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RESEARCH ARTICLE

GAP ANALYSIS OF PROVIDING PRIMARY HEALTH CARE IN COMPREHENSIVE RURAL HEALTH CENTERS OF IRAN

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ABSTRACT

BACKGROUND:

The lack of primary health care (PHC) assessment will lead to the lack of knowledge of the client's final needs and to a deviation from the mission of the health system. This study was conducted to compare the understanding and experience of PHC providers and recipients regarding the principles of PHC in Iran.

METHODS:

This cross-sectional descriptive-analytical study was conducted in Comprehensive Rural Health Centers (CRHCs) in 2022. The research population consisted of health service providers and recipients in rural areas. A Primary Care Assessment Tool (PCAT) was used. 410 child / adolescent and 402 adult PCAT forms were completed by using a stratified cluster sampling method and 413 service providers were randomly selected. This questionnaire had 6 core domains and 3 ancillary domains designed to measure quality of primary care services. After collection and entering into the Excel spreadsheet; data were analyzed by inferential statistics tests including Independent T-test and one-way ANOVA, by SPSS26 and STATA16 at the significant level of P>0.05.

RESULTS:

Except for the Cultural Competence and Services Available domains, in the remaining domains, there was not the same understanding between the service provider and recipient regarding PHC services. Child/adolescent PHC respondents had the same understanding as adult PHC survey recipients in the domains of Cultural Competence, Family Centeredness, Information System, Ongoing Care, and Access. A significant difference between the two recipient groups were in the other domains of Primary Care Score, and Primary Care Expanded scores (P >0.05).

CONCLUSIONS:

For common understanding amongst all three compared groups, cultural competence was the strongest component, and coordination-referral system, services provided, and community orientation were the weakest components. To address these gaps, it is necessary to augment community health literacy, do needs analyses, deliver services aligned with community requirements, and overhaul the referral system procedures and the government's commitment to implement them.

KEYWORDS
rural health services, primary health care, healthcare providers, assessment of healthcare needs, Iran.

INTRODUCTION

The lack of Primary Health Care (PHC) assessment in Comprehensive Health Centers(CHCs) will lead to the lack of knowledge of the client's final needs in the primary care system [1]. PHC should naturally maximize the level of health and equitable distribution of well-being in the shortest time, focusing on the needs of people both as individuals and communities, in the context of health promotion including treatment, rehabilitation and palliative care [2]. The lack of knowledge on such need leads to deviating from the mission of the health system [1].

Iran has a long history of implementing PHC projects, especially in rural areas. The first project was the Behdar (healer) plan (training of health workers) in the 1940s during four years of health education when the health workers became employees in the health system [3]. Since 1981, the PHC has served communities in the form of healthcare networks at three levels. The first level includes comprehensive urban and rural health centers. The urban health office and the rural health house are its subcategories. The rural health house is located in the main village and covers a number of satellite villages based on geographical distance and population. The second level is the general hospital, and the third level is the specialized and super-specialized hospital. There is a referral system from level one to three [3]. Despite many decisions and interventions in the history of PHC implementation in Iran [4], and increasing access to health services [5], there is still public distrust in the health system [6], low quality of services [7], and dissatisfaction with the referral system [8]. The demand for PHC services are increasing due to changes such as increasing complex chronic diseases, the elderly population with multiple co-morbidities, shortage of human resources, geographical dispersion, health costs, and development of new technologies which have increased in recent years [9].

Health system assessment is the basis for reforms in structures and processes in order to achieve better quality [10]. It is important for governments to improve the quality of care according to the needs of the community [11]. Hence, different countries have assessed the state of their primary care systems and services [12-16]. The Primary Care Assessment Tool (PCAT) designed by Starfield [17], is one of the most widely used measures for PHC assessment [18]. This tool can measure the presence of essential features of PHC principles [11]. Kalavani et al. in the south-east of Iran, used this tool to assess the status of providing care in service recipients as they desired relative to individual needs [19]. In a study in the south of Tehran, Dargahi et al. used this tool and found the quality of the services provided to the recipients was lower than the average [20]. Although the basic physical structures and hardware of health care delivery are available, the provision of necessary facilities to maintain and improve the quality of services provided should be considered [19]. The assessment of primary care using PCAT in Brazil indicated that it is necessary to pay attention to people's perception of the services provided and create value for health services [21]. A study in China found Level One (Preventive Care) health care to improve the utilization and coordination of PHC, but due to poor access and ongoing care, the current system needed reforms [22].

Based on our search, despite numerous studies worldwide and in Iran that have utilized the PCA tool, none of them have investigated the gap between the perceptions of care providers and care recipients. This raises a crucial question: Are the services offered at the primary level of Iran's healthcare system driven by induced need or actual need, and to what extent are they perceived by the care recipients? The present study was conducted to compare the understanding and experience of care providers and care recipients regarding the principles of PHC and a gap analysis for providing PHC in Comprehensive Rural Health Centers (CRHCs) of Iran. The study results can help policy makers to take into consideration the perceived, induced, and real needs necessary so as to make more favorable policies for primary services in the country's health care system.

METHODS

STUDY DESIGN

This cross-sectional descriptive-analytical study [23] was conducted in 2022 to compare the understanding and experience of care providers and recipients regarding the

principles of PHC and gap analysis in providing PHC in CRHCs of Iran. First-level rural primary care in Iran includes general practitioners under the title of a family physician, healthcare providers (midwives, nurses, family health workers; environmental; and occupational health workers) in CRHCs, and local healthcare workers (with two years of training so-called "Behvarz" to provide basic PHC services such as vaccination, screening, mother and childcare, etc) in premises called "Health Houses" within the villages [5]. If the physician diagnoses to receive specialized care, patients are referred to higher levels. All the households living in the rural area are primary registered in the electronic care system and have visited the health center at least once. Each Local Health House is located in the main village and covers a number of satellite villages; Several Local Health Houses operate under the supervision of a CRHC. The research site consisted of CRHCs and the research population consisted of service providers (physicians) and service recipients in rural areas. The inclusion criteria for the service provider were physicians working in CRHCs and having at least five years of continuous experience in the field of providing rural health services, and for the recipient of the service were a resident of the village and the content for completing the questionnaire. The physicians who did not want to participate in this study or answered incompletely to the questionnaire; service recipients who were not available at the time of the questionnaire completion; and illiterate people who did not have a literate person as a companion were excluded from the study. In order not to create bias in completing the questionnaire of illiterate people, health workers or service providers at any level were not hired. Written informed consent was obtained from all participants.

DATA COLLECTION TOOL

The Standard Questionnaire of Provider Short Version (PCAT-PS) (physicians), Adult Short Version (PCAT-AS) (over 18 years old), and Child Short Version (PCAT-CS) (under 18 years old which were completed by their parents or guardians) were used for the status of providing care in CRHCs. When arranging the appointments, we requested the parent/guardian with the most information about the child's needs to answer the questionnaire. To save time, we only talked about one child in the family. This questionnaire is one of the PHC quality assessment models that has been used in many countries [19, 21, 22, 24-28]. In addition to conducting a previous study in Iran, to be sure, the reliability of the questionnaire was confirmed using Cronbach's alpha and SPSS23. For this purpose, 30 questionnaires of all three types (n=90) were completed; Cronbach's alpha coefficient was 0.8 for the service provider and 0.9 for the service receiver, which indicated good internal consistency in the questionnaire questions. The first part of the questionnaire contained demographic questions (including age, gender, education level, employment status, work experience, etc.) and then specific questions. The variables of this questionnaire included 6 core domains and three ancillary domains common to the service provider and receiver. The service recipient questionnaire had two other core domains (Table 1).

TABLE 1: FEATURES OF CORE AND ANCILLARY DOMAINS OF PHC ASSESSMENT IN THE PCAT QUESTIONNAIRE

Core domains	N	AS/ CS	PS	Definition [29]
Continuity (Extent of Affiliation with a Provider)	2	*		It reflects the creation of a "Center of Health Care" recognized by both the patient and the provider, regardless of the presence or absence of disease or injury.
First Contact (Utilization)	3	*		It refers to the primary care provider's behavior, being responsible for assisting the client to enter the health care system for each non-referred and non-emergency provision of health care.
First Contact (Access)	4	*	*	service provision must be accessible as the first entry point to PHC; when new health or medical need arises.
Continuity (Ongoing Care)	4	*	*	It refers to the service provider's behavior in creating an ongoing person-focused (not disease-focused) relationship between patient and provider over time that is not limited to certain types of healthcare needs.

Coordination (Information System; MRA)	3	*	*	It requires the establishment of mechanisms to communicate information and the incorporation of that information into the client's plan of care.
Coordination (Referral System)	4	*	*	It refers to transferring information to and receiving it from other resources that may be involved in the care of a client, and to developing and implementing an appropriate plan for health care management and disease prevention.
Comprehensiveness (Services Available)	4	*	*	It provides a range of essential personal health services that promote and preserve health and provide care for illness and disability.
Comprehensiveness (Services Provided)	5	*	*	Primary care that is comprehensive arranges for clients to obtain services elsewhere for uncommon or special needs.
Ancillary Domains				
Family Centeredness	3	*	*	It understands the impact of family characteristics on the genesis and prevention of ill health, as well as the response to both medical and psycho-social interventions.
Community Orientation	3	*	*	It refers to efforts to recognize the primary care needs of a defined population.
Cultural Competence	2	*	*	Services are designed to be acceptable to people in the community, who may be distinguished by common values, language, heritage, and beliefs about health and disease.

Number of Questions=N; Adult Short Version= AS; Child Short Version= CS; provider Short Version= PS, Medical Record Adequacy= MRA

SCORING METHOD

Questions were scored based on a 5-point Likert scale (always = 5, sometimes = 4, rarely = 3, never = 2, no idea = 1). According to the questionnaire scoring guide, since less than 50% of the answers were "no idea" for scoring, this option became "rarely" and for the component for Comprehensiveness-Services Provided which became zero. The average score of each domain was calculated by adding the number of answers and dividing the total by the number of items. Primary Care Score is obtained from the sum of the average scores of core domains and Primary Care Expanded Score is obtained from the sum of the average scores of core and ancillary domains [17].

SAMPLING STRATEGY

Based on the inclusion criteria, 413 physicians in rural areas of 17 provinces in 10 macro-regional planning of the university randomly completed the self-reporting questionnaire. Overall, 410 PCAT-CS and 402 PCAT-AS surveys were completed using stratified cluster sampling. Within the centers and based on the sample size, 400 households were randomly selected through the electronic care system. Each cluster consisted of ten cluster heads. Taking into account the correction factor 1.25(25%), first 50 clusters were selected and finally 812 service recipient questionnaires were completed in forty clusters. The correction factor was used so that if a cluster was not suitable for completing the questionnaire for any reason, the next cluster was used.

STATISTICAL ANALYSIS

First, all the data were entered into a Microsoft Excel spreadsheet. Other software used were IBM SPSS26 and StataCorp STATA16. Given the normality of the data, Independent T-test and one-way ANOVA were used to compare PHC domains in the group of adults, children and service providers ($P < 0.05$).

RESULTS

There were 228(55.21%) women in the Providers group. 238(57.63%) people had work experience of 11-20 years. 216(52.30%) people had completed a MPH course. There were 202(50.25%) women in the adult service recipient group. The average age was 43.05 ± 13.72 years. For education level, 3(0.75%) people were illiterate and 24(5.97%) people had a Masters degree or higher. There

were 206(50.24%) males in the Child/Adolescent group. The average age was 8.41 ± 5.38 years (Table 2).

TABLE 2: DEMOGRAPHIC INFORMATION OF SERVICE PROVIDERS AND RECIPIENTS IN CRHCS

Characteristics	Recipient		Provider (%)
	Child/Adolescent (%)	Adult (%)	
Gender			
Male	206(50.24)	200(49.75)	185(44.79)
Female	204(49.76)	202(50.25)	228(55.21)
Age (mean ±SD)	8.41 ± 5.38	43.05 ± 13.72	41.68 ± 6.05
Work experience (year)			
5 -10			120(29.06)
11 - 20			238(57.63)
≥ 21			55(13.32)
Family physician workplace			
small city [a]			31(7.51)
Village			382(92.49)
Completion of MPH course			
Yes			216(52.30)
No			197(47.70)
Job Status of the person/parent			
Employee	79(19.27)	51(12.69)	
Housewife	238 (58.05)	137(34.08)	
Other (Manual Worker, Job seeker, Self-employed, Student, Retiree, Disabled)	93 (22.68)	214(46.76)	
The income of family monthly (in Million Rials)			
20 (20≈US$ 70)<	25(6.10)	52(12.94)	
20-40	117(28.54)	138(34.33)	
40-60	74(18.05)	61(15.17)	
60-80	59(14.39)	31(7.71)	
80>	71(17.32)	48(11.94)	
Not informed	64(15.61)	72(17.91)	
Education of the person/parent			
Illiterate	1(0.24)	3(0.75)	
< High school	120(29.27)	119(29.6)	
End of High School	148(36.10)	148(36.82)	
Junior college	43(10.49)	65(16.17)	
Bachelor Degree	85(20.73)	43(10.70)	
≥ Master's degree	13(3.17)	24(5.97)	
Type of insurance			
Health insurance (rural/government employees)	156(38.05)	226(56.22)	
Social Security Insurance	226(55.12)	148(36.82)	
Other insurances	21(5.12)	16(3.98)	
not insurance	7(1.71)	12(2.99)	

a Small City is considered as a rural area in health divisions; Master of Public Health= MPH

The results showed that except for the Cultural Competence and Comprehensiveness- Services Available, the rest of domains there was not the same understanding of PHC services between the service provider and recipient. T-Score showed the lowest understanding of Access and Community orientation in the client group and cultural competence in the service provider group ($P < 0.05$) (Figure 1) (Table 3).

A radar chart was prepared that shows the average score of service receivers' understanding and experience was lower than that of the service providers' (Figure 1).

The results showed that the recipients of child/adolescent care had the same understanding as the recipients of adult care in the domains of Cultural Competence, Family Centeredness, Information System, Ongoing Care, and Access. But in other domains, Primary Care Score, and Primary Care Expanded Score, a significant difference was between the two groups ($P < 0.05$) (Table 4).

TABLE 3: COMPARISON OF PHC DOMAINS FROM THE PERSPECTIVE OF SERVICE PROVIDERS AND CLIENTS OF CRHCS

Domains	Total (n=1225)		Recipient (n=812)		Provider (n=413)		T- Statistics	P-value
	Mean ±SD	T-score	Mean ±SD	T-score	Mean ±SD	T-score		
Access	3 ± 0.71	-0.95	2.83 ± 0.71	-1.245338703	3.31 ± 0.59	-0.421531652	12.4713	<0.001
Ongoing Care	3.39 ± 0.72	0.88	3.2 ± 0.8	0.597762578	3.75 ± 0.29	0.969522799	17.4852	<0.001
Information System (MRA)	3.3 ± 0.71	0.46	3.15 ± 0.78	0.348694837	3.6 ± 0.39	0.495299691	13.519	<0.001
Referral System	3.37 ± 0.75	0.79	3.15 ± 0.81	0.348694837	3.8 ± 0.33	1.127597168	19.993	<0.001
Services Available	3.14 ± 0.66	-0.29	3.16 ± 0.77	0.398508385	3.11 ± 0.37	-1.053829129	1.5498	0.121
Services Provided	3.41 ± 0.71	0.97	3.34 ± 0.82	1.295152252	3.56 ± 0.38	0.368840195	6.6025	<0.001
Family Centeredness	3.38 ± 0.74	0.83	3.24 ± 0.83	0.79701677	3.65 ± 0.39	0.65337406	11.988	<0.001
Community Orientation	2.97 ± 0.79	-1.09	2.77 ± 0.88	-1.544219992	3.37 ± 0.34	-0.231842408	17.11	<0.001
Cultural Competence	2.86 ± 0.91	-1.61	2.88 ± 1	-0.996270963	2.84 ± 0.7	-1.907430724	0.7579	0.448

FIGURE 1: COMPARISON OF THE AVERAGE UNDERSTANDING AND EXPERIENCE OF PHC IN THE GROUP OF RECEIVERS AND SERVICE PROVIDERS SEPARATELY AND GENERALLY (SERVICE PROVIDERS AND RECEIVERS)

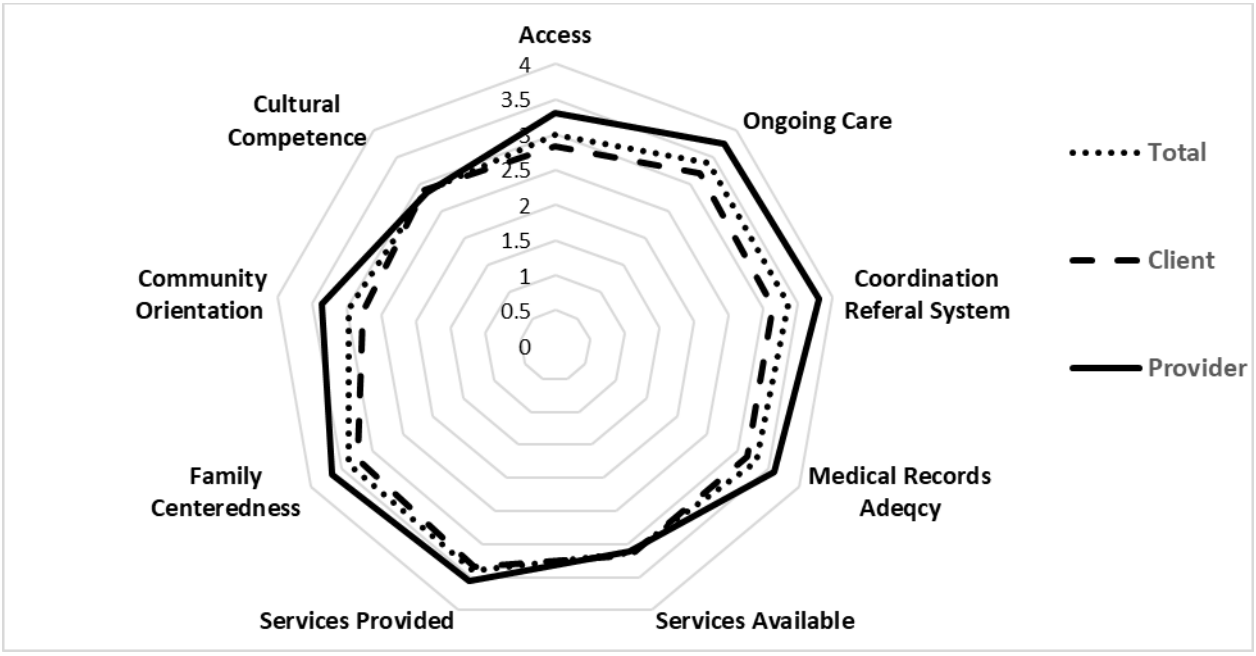

TABLE 4: COMPARISON OF PHC DOMAINS FROM THE PERSPECTIVE OF CHILD/ADOLESCENT AND ADULT PARTICIPANTS IN THIS STUDY

Domain	Child/Adolescent (n=410)	Adult (n=402)	T- Statistics	P-value
	Mean ±SD	Mean ±SD		
Access	2.79 ± 0.73	2.87 ± 0.69	1.6274	0.104
Utilization	3.14 ± 0.86	3.31 ± 0.7	3.1693	0.0016
Extent of Affiliation with a Provider	3.52 ± 0.04	3.68 ± 0.03	2.7163	0.0067
Ongoing Care	3.16 ± 0.86	3.25 ± 0.74	1.6055	0.1088
Information System (MRA)	3.1 ± 0.78	3.19 ± 0.79	1.6187	0.1059
Referral System	2.99 ± 0.83	3.31 ± 0.75	5.8578	<0.001
Services Available	3.01 ± 0.83	3.31 ± 0.67	5.6163	<0.001
Services Provided	3.25 ± 0.88	3.42 ± 0.73	2.9305	0.0035
Family Centeredness	3.21 ± 0.84	3.27 ± 0.81	1.0232	0.3065
Community Orientation	2.69 ± 0.83	2.84 ± 0.91	2.374	0.0178
Cultural Competence	2.82 ± 0.98	2.94 ± 1.01	1.7458	0.0812
Primary Care Score	24.97 ± 4.92	26.35 ± 4.19	4.2961	<0.001
Primary Care Expanded Score	33.68 ± 6.9	35.39 ± 6.16	3.7072	0.0002

DISCUSSION

The results of the data analysis showed that the people who received PHC services from CRHCs had the same understanding as the personnel who provided the services directly only in terms of the principles of comprehensiveness-services available and cultural competence. In other domains, the average score of service recipients was lower than that of service providers. In a study by Bresick et al. in South Africa, in terms of the domains of comprehensiveness-services provided, cultural competence, coordination-information system, coordination-referral system, ongoing care, and family-centeredness, there was the same understanding between the provider and the recipient of the service and in other domains, such as the results of our study, the score of service receivers was lower than that of service providers [30].

The lower mean score of the clients in all domains indicates an undesirable status between what they demand and what they receive. In a study by Oliveira et al. on service adult recipients, all the assessed features, except coordination, showed insufficient orientation to PHC [11]. The study results of Aoki et al. in Japan, which compared the experiences of visitors to community-oriented health centers with hospitals; also showed that the score of access to services in the recipients of care in community-oriented centers was lower than that of patients in hospitals [31]. The asymmetry of understanding towards the implementation of PHC principles is a sign of the inadequacy of the services provided or the lack of effective communication between the provider and the recipient of the service, which fades the mission of PHC. While it is expected that the vision of universal health care and social determinants affecting health in the 21st century will cross the path of PHC [32] service delivery.

From the point of view of service recipients and service providers, there was no agreement on the comprehensiveness of services provided in health centers which can be a sign of service recipients' dissatisfaction with the quality of the service received. The quality of service can be related to the service received or the process followed to receive the service; long waiting time to receive the service; inappropriate behavior of the service provider, unsuitable physical space for receiving the service; or any other factor that can contribute to the dissatisfaction of the service recipient. For example, Aoki et al. found that improving the accessibility to community health centers, including out-of-hours care, led to an increase in the quality of PHC [31]. The comprehensiveness of services provided is a behavioral feature. It seems that the service providers do not have the necessary skills to communicate effectively with the service recipient and provide effective training, or they do not spend enough time for this. Spending insufficient time or skills for the service recipient causes mistrust, disruption in ongoing care and lack of regular visits to health centers. Ongoing care is also

a behavioral principle in PHC, which indicates the existence of a continuous relationship focused on the person (not on the disease) over time between the provider and the recipient of the service [17]. According to the rural family physician law in Iran, people who live in a rural area should refer to the comprehensive health service center of the same rural area and due to the special conditions of the rural area, we cannot expect the option to change and to be able to select the service provider as occurs in urban areas. Therefore, dissatisfaction with that center makes them not attend without expressing their dissatisfaction due to the small geographical area and special considerations of communication between the service provider and recipient, or they refer to the hospital and private practices outside of the systematic referral process.

The low level of health literacy of the people makes the real value of the services provided not understood. In their study, Inoue and Aoki assessed the health literacy of the service recipients in a significant positive relationship with PHC features, especially with the principle of ongoing care and comprehensiveness services provided [18]. Cultural competence respects the beliefs, attitudes, and behaviors of individuals in providing health care [17]. Perhaps it can be said that the most obvious feature of PHC in Iran is the adaptation of services to people's beliefs and behaviors. Because comparing all groups in our study, there was the same understanding of this principle. Families that are at a good level of economic ability or do have not a child under five ages may not have a specific understanding of the cultural competence of the services provided. The main reason for most people visiting PHC centers is children's vaccinations or to measure their height and weight. Families living in health poverty are usually unaware of the cultural appropriateness of services due to information asymmetry. On the other hand, it seems that in recent years, services such as the requirement of COVID-19 vaccination or the decision-making method for adjusting the family size in Iran are not liked by many people. Maybe the questions of the questionnaire used should have examined the cultural competence from different aspects such as these mentioned. The results of Besigye et al. correspond with our research due to finding similar perceptions among managers, care providers, and care receivers regarding the cultural competence of PHC services [33]. A study by Nascimento et al, which used the Portuguese version of this questionnaire in Brazil, the same understanding of cultural competence was not observed between recipients and providers of oral care [34].

Comparison of child/adolescent PHC responses with those over 18 years showed that, in terms of three core domains of access, ongoing care, coordination-care system, and two ancillary domains of cultural competence, there was a similar understanding of family-centeredness between the two groups. But in terms of five core domains and one ancillary domain, as well as in terms of the total score and PHC score, there was no agreement between the two groups in terms of their understanding. The total score and PHC score were significantly higher in the adult group. PHC services as the first level of care in the health system, should be available to everyone. Access is a structural property. One of the very good features of Iran's PHC is the existence of Local Health Houses and CRHCs. But the "utilization" component reflects the population's use of the facilities. Utilization is a behavioral feature [17]. The study results assessed PHC utilization by adults more than that of children/adolescents. Perhaps adults visited the center the most for blood pressure and diabetes checkups. Although it can be seen that some people with non-communicable diseases (NCDs) tend to refer continuously for blood pressure and diabetes measurements, which should not cause the care of other groups to be neglected. In a study by Pinto et al. in Brazil it was also shown that the elderly group had the most visits to health centers and assessed the performance of service providers more positively than other groups [21]. Family centeredness reflects the understanding of the nature, role, and effect of health, disease, disability, or injury of members on the family, the effect of the structure, function, and dynamics of the family, as well as the family history of diseases in individuals [17]. In the care registration system in health centers and homes in Iran, people are covered by the service provider unit as a family. Although urban areas still face problems with this issue, it has been completely resolved in rural areas. A study by Shi et al. showed that PHCs in rural centers were significantly better than the city in the domains of utilization, access, referral system, comprehensiveness-services available, and community orientation. However, both domains needed improvement in electronic information registration [35]. Due to the relationship with the population covered, the rural family physician knows people based on the household and asks questions about possible diseases or problems in the family.

Community orientation is concerned not only with the health care needs of the patients and families who used the services by the provider, but also with those whose health care needs are not met and the features that affect the health needs of everyone in the community [17]. In our

study, there was not the same understanding in terms of community orientation in the group of recipients and service providers. In a study by Moe et al. on the domains of PHC among adults receiving services in community-oriented clinics during 2007-2016 at four intervals in Canada, the average access score improved significantly during these years. But community orientation, ongoing care, coordination-referral system, family centeredness and cultural competence satisfaction reduced. Dependence on a service provider, utilization and coordination of the care system were not improved [36]. Community-oriented PHC, which operates on the principles of community participation and mobilization, is now more critical than ever [37].

Referral system coordination is a behavioral feature that refers to the logical ordering of those services including community resources [17]. The rural family physician serves as an intermediary connecting rural households with the second level of health services. Upon conducting their own diagnosis, if the individuals under their care require the expertise of a specialist physician, it is incumbent upon the rural family physician to guide and assist them in obtaining the appropriate referral. Subsequently, after the individuals have consulted with the specialist, the family physician is responsible for engaging in discussions with them and monitoring the progress of their care and treatment. It seems that children and adolescents often refer to higher levels of care services without consulting a family physician. It can be asserted that with enhanced accessibility to specialists, facilitated by shorter geographical distances and widespread availability of transportation, individuals are inclined to seek perceived higher quality services by paying more. Consequently, they opt for direct referrals to specialists and urban centers. A study by Liang et al. also showed that in the adult population who were definitely referred to higher levels through Level 1 (primary care), compared to the same population that was referred to higher levels of care without a referral system then the domains of utilization and coordination of the referral system were higher. However, the domains of access and ongoing care were lower [22].

LIMITATIONS OF THE STUDY

Our study was based on a questionnaire in which the perceptions and experiences of the participants regarding how to receive and provide PHC services were conducted. But this study did not address the causal relationships between the studied components. On the other hand, the researchers had intended to include more samples (participants) in the study from all over the country but distributing and completing three types of questionnaires and convincing people to complete the questionnaire was too difficult because of the high costs, high workload in the executive departments, the start of an electronic prescription program and coincidence with the COVID-19 pandemic throughout the world.

CONCLUSION

The results from this study showed that there was more similarity between the child/adolescent group and the group over 18 years old in terms of understanding of services where these two groups had the same understanding of cultural competence in terms of the three core domains of access, ongoing care, information system and two family centeredness ancillary domains. However, the group of providers, and service recipients had the same understanding in only one core domain of comprehensiveness of existing services and one ancillary domain of cultural competence.

The components of the coordination-referral system, comprehensiveness-services provided, and community orientation should be paid more attention because they were among the weak components regarding common perception among all three groups. For common understanding between the three groups, cultural competence was one of the strongest components and other components had an average rank. To address these gaps, it is necessary to augment community health literacy, do needs analyses, deliver services aligned with community requirements, and overhaul the referral system procedures and the government's commitment to implement them. The study findings can serve as valuable insights for healthcare policymakers and enable them to formulate favorable policies for primary services within the country's healthcare system, considering the clients' perceived, induced, and actual needs.

ETHICS CLEARANCE

The study was done after holding the ethical code IR.IAU.CHALUS.REC.1399.022 from Islamic Azad University, CHALUS Branch. Written informed consent was obtained from all study participants.

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