilitates the care within a period appropriate to the urgency of the problem.(16)	Rating of how confident the patient can regularly seek medical advice (6 items rated on a scale of 1 to 4)
Continuous (ongoing) care refers to the ongoing use of a regular source of care over time, with more than one episode that leads to a therapeutic relationship with the health-care provider and builds a common understanding of each other's needs and expectations.(17)	Ability to choose a regular physician who knows the patient well and can take principal care of him (13 items rated on a scale of 1 to 4)
Coordinated care is the linking of health-care providers and services so that patients' care is complete.(17)	How confident the principal physician and the specialist are in putting effort and collaborating for patients' care (16 items rated on a scale of 1 to 4)
Comprehensive care refers to the availability of a wide range of services in primary care to fulfill a patient's needs, such as health promotion, the prevention of common skin problems, chronic care and minor injuries, and behavioral and mental health.(16)	Full range of services such as health promotion, prevention, available procedures, and screening tests (32 items rated on a scale of 1 to 4)
Family-centered care means a common understanding of the nature and role of family members' health status, disability, or illness, its impact on the function family dynamics and its structure, and any family history of chronic medical illness or disability.(18)	How confident the physician is to consider his management and the patient's family history and socioeconomic status (8 items rated on a scale of 1 to 4)
Community-oriented care is delivered care in the community. The distinguishing character of community-oriented care is that it considers the health-care needs of a defined population or community. Community-oriented care, therefore, is concerned with caring for not only patients and families but also the health needs of the community that are not being met, considering the characteristics of the community that influence their health-care needs.(18)	How aware the physician is about common community problems, measuring the participation of health-care activities within the community (21 items rated on a scale of 1 to 4)
Culturally competent care respects and honors people's interpersonal beliefs, attitudes, styles, and behaviors as they influence health.(18)	Considering the patient's own personal beliefs and respecting their choices (3 items rated on a scale of 1 to 4)

Ethical Considerations

IRB granted the approval of the study prior to its implementation.

Approval was gained from the Ministry of Health and the General Directorate of Health in the eastern province before conducting the study.

All information in the questionnaire will be confidential.

RESULTS

The sociodemographic data of the centers surprisingly showed the following with the same exact percentage:

1. More than half of the facilities were single-family or general-practice clinics.
2. More than half of the centers could not estimate the percentage of the facility's patients who have long-term medical or behavioral problems or disabilities.

3. More than half of the centers reported that they did not have a geographically defined population they intended to serve.

In Domain (First Contact — Access)

1. The study showed that all PHCCs are opened on weekdays from 8 to 4 .
2. Only one center would be opened at least during some weekday evenings until eight in the evening.
3. Almost half of the centers reported that the patient could get quick phone advice while the facility was open.

Table 2: c4)When your facility is open, can patients get advice quickly over the phone when they need it

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	7	46.7	46.7	46.7
	sometimes	6	40.0	40.0	86.7
	most of the times	2	13.3	13.3	100.0
	Total	15	100.0	100.0	

In Domain (Ongoing Care)

1. More than half of the facilities reported that "sometimes" the patients see the same clinician each time they visit.
2. More than 70% of the centers reported that "most of the times" the clinicians give patients enough time to talk about their worries or problems.
3. Almost all of the centers reported that clinicians know the patients who use the facility very well.
4. Majority of the center reported that clinicians would know if patients had trouble getting a prescribed medication.
5. The majority of the centers reported that clinicians do know all the medications their patients take.

Table 3. (D1) At your facility,do patients see the same clinician each time they make a visit?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	rarely	2	13.3	13.3	13.3
	sometimes	10	66.7	66.7	80.0
	most of the times	3	20.0	20.0	100.0
	Total	15	100.0	100.0	

Table4. (D12) Would the clinicians know if patients had trouble getting a prescribed medication?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sometimes	4	26.7	26.7	26.7
	most of the times	11	73.3	73.3	100.0
	Total	15	100.0	100.0	

In Domain (Coordination)

1. Majority of the centers reported that the facility "never" phoned or sent patients the results of lab tests.
2. Only one-third of the clinicians "sometimes" know about all the visits their patients make to specialists or special services.
3. Only 40% reported that "most of the time," clinicians discuss different places they might go to get help with their problems when they need referrals.
4. Only 40% of the centers would "never" have someone help the patient set an appointment for a referral visit.
5. Almost all clinicians give their patients written information to take to the specialist when they are referred.
6. Only one-third of clinicians reported that "most of the time," they would receive useful information about their referred patients back from the specialists or special services.
7. Almost half of the centers reported that "most of the time," clinicians would discuss with patients the results of their visits with the specialists or special services.

Table5. (E6)Do the clinicians receive useful information about their referred patients back from the specialists or special services?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not sure/DK	1	6.7	6.7	6.7
	never	2	13.3	13.3	20.0
	rarely	2	13.3	13.3	33.3
	sometimes	5	33.3	33.3	66.7
	most of the times	5	33.3	33.3	100.0
	Total	15	100.0	100.0	

In Domain (Information System)

1. Two-thirds of the facilities reported that "most of the time," they would allow patients to look at their medical records when they want to.
2. Almost all centers reported that "most of the time," patient records were available when the clinicians would see the patients.
3. Thirteen percent of the center would "never" have flow sheets in patients' charts for lab results.
4. Two-thirds of the center reported that "most of the time," problem lists are used in patient files or records. Only half of the centers reported that "most of the time," they keep medication lists in the patients' records.

In Domain (Available Comprehensive Care)

1. Forty percent of the center would "never" offer the patients nutrition counseling by a nutrition specialist.
2. One-third of the centers reported that "most of the time," they offer family planning or birth-control services.
3. Twenty percent of the centers reported that they would "never" offer suturing for a minor laceration.
4. Two-thirds of the centers reported that they would "never" offer a vision screening.
5. Eighty percent of the centers reported that they would "never" offer a Pap smear procedure.
6. One-third of the centers reported that they would "never" offer a smoking-counseling clinic.
7. Eighty percent of the centers reported that "most of the time," they offer prenatal care.

Table6. (G19) Prenatal care availability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	1	6.7	6.7	6.7
	rarely	1	6.7	6.7	13.3
	sometimes	1	6.7	6.7	20.0
	most of the times	12	80.0	80.0	100.0
	Total	15	100.0	100.0	

In Domain (Provide Comprehensive Care)

1. Half of the centers reported that "most of the time," they discuss with the patients eating nutritional and nonnutritional foods or getting enough sleep.
2. Twenty percent of the centers reported that "most of the time," they discuss with the patients home safety, such as using smoke detectors and storing medicines safely.
3. Sixty percent of the centers reported that they would "never" discuss seat belt use with the patients.
4. Sixty percent of the centers reported that "most of the time," they advise appropriate exercise.
5. Almost all of the centers reported that clinicians would discuss cholesterol levels with their patients.
6. Almost all of the centers reported that clinicians would discuss medications taken by the patient.
7. One-third of the centers reported "sometimes" they discuss with the patients exposure to harmful substances at home, at work, or in their neighborhood.
8. Almost half of the centers reported that "most of the time," they discuss the prevention of falls with their patients.
9. Half of the centers reported that "most of the time," they provide care for common menstrual or menopausal problems with the patients.

Table7. (H6) cholesterol level (measurement)

		Frequency	Percent	Valid Percent	Cumulative Percent
valid	rarely	1	6.7	6.7	6.7
	sometimes	4	26.7	26.7	33.3
	most of the times	9	60.0	60.0	93.3
	Not sure	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Table8.(H7) Medications been taken

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sometimes	4	26.7	26.7	26.7
	most of the times	10	66.7	66.7	93.3
	Not sure/DK	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

In Domain (Family Centeredness)

1. Half of the centers report that "most of the time," the doctors ask about illnesses or problems that might run in the patients' families.
2. One-third of the centers reported that the clinicians at their facility would "never" discuss social risk factors such as loss of employment.

In Domain (Community Orientation)

1. Forty percent of the centers reported that "most of the time," the clinicians have adequate knowledge about the health problems of the communities they serve.
2. Only one quarter of the centers reported that their clinicians "sometimes" get opinions and ideas from people who might help provide better health care.
3. Forty percent of the centers would "never" survey or evaluate the patients to monitor the effectiveness of their services and programs.
4. Almost half of the centers would "never" have community surveys.
5. "Most of the time," one-third of the centers would have feedback from practice staff.
6. Almost half of the centers reported they have "never" networked with state and local agencies or religious organizations or services to reach out to populations in the communities they are serving.

In Domain (Cultural Competence)

1. Only 13% of the centers would have some difficulties with people who do not speak Arabic well.
2. Half of the centers "sometimes" consider a family's special beliefs about health care, that is, the use of herbs or homemade medicines.

Table 9. Comparison of Primary Care Assessment Scores among the Studied Primary Health-Care Centers

Primary Care Domains	Range of Values	Group A Score Mean (SD)	Group B Score Mean (SD)	P-value
First Contact	(6–19)	11.8 (4.7)	8.8 (2.1)	0.110
Ongoing Care	(35–52)	44.2 (3)	42.2 (5.4)	0.505
Coordination	(12–25)	19.6 (3.3)	19.9 (4.2)	0.892
Coordination (Information System)	(14–31)	29.6 (2)	25.6 (5.1)	0.085
Comprehensiveness (Services Available)	(34–71)	53.6 (12.5)	47.9 (11)	0.382
Comprehensiveness (Services Provided)	(20–59)	40.2 (11)	31 (7.8)	0.100
Family Centeredness	(13–32)	27.6 (4)	23.5 (6.4)	0.221
Community Orientation	(23–72)	51.6 (13.2)	39 (11.8)	0.083
Cultural Component	(4–12)	8.8 (2.7)	8 (2.4)	0.574

Table 9 presents the results of the comparison of PCAT scores between the two groups of PHC in Dammam and Khobar. Group A represents the ideal CBAHI-accredited centers, while group B represents the remaining non–CBAHI-accredited centers.

The results showed that the CBAHI-accredited centers obtained better PCAT scores in all domains except the coordination domain (19.60 compared with 19.90), with a p-value of 0.085.

Group A scored slightly better in all other domains, with the most noticeable difference in comprehensive care, such as home safety, seat belt discussion, and nutritional and menopausal care (40.20 versus 31.50), with a p-value of 0.100.

Group A scored much better PCAT points compared with group B in community orientation, such as the physician's awareness about common problems in the community and the usage of surveys and feedback to monitor the effectiveness of their services and programs (51.60 versus 39.00), with a p-value of 0.083.

Table10. Comparison of Total PCAT between Group A (CBAHI-Accredited) and Group B (Non–CBAHI-Accredited)

Groups	Mean	N	Minimum	Maximum	P-value
Group A	287	5	250	345	0.100
Group B	246	10	177	308	
Total	259	15	177	345	

Table 10 shows the comparison in total PCAT scores between the two groups, with slight better scoring for group A (mean 287 versus mean 246), with a p-value of 0.100.

DISCUSSION

Forty-three PHCCs in the two major cities of the eastern province are the fundamental blocks for our promising future health transformation. This will be the first region to take a position toward health-system modification and the first steps toward achieving Saudi Arabia's vision. This huge number of PHCCs is proof of the Ministry of Health's effort to make primary care even more accessible to most of the population in the kingdom.

This study showed an insignificant difference between the ideal CBAHI-accredited PHCCs and the nonaccredited centers. The results came in logically when the group A centers had better PCAT scores.

The results may raise a question regarding the validity and the impact of CBAHI accreditation on the actual services provided.

Another noticeable difference between the two groups, still in favor of group A, is in comprehensive care domain (service provided), such as advising about nutrition, seat belts, fall prevention, and menopausal care.

Of course, we cannot generalize the comments on all the centers. This study included a sample that almost accounts for one-third of the PHCCs in Dammam and Khobar. We recommend a further and vast study that includes all the centers to have better judgement on the objectives that were studied. The limitation of randomization of the sample could explain the results.

However, we faced difficulties with some centers in interviewing medical directors or most senior physicians. Some centers nominated new staff for the interview and could not present senior staff because of manpower shortage.

Another limitation for this study is that all PHCCs studied are MOH operative. Little is known about services provided elsewhere, such as the military, private sector, and school setting.

A national study published in late 2017 assessed the current training of both undergraduate and postgraduate studies of FM in Saudi Arabia. This is the foundation of primary care, illustrating Saudi Arabia's vision.

Because of the incorrect old strategic planning that was focused in areas other than primary care, the study concluded that we have a shortage of qualified family physicians, hence the urge to allocate a budget in enhancing our primary care.(8)

Another study done in Riyadh and published in 2016 aimed to evaluate PHCC services from a patient's view, discussing accessibility, effectiveness, and patient perception about using these services as well as the obstacles and problems that PHCCs face.
The study concluded that PHCCs in Riyadh are effective and accessible. However, it also showed that patients would not consider PHCCs as their first choice.(12)

A previous study assessing the structure of PHCCs in Riyadh showed that some centers were inadequately equipped.(11)

CONCLUSION

In summary, we have shown that most of the PHCCs had poorer scores for PHC domains when compared with CBAHI-accredited centers, largely because of limited comprehensive care and community orientation. However, we found that the variation of scores between the two groups was statistically insignificant, hence the need for further research.

Recommendations

1. Conduct this research in a wide national level to obtain more accurate results and better judgment of our current level of PHC.
2. Try to acquire intrasectoral participation from the Ministry of Health other General Directorate of Health Affairs for better and

more reliable data and eliminate some limits that existed in this study.

3. Most of the centers had poor scores in community participation. Perhaps more community-oriented primary care centers would make a huge impact on that same community and, eventually, within a population.

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