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Assessment of Components of Primary Health Services and Psychology Health Providers in Main Primary Health Care in the Kurdistan Region of Iraq

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Abstract

Background: Primary health care (PHC) issue is trying to promote the best possible health and well-being for all individuals, regardless of their background, by focusing on the community's needs for sustainable and affordable healthcare.

Objective: The primary goal of this study is to assess the key elements of primary healthcare services in the PHC centers located in the Kurdistan Region of Iraq.

Methods: It is a mass cross-sectional observational study including PHCs in the Kurdistan region, Iraq. Sampling is done using multistage sampling that includes simple random sampling, stratified random sampling, and systematic random sampling design. The required PHC data were collected in Sulaymaniyah, Halabja, Erbil, and Duhok governorates. The method of data collection involves visiting all primary healthcare centers and obtaining prior permission from the health directorate in each governorate. Face-to-face interviews with medical personnel will be conducted, and a standardized checklist will be used to evaluate health service indicators.

Results: Out of a total of 222 primary healthcare centers in the Kurdistan region, we chose to focus on 68 main primary healthcare centers for this study. Child growth monitoring was the most frequently offered service, available at 77.3% of primary healthcare centers. Laboratory services were the next most common, with 76.7% providing them. Antenatal care was offered at 75.5% of centers, while child immunization services were available at 73.5%.

Conclusion: Monitoring a child's growth is a crucial measure for promoting their survival. To improve the effectiveness of current primary healthcare centers, prioritizing laboratory services, and improving the staff's attitudes and practices are essential.

Keywords: primary health care, health centers, medical care

Introduction

Primary care represents the entry-level cornerstone of many health systems which provides accessible person-centered, appropriate, and equitable care from a population-based perspective. Primary care is aimed at preventing disease at an early stage, health promotion across the population, and comprehensive acute and chronic care involving rehabilitative and palliative approaches (Bevan et al., 2019). Half the world lacks access to essential health services, and more than 100 million are still pushed into extreme poverty because of health expenses. According to the latest available data, nearly 500 million people do not receive at least one of seven essential services (WHO, 2015., WHO, 2023). Inadequate basic infrastructure, human resource gaps, poor quality services, and low trust in health practitioners and medical authorities remain barriers to achieving health goals (WHO, 2019).

Nowadays in developed countries, the demands for healthcare services are increasing. However, the burden of disease and many other challenges in this regard are unequally shared across socio-economic groups (WHO,

UNICEF, 2018). Primary health care (PHC) has been advanced as a cost-effective way to improve health outcomes in an equitable manner (WHO, UNICEF, 2018). Due to the low concentration of lower and middle-income countries on the quality of healthcare services delivered, they hardly ever achieve an appropriate level of health (W. H. Organization, 2015). High-quality primary health care is crucial to improve the health status of populations. On the other hand, poor quality leads to more diseases and costs, loss of public confidence, loss of time, and low staff morale, and also results in the wastage of limited resources (Kress et al., 2016). One of the last updated reports of the primary health concept in the primary health care operation framework was ASTANA declaration in 2018. This declaration aimed to strengthen the commitment of countries and international partners to make concerted efforts to orient health systems towards PHC for accelerated progress on universal health coverage and the health-related Sustainable Development Goal (World Health Organization. 2018).

Based on the studies carried out by Kress et al (2016) the strength of a country's primary care system was negatively associated with mortality in Organization for Economic Co-operation and Development (OECD) countries. Moreover, PHC also has improved population health in low- and middle-income countries (Macinko et al., 2009). According to the Alma-Ata declaration, primary healthcare services should be in line with the needs of a particular population (Taha et al, 2021). PHC services mainly involve providing treatment for common illnesses, the management of long-term illnesses such as diabetes and heart disease, and the prevention of future ill-health through advice, immunization, and screening programs (Taha et al, 2021). Moreover, a health system needs staff, funds, information, supplies, transport, communications, and overall guidance and direction to function (WHO, 2015).

The health care system in Iraq is essentially a hospital oriented with little focus on primary care. However, there was no specialty in primary care or family medicine until the recent introduction of the family medicine specialty in Iraq. Moreover, because of the poor functioning of the primary care system in Iraq, including the Kurdistan region, there is a desperate need for re-organizing and restructuring the primary care services (Alwan, 2004). In developing countries, particularly in the Kurdistan region of Iraq, the assessment of the primary health care components was not done till now. Therefore, we believe that assessing our PHC operational framework should in the priority of the policymakers. However, according to our knowledge their limited report on this area. So, the present study is aimed to assess the primary health care operational framework indicators based on the new standard tools (WHO) as well as human resource knowledge and attitude about these indicators.

Material and methods

Study setting: The research will be conducted in all four governorates of Iraqi Kurdistan (Sulaimani, Halabja, Erbil, and Duhok). The study participants are including all PHCs will be selected in the Kurdistan region, Iraq

Study design: A mass cross-sectional observational study will be used for conducting this study to create a representative sample of Kurdistan's PHC.

Sampling procedures (sample size and sampling methods)

Assessment of indicators:

In this study, we used multistage sampling, (Simple random sampling, stratified random sampling, and Systematic random sampling design) including all PHC in the Kurdistan region, Iraq. The required PHC data were collected in Sulaymaniyah, Halabja, Erbil, and Duhok governorates. The total number of main PHCs in the Kurdistan region was 222. We select 68 main PHCs according to the sampling technique, 29 PHCs in Sulaymaniyah, 3 PHCs in Halabja governorate, 20 PHCs in (Erbil) and 16 PHCs in Duhok. The data were collected by visiting all PHCs and taking pre-permission from the directorate of health from all governorates. Data collection was done through face-to-face interviews with medical staff and for assessing the health services indicators using a standard checklist.

Study procedures:

The PHC services were evaluated using the standard checklist developed by WHO to examine health care programs, infrastructure, and manpower. The checklist consists of (antenatal care (ANC) services such as service availability, and maternal health administration), (child immunization such as vaccine stock, and vaccination technique), (child growth and development state such as utilizing the check card, and child preventative and curative care services), (non-communicable diseases (NCDs) such as appropriate care), communicable diseases, school health services, health promotion documents, (administration units such as personnel, logistics, and supervision), Dental clinic and The laboratory.

Data management and statistical analysis:

The collected data were reviewed and analyzed using the Statistical Package for Social Sciences (SPSS version 24). Descriptive statistics such as frequency and percentage were also measured. Continuous variables were described by measuring central tendency and dispersion around the mean. For data with non-normal distributions, the median-interquartile range was used to describe continuous variables. The normality of data was assessed using the Shapiro–Wilk test.

To compare the Median and interquartile ranges the P-value was obtained for the continuous variable using the nonparametric test 2-Independent Samples Test (Mann-Whitney U). The chi-square (Odd ratio) with a 95% confidence interval was used to determine the associations between qualitative dependent and independent variables. A p-value less than 0.05 (typically ≤ 0.05) is statistically significant.

Ethical considerations:

The researcher sought the approval of the Ethics Committee of the University of Sulaimani and the Ministry of Health for performing the study. This study complies with international Ethical Research Guidelines. Informed consent was obtained from the participants and the information was kept confidential and properly safeguarded.

Results

According to the results, the total number of main PHCs in the Kurdistan Region was 222 we select 68 main PHC services from the total number in the Kurdistan Region. In the Kurdistan region, the PHCs had a range of services available to the public. The service that was most commonly available, at 77.3%, was child growth monitoring. This was followed by laboratory services, with a percentage of 76.7%. Antenatal care services were available at 75.5% of the PHCs, while child immunization services were available at 73.5%. School health services were also prevalent, with more than two-thirds of the PHCs offering them. Dental services were available at 67%, while non-communicable disease services were the least commonly available. Table 1.1 provides a detailed list of the top functioning primary care services.

Table 1.1. Distribution of components of health services for a total of 68 PHC services in the Kurdistan Region – Iraq

Component of health services	**(%)**
Antenatal care services (ANC)	75.5
Child immunization services	73.5
Child growth monitoring services	77.3
Non-communicable disease services	42.6
Communicable disease total services	51.5
School health service	67.9
Health promotion services	50.6
Administration health services	55.4
Dental clinic services	67.0
Laboratory health services	76.7

According to the results, out of the 68 PHCs in the Kurdistan Region of Iraq, the following table presents the median interquartile range (IQR) scores of various components of health services in Province number 30 and District number 38. The components of the health services are listed in the first column, and the corresponding median IQR scores for each component in Province number 30 and District number 38 are represented in the second and third columns, respectively. The P-Value for each component is presented in the fourth column. The P-Values indicate the level of statistical significance of the difference between the median scores of the two districts for that particular component. Overall, the table provides a clear concise comparison of the health service in the two districts, highlighting the differences in their performance.

Table 1.2. Relation of the components of health services in all PHC services between provinces and districts in the Kurdistan Region of Iraq

Components of health services	Province No= 30 Median (IQR)	District No= 38 Median (IQR)	P- value
ANC total score	86 (17.5)	78 (33)	0.012
Child immunization total score	72.4 (13.8)	79.9 (15.5)	0.223
Child growth monitoring total score	78.9 (11.9)	78.9 (21.1)	0.910
Noncommunicable disease total score	27.3 (72.7)	50 (81.8)	0.474
Communicable disease total score	66.7 (33.4)	66.7 (33.4)	0.139
School health service total score	85 (32.5)	70 (60)	0.042
Health promotion services total score	71.4 (100)	42.9 (100)	0.428
Administration unit total score	44.4 (33.4)	66.7 (55.6)	0.060
Dental clinic total score	1.4 (32.2)	80 (85)	0.726
Laboratory total score	80 (45)	85.7 (28.6)	0.342

The following table presents data on various components of health services across four governorates (Sulaymaniyah, Halabja, Erbil, and Duhok) in an unknown country. This table reports the number of facilities in each governorate and their median total score for each component, along with the IQR and P-value. The components of health services that are included in Table (3) are the Antenatal care (ANC) total score, child immunization total score, child growth monitoring total score, non-communicable disease total score, communicable disease total score, school health service total score, health promotion documents total score, administration unit total score, dental clinic total score, and laboratory total score.

The P-value indicates the statistical significance of the differences in median total scores between the governorates. For example, a P-value of less than 0.05 indicates that there is a significant difference in the median total scores between the governorates for that particular component. In summary, this table provides information on the performance of different governorates in various components of health services, highlighting the areas where improvement is needed.

Table 1.3. Relation of components of health services in all PHC services between province and district in the Kurdistan Region of Iraq

Component of Health Services	Governorates	No	Median (IQR)	P-value
ANC (Antenatal care) total score	Sulaymaniyah	31	83 (17)	0.007
	Halabja	2	78 (0.0)	
	Erbil	19	67 (34)	
	Duhok	16	89 (15.5)	
Child immunization total score	Sulaymaniyah	31	69 (10.3)	< 0.001
	Halabja	2	63.8 (58.6)	
	Erbil	19	75.9 (9.9)	

	Duhok	16	82.8 (6.1)	
Child growth monitoring total score	Sulaymaniyah	31	78.9 (15.8)	< 0.001
	Halabja	2	78.9 (0.0)	
	Erbil	19	73.7 (15.7)	
	Duhok	16	89.5 (4)	
Non communicable disease total score	Sulaymaniyah	31	0.0 (27.3)	< 0.001
	Halabja	2	0.0 (0.0)	
	Erbil	19	63.6 (54.5)	
	Duhok	16	81.8 (6.9)	
Communicable disease total score	Sulaymaniyah	31	66.7 (66.7)	0.661
	Halabja	2	33.3 (0.0)	
	Erbil	19	66.7 (33.4)	
	Duhok	16	66.7 (33.4)	
School health service total score	Sulaymaniyah	31	70 (30)	0.002
	Halabja	2	30 (0.0)	
	Erbil	19	70 (60)	
	Duhok	16	90 (10)	
Health promotion documents total score	Sulaymaniyah	31	0.0 (57.1)	< 0.001
	Halabja	2	0.0 (0.0)	
	Erbil	19	71.4 (100)	
	Duhok	16	90 (10)	
Administration unit total score	Sulaymaniyah	31	33.3 (33.4)	< 0.001
	Halabja	2	44.4 (22.2)	
	Erbil	19	66.7 (44.5)	
	Duhok	16	83.3 (30.6)	
Dental clinic total score	Sulaymaniyah	31	60 (40)	0.038
	Halabja	2	50 (0.0)	
	Erbil	19	100 (60)	
	Duhok	16	100 (60)	
Laboratory total score	Sulaymaniyah	31	71.4 (14.3)	0.007
	Halabja	2	50 (42.9)	
	Erbil	19	85.7 (28.6)	
	Duhok	16	100 (53.4)	

Discussion

It is widely acknowledged that growth monitoring can play a crucial role in promoting child survival, however, it remains to be demonstrated whether this approach is equally effective in all developing nations. Based on the data achieved from this study, child growth monitoring was the most prevalent service available in the studied region. In line with our findings, Kebede et al [2022] reported that growth monitoring has been promoted as an important intervention for child survival.

Moreover, laboratory and antenatal care services were also available in more than three-fourths of the PHC settings. In contrast with the data from the present study Mansur et al [2014] reported that the antenatal care services at the primary health care level are not adequate in Bangladesh. So, they suggested that in order to improve the quality of antenatal care services, it is advisable to improve the logistics and supplies instruments used. Another story by Jain et al [2019] stated that to enhance the performance of existing primary healthcare centers, it is necessary to prioritize laboratory services. On the other hand, in less than three-fourths of the PHCs child immunization services were available. In line with the data from this study, Al-Salihi et al [2019] reported that one of the key preventable causes of under-immunization is missed opportunities for immunization.

Our data revealed that in more than two-thirds of the PHCs, school health services were available. Hale et al [2023] conducted a similar study to examine how school health services contribute to primary healthcare services for school children. They compared the national school health systems with the standards of the World Health Organization and used a framework for measuring the strength of primary care, which was adapted from an existing framework that focused on adults. The study found that improved collaboration between school health services and primary care services could result in better coordination and health and educational outcomes. Additionally, involving young people and families in the design of school health services and as participants in its outputs could also enhance school health [Hale et al, 2023].

Our data showed that non-communicable disease services were the least commonly available in PHCs. In contrast with the data from the present study, Aung et al [2022] reported that the majority of primary healthcare facilities offered non-communicable disease services, and there were no significant differences in availability between the three districts. However, the average scores for the availability of non-communicable disease services for chronic respiratory diseases and cancers were lower in all districts.

Our data showed that there was a significant association between the median IQR of the district and province in terms of their ANC total score. In line with the data of the present study, Fagbamigbe et al [2015] showed that providing ANC services can be useful in the process of prevention, detection, and treatment of negative outcomes for both the mother and newborn. Moreover, based on their studies ANC services can significantly affect the quality of PHCs in many low and middle-income countries across the world.

Our data also revealed that the total score of school health services can significantly affect the median IQR of both studied provinces and districts. In line with the data from this study, Lu et al [2023] showed that school health service plays an important role in PHCs. In another study, Doyle et al [2019] reported that school health is an important branch of PHC services. In this regard, providing appropriate systems for the identification and solution of students' health as well as their educational problems improves their overall well-being status. In a similar study by Baltag et al [2015], it was reported that school health services are mainly by dedicated school health personnel. Based on their studies, mental health, injury, and violence prevention are among the areas which commonly have insufficient consideration in routine service provision.

Our data revealed a significant difference between different governorates in terms of their child immunization total score. So, the IQR range for child immunization total score in Halabja was higher compared with other regions. In a similar study, Pinaka et al [2021] showed that PHCs have the potential to improve the available confidence between healthcare providers and in-danger social groups, towards disease prevention and to improve their immunization uptake. Based on the data from this study, the difference between child growth monitoring total scores in different studied areas was significant. So, the highest IQR rate was for Sulaimani and Erbil Governorates respectively. In a similar study, Sulley et al [2019] reported that the value of growth monitoring is its ability to serve as a means of detecting nutritional or health issues in children, allowing for intervention before their nutritional condition becomes severely compromised. Moreover, by regularly measuring a child's weight and comparing their growth pattern to the growth curves of healthy children, growth faltering can be detected early [Sulley et al, 2019].

Based on our data there was a significant difference in the total score of non-communicable diseases between different governorates. In a similar study, Aung et al [2022] reported that non-communicable disease service availability is the pathway from the inputs of non-communicable disease capacity readiness to non-communicable disease service utilization. However, in contrast to our study, their study found that nearly all primary healthcare facilities had a high overall score for the availability of non-communicable disease services, but the scores for chronic respiratory diseases and cancer care were low across all districts. One other significant component of health services which was significantly different between the studied Governorates was the health promotion documents' total score. Based on the IQR range, the highest differences were between the PHCs in Erbil and Sulaimani governorates. In a similar study, Pati et al [2017] reported a significant difference between the total and mean scores of health promotion documents and practices. Based on their study, physicians urgently needed to

increase their practice in health education. Moreover, they concluded that it is essential to integrate health promotion practices into regular healthcare services in order to establish a robust healthcare system. Additionally, it should be integrated into medical curricula as a structured health promotion module.

Conclusion

Primary healthcare is widely acknowledged to be a vital component in achieving public health, and evaluating its effectiveness is crucial in promoting ongoing improvements. So, evaluating primary healthcare performance should encompass both system components and appropriate measures of personnel performance beyond simply understanding protocols. The current methods used to assess primary healthcare performance in developing nations must be verified, and new, succinct measures must be developed to address overlooked aspects. In this regard, it is crucial for any government to enhance its financial dedication to the healthcare industry. To sum up, this study proposal has the potential to generate a set of verified instruments for evaluating the quality of primary healthcare by utilizing unannounced standardized patients. These tools can then be utilized to gather valuable information about the quality of primary healthcare in the Kurdistan region of Iraq.

References

1. Bevan, G., Evans, A., Nuti, S. (2017) Reputations Count: Why benchmarking performance is improving health care across the world. In proceedings at Workshop: Public Management and Institutional Quality, Gothenburg June 6-8 2017.
2. World Health Organization. (2015), Tracking Universal Health Coverage Report. http://apps.who.int/iris/bitstream/10665/ 174536/1/9789241564977_eng.pdf?ua=1.
3. World Bank and WHO. (2023). Half the world lacks access to essential health services, 100 million still pushed into extreme poverty because of health expenses. (n.d.-b). Who.int. Retrieved April 6, 2023, from https://www.who.int/news/item/13-12-2017-world-bank-and-who-half-the-world-lacks-access-to-essential-health-services-100-million-still-pushed-into-extreme-poverty-because-of-health-expenses.
4. World Health Organization (WHO). (2019). Primary Health Care on the Road to Universal Health Coverage 2019 MONITORING REPORT, CONFERENCE EDITION. Geneva, Switzerland: WHO, 2019.
5. World Health Organization, UNICEF. (2018). Primary health care: transforming vision into action, OPERATIONAL FRAMEWORK-Draft for Consultation. Geneva, Switzerland: World Health Organization. 2018.
6. W. H. Organization, World report on ageing and health. World Health Organization, 2015.
7. Alwan A. Health in Iraq: The current situation, our vision for the future and Areas of work. 2nd ed. Baghdad: Ministry of Health, 2004.
8. Kress DH, Su Y, and Wang H. (2016). Assessment of primary health care system performance in Nigeria: using the primary health care performance indicator conceptual framework. Health Systems & Reform. 2016 Oct 1; 2(4):302-18.
9. Taha TY, Qassim WJ. (2021). Quality of Health Care System and Structure at Primary Health Care in Baghdad City. Prof.(Dr) RK Sharma. 2021 Jan;21(1):1081.
10. Kadam P, Bhalerao S. Sample size calculation. Int J Ayurveda Res. 2010;1(1):55-57. doi:10.4103/0974-7788.59946.
11. Kebede, G. G., Dawed, Y. A., & Seid, K. A. (2022). Child growth monitoring and promotion practice and associated factors among health care workers at public health facilities in south Wollo Zone, Northeast Ethiopia: a facility-based cross-sectional study. BMC Nutrition, 8(1), 99. https://doi.org/10.1186/s40795-022-00597-6.
12. Mansur, A. M. S. A., Rezaul, K. M., Mahmudul, H. M., & S, C. (2014). Quality of antenatal care in primary health care centers of bangladesh. Journal of Family & Reproductive Health, 8(4), 175–181.
13. Jain, R., & Rao, B. (2019). Role of laboratory services in primary health center (PHC) outpatient department performance: an Indian case study. Primary Health Care Research & Development, 20(e112), e112. https://doi.org/10.1017/S1463423619000537.

14. Al-Salihi, L. G., Aakef, I. R., Al-Shuwaili, S. J., & Zaki Hadi, W. M. (2019). Primary health-care staff barriers to immunization. Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine, 44(3), 256–260. https://doi.org/10.4103/ijcm.IJCM_14_19.
15. Hale, E. W., & Davis, R. A. (2023). Supporting the future of medicine: Student mental health services in medical school. Frontiers in Health Services, 3, 1032317. https://doi.org/10.3389/frhs.2023.1032317.
16. Aung, W. H., Kitreerawutiwong, N., Keeratisiroj, O., & Jariya, W. (2022). Health service readiness, availability, and utilization of primary health care facilities for non-communicable diseases in Shan State, Myanmar. Iranian Journal of Public Health, 51(6), 1303–1312. https://doi.org/10.18502/ijph.v51i6.9675.
17. Fagbamigbe, A. F., & Idemudia, E. S. (2015). Assessment of quality of antenatal care services in Nigeria: evidence from a population-based survey. Reproductive Health, 12(1), 88. https://doi.org/10.1186/s12978-015-0081-0.
18. Lu, J., Yang, H., Shi, L., Sheng, X., Huo, Y., Liu, R., & Hu, R. (2023). Associations between primary healthcare experiences and glycemic control status in patients with diabetes: Results from the Greater Bay Area study, China. International Journal of Environmental Research and Public Health, 20(2), 1120. https://doi.org/10.3390/ijerph20021120.
19. Doyle, A. M., Mchunu, L., Koole, O., Mthembu, S., Dlamini, S., Ngwenya, N., Ferguson, J., & Seeley, J. (2019). Primary healthcare and school health service utilisation by adolescents and young adults in KwaZulu-Natal, South Africa. BMC Health Services Research, 19(1), 905. https://doi.org/10.1186/s12913-019-4559-2.
20. Baltag, V., Pachyna, A., & Hall, J. (2015). Global overview of school health services: Data from 102 countries. Health Behavior and Policy Review, 2(4), 268–283. https://doi.org/10.14485/hbpr.2.4.4.
21. Pinaka, O., Spanou, I., Papadouli, V., Papanikolaou, E., Gioulekas, F., & Mouchtouri, V. A. (2021). The role of local primary healthcare units in increasing immunization uptake among children in vulnerable social groups through vaccination campaigns. Public Health in Practice (Oxford, England), 2(100185), 100185. https://doi.org/10.1016/j.puhip.2021.100185.
22. Sulley, I., Abizari, A.-R., Ali, Z., Peprah, W., Yakubu, H. G., Forfoe, W. W., & Saaka, M. (2019). Growth monitoring and promotion practices among health workers may be suboptimal despite high knowledge scores. BMC Health Services Research, 19(1), 267. https://doi.org/10.1186/s12913-019-4103-4.
23. Pati, S., Chauhan, A. S., Mahapatra, S., Sinha, R., & Pati, S. (2017). Practicing health promotion in primary care -a reflective enquiry. Journal of Preventive Medicine and Hygiene, 58(4), E288–E293. https://doi.org/10.15167/2421-4248/jpmh2017.58.4.749.