# 40 Years after Alma Ata: How People Trust in Primary Health Care?

## CURRENT STATUS: UNDER REVIEW

Homayoun Sadeghi Bazargani
Tabriz University of Medical Sciences

Mohammad Saadati
Tabriz University of Medical Sciences

✉ hcm.2020@gmail.com*Corresponding Author*
*ORCiD: https://orcid.org/0000-0003-3047-5624*

Jafar Sadegh Tabrizi
Tabriz University of Medical Sciences

Mostafa Farahbakhsh
Tabriz University of Medical Sciences

Mina Golestani
Tabriz University of Medical Sciences

## Abstract

**Background:** Primary Health Care (PHC) was introduced as the first level of health services delivery after Alma Ata declaration. PHC as a first level of health services delivery needs to be more trustfulness to achieve its defined goals. Public trust in PHC is one of the ignored issues in the context. The aim of this study was to explore public trust in PHC in Iran**.**

**Methods:** This was a household survey study conducted in 2016 in East Azerbaijan Province, Iran. Two-stage cluster sampling method with probability proportional to size (PPS) approach was used**.** Totally 1178 households were enrolled in the study. PHC trust questionnaire and Ultra-short version of socio-economic status assessment questionnaire (SES-Iran) was used for data collection. Data were analyzed using STATA 15 through descriptive statistics and linear regression.

**Results:** The mean age of the participants was 41.2, (SD: 15.1) and most of them (53.7%) were female. Mean score of PHC trust was 56.9±24.7 (out of 100). It was significantly different between inhabitants of Tabriz (the province capital city) and other cities in the province (p<0.001). Linear regression showed that younger age, gender, insurance type, being married and households higher socio-economic situation had a significant positive influence on PHC trust level with $R^2 = 0.14383$ .

**Conclusions:** Public trust in PHC system in Iran needs to be improved. Individual variables had a small but significant share in trust level. PHC trust not only influenced by individual variables and experience but also by health system and health providers characteristics and public sphere about PHC system. PHC trust level could be used as a public indicator in health systems especially in Low and Middle income countries to lead system strengthening policies in national and international levels.

## Background

Primary Health Care (PHC) as the first level of health services delivery was extended after Alma Ata Declaration, worldwide [1]. PHC was introduced as an approach to achieve "Health for All" through providing appropriate, accessible, acceptable and affordable services for broad population in a country [2]. Effective and responsive PHC strengthen the integration of health services and improve the health outcomes in the community [3, 4]. One of the most important determinants of health

2

services effectiveness is trust [5]. Interpersonal and public trust in health are crucial issues in relation of health system or providers and patients[6, 7]. Employing patient-centered approach, shared decision making, providing information for patients by health providers would lead to more trust of patients[8].

Trust in health system is as a public support indicator and could be served as the orienting variable in health policy making [9]. A study of trust in health system in 33 countries revealed that low level of public trust stem from the health system incapacity in community health promotion [10]. It was revealed that low level of trust in health providers or organizations lead to underutilization of vaccination and health services [11, 12]. Moreover, it causes delay in care-seeking and lower adherence of health providers' orders [13-15]. However, literature reported that trust is significantly related with patients' outcomes and well-being [16, 17]. In a comparative study, it was revealed that German people had the least level of trust in health system compared with England, Wales and Dutch. Trust in health system mean score was reported as 7 and 5.3 out of 10 in Dutch and Iran, respectively [5, 9]. Trust in health system was reported to be affected by various variables such as age, gender, education, religion, race and socio-economic status [18-21]. Most of the previous studies on trust have focused on whole health system [9], health providers or organization [22, 23] and health insurances [24]. Only some of the studies have a small glance on public trust in PHC. As Tabrizi et al (2016) reported that trust on health system was 10.83 out of 20 for PHC in Iran [5].

Gille et al (2015) stated that regarding the effects of trust/mistrust in health system, it is needed to produce more evidences on it to improving efficiency and effectiveness of health systems [25]. Considering that public trust was used as a public indicator and have an important share in developing health policies, it is necessary to be measured continuously using valid tools [26]. Measuring public trust in PHC provides evidences on the people experience and PHC system accountability and performance. The aim of this study was to measure public trust in PHC system in East-Azerbaijan, Iran.

## Methods

**Study Design**: A household survey was conducted in East-Azerbaijan Province of Iran in 2015. This

study is part of a larger project designed to assess the effectiveness of PHC reform in Iran. Methodological details were published previously as the research and intervention protocols [3].

**Study Setting**: East Azerbaijan Province with a total population around 3900000 people (based on 2016 census) is located in northwest of Iran. Tabriz as the capital city is the most developed, populated (1773033 people) and oldest city in the province.

**Sampling**: Two-stage cluster sampling method with probability proportional to size (PPS) approach was used. One county was selected randomly as the representative of each of five geographical parts (central, northwest, southwest, northeast, southeast) of the province.

Regarding, Tabriz metropolitan as province capital, Oskou in central part, Marand in northwest, Varzeghan in northeast, Bonab in southwest and Mianeh in southeast were selected.

120 clusters comprising 20-household were allocated as Tabriz city sample and the National Demographic Health Survey study (2011) was used as sampling framework. Similarly, 120 clusters were allocated to the other cities based on PPS. In cities other than Tabriz, the national population census was used as sampling framework.

**Questionnaires**: PHC trust questionnaire was used for data collection [26]. The questionnaire validity (Kappa coefficient = 0.94) and reliability (Cronbach-Alpha=0.98, ICC=0.94; CI: 0.87- 0.97) was approved. The questionnaire included 2 sections: first demographic data such as age, gender, education, insurance, marital status and household dimension, and the second comprising 30 items on trust in PHC. Moreover, Ultra-short version of socio-economic status assessment questionnaire (SES-Iran) which was validated in previous studies was used for data collection [27, 28].

**Data collection and analysis**: According to the main study data collection plan [3], households number 6-10 (600 households) in each cluster, were asked to response the PHC trust questionnaire. Each household was approached for data 3 times. Head of the households or housewife were interviewed by a trained questioner. If he/ she was not able to respond, an educated member of the household of at least 15 years old was asked to respond. At least 6 month of residency was used as inclusion criteria for households. Descriptive statistics including frequency, mean and standard deviation and inferential statistics based on data normality were used for data analyzing through

4

STATA 15.

## Results

Totally 1178 households were enrolled in the study. The mean age of the participants was 41.2, (SD:

15.1) and most of them (53.7%) were female. Nearly a quarter of the participants (24.15%) had

elementary education and 84.6% of them were married. Household size mean was 3.5±1.2.

Demographic characteristics of the participants are presented in Table 1.

**Table 1**. Demographic characteristics of the study population

| Variable | | Tabriz Sample % (N) | Other cities Sample % (N) |
|---|---|---|---|
| Gender | Male | 55.25 (352) | 52.26 (335) |
| | Female | 44.75 (285) | 47.74 (306) |
| Education | Illiterate | 17.49 (110) | 21.63 (138) |
| | Elementary | 22.1 (139) | 26.18 (167) |
| | Under-diploma | 23.21 (146) | 22.26 (142) |
| | Diploma | 23.69 (149) | 18.5 (118) |
| | BSc | 12.08 (76) | 10.97 (70) |
| | MSc and upper | 1.46 (9) | 0.47 (3) |
| Insurance | No-insurance | 14.75 (90) | 4.04 (25) |
| | Health (public workers) | 8.69 (53) | 10.02 (62) |
| | Social security | 59.51 (363) | 43.62 (270) |
| | Military | 2.62 (16) | 2.26 (14) |
| | Rural | 0.66 (4) | 34.73 (215) |
| | Self-insured | 0.49 (3) | 0 |
| | Iranian (public) | 12.46 (76) | 5.01 (31) |
| Marital status | Married | 83.49 (521) | 85.85 (546) |
| | Single | 16.51 (103) | 14.15 (90) |

About 16% of the households had a member hospitalized at least once during the year before the

study. Based on the participants responses; 6.65%, 5.79% and 14.07% of the households had at least

a member with diabetes, depression and hypertension, respectively.

Mean score of PHC trust was 56.9±24.7 (out of 100). PHC trust score distribution was skewed based

on Shapiro-Wilk W test (p<0.05) so nonparametric analyses were used. Results revealed that PHC

trust score was different between inhabitants of Tabriz and Other cities in the province (p<0.001).

Moreover, female have significantly more trust on PHC than men (Table 2). Individuals with university

education had lower level of trust compared with those with diploma and under-diploma level

education but the difference was not significant.

**Table 2**. Relation between PHC trust score and participants characteristics

| Variable | | PHC trust score (Mean ± SD ) | P-Value |
|---|---|---|---|
| Gender | Male | 53.86±25.7 | 0.001 |
| | Female | 59.53±23.4 | |
| Participants residential city | Tabriz inhabitants | 49.32± 24.63 | 0.001 |
| | Other cities inhabitants | 64.13± 24.68 | |
| Marital status | Married | 57.81± 24.3 | 0.007 |
| | Single | 52.14± 26.03 | |

It was revealed that people with chronic disease (diabetes, hypertension and depression) had a lower trust on PHC compared with other people (p<0.05). Contrary to this, people who have faced an injury from road accidents or falling, have more trust on PHC than who have not and the difference was not statistically significant. Regarding households socio-economic situation (SES), majority of the households (89.2%) had rate their economic capacity as low (SES score ≤25) and middle (25<SES score ≤ 50). Trust level was significantly different between households with different level of SES (p = 0.02).

Linear regression showed that younger age, gender, insurance type, being married and households socio-economic situation had a significant effects on PHC trust level with $R^2$ = 0.14383 (Table 3).

**Table 3**. Correlation of various factors with PHC trust

| Independent variables | | Coef. | Std. Err. | Sig | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| Age | | -.1374873 | .0554154 | 0.013 | -.2462224 | -.0 |
| Gender | | -8.031263 | 1.432971 | 0.000 | -10.84301 | -5 |
| Married | | -7.120119 | 2.039348 | 0.001 | -11.12169 | -3 |
| Insurance type* | No-Insurance | -21.69379 | 2.965023 | 0.000 | -27.51171 | -1 |
| | Staff insurance | -18.90197 | 2.827646 | 0.000 | -24.45033 | -1 |
| | Social security | -19.63547 | 1.913221 | 0.000 | -23.38956 | -1 |
| | Military | -15.49104 | 4.777801 | 0.001 | -24.86596 | -6 |
| | Public insurance | -20.40934 | 2.815921 | 0.000 | -25.9347 | -1 |
| Diabetes | | -2.257582 | 3.203666 | 0.481 | -8.543762 | 4. |
| Depression | | -4.900601 | 3.229798 | 0.129 | -11.23806 | 1. |
| Hypertension | | -3.24862 | 2.394783 | 0.175 | -7.947623 | 1. |
| SES** | Middle level | 4.144453 | 1.614019 | 0.010 | .9774518 | 7. |
| | High level | 4.897282 | 2.573098 | 0.05 | -.1516085 | 9. |

* Reference group: Rural insurance

** Reference group: Low level

## Discussion

PHC is a health approach to optimize equitably level of health and well-being in the whole of

community. The results of the present study showed that PHC trust was in an average level but it was

not acceptable level. Age, gender, being married, type of health insurance, SES level and living in the

province capital city were the variables which affect the PHC trust level. PHC focuses on population needs and preferences, individually and as community, and systematically address the health social determinants by providing proper services for health promotion [29]. PHC is the widest and first level of health services delivery in Iran with a focus on deprived population [30, 31]. It is revealed in literature that trusted health team provide emotional care and also information for patients and help them in shared decision making about their health (cognitive care) [29, 32, 33]. Low level of public trust in PHC will affect the health services effectiveness and patients comply with healthy behaviors suggested by PHC providers [15, 34]. Kelley and et al (2014) in a systematic review of 13 randomized clinical trials, conclude that trust have a small but significant effect on health outcomes [17]. PHC system needs to be more trustful than other sectors of health system. Because it provides preventive health services with focus on population health needs and interventions which support achieving sustainable development goals and also address the social determinants of health like healthy childhood. Identifying PHC trust determinants and employing proper policies to increase its level should be one of the policy-makers priority.

Female, younger people, married people, having Insurance, individuals from households with higher level of SES and participants from cities other than Tabriz (the province capital city) have higher level of trust with a significant difference (p<0.05) compared with corresponding variables. In contrast with our results, Zhao et al (2017) resulted that younger people in china had lower level of trust in health system [35]. It was reported in previous studies that age had a positive and significant relation with trust level means that people with higher age have higher level of trust in health care or health providers [36, 37]. PHC system in Iran did not provide efficiently health services needed for middle-aged and elderly. However, individuals in these groups beside clinical services, mostly need routine care, education and empowerment. Population aging is a real trend in Iran and also most of the countries and PHC system should consider the changing face of health needs and be more responsibility and accountable. This could help to bring more trust on PHC system.

Results revealed that people with chronic condition have less PHC trust than others. This was consistent with Ronny et al (2016) results which stated that people with fewer chronic condition had

8

higher trust level on physicians [38]. This may be the result of long time involvement of individuals in chronic condition treatment and also experiencing the system deficiencies during this long-term relation with health system. PHC system mostly provides caring services and suggest lifestyle intervention for people with chronic condition which has long-term outcome. This is not a pleasant achievement for patients and they are seeking for short-term positive outcomes about their condition and this affects their trust level in PHC services.

It was revealed that demographic variables had a small but significant relation with PHC trust level ($R^2$ = 0.14383). In a study by Jodyn E. Platt et al (2017), it was resulted that demographics only describe 18% of system trust [39]. Zhao et al (2019) in study of trust in physician trend in china among 2011-2016, revealed that demographic variables have a small share in predicting trust level [36]. Trust is a multifaceted concept which is affected by various social, economic, individual and behavioral variables. Trust in health system, as a complex system, is related with institutional and individual factors and also the context and depiction of health system in the society. Literature reported that interpersonal relation between provider and patients, health provider skill, patients' experiences by health services delivery and outcome, high quality services provided by health facilities and social image of health system made by social media affects public trust on health system [9, 40]. Moreover, it was reported that patient participation in PHC services delivery and shared decision making will lead to improved trust and public sphere of the health system [41, 42]. Policy-makers should adopt PHC system reform considering social context to create positive experiences. Public trust in PHC system is a vital requirement for countries to increase health level and also achieve Universal Health Coverage (UHC) goals. As a first level of health services delivery, it should be trustful to encourage people to employ healthy lifestyle and also adhere health behavior.

## Conclusions

PHC trust needs to be in focus of all policies to reform the system. PHC trust level is a sight of health services quality and patients experience. Public trust in PHC system not only influenced by individual variables and experience but also by health system and health providers characteristics and public sphere about PHC system. It is needed to work empirically more on PHC trust concept to identify

building blocks of trust in and out of health system. PHC trust level could be used as a public indicator in health systems especially in Low and Middle income countries to lead system strengthening policies in national and international levels

## List Of Abbreviations

**PHC:** Primary Health Care

**UHC:** Universal Health Coverage

## Declarations

## References

1.  World Health Organization, editor The Declaration of Alma Ata. Presented at. International Conference on Primary Health Care Alma Ata; 1978.

2.  Walley J, Lawn JE, Tinker A, De Francisco A, Chopra M, Rudan I, et al. Primary health care: making Alma-Ata a reality. The Lancet. 2008;372(9642).

3.    Tabrizi JS, Farahbakhsh M, Sadeghi-Bazargani H, Hassanzadeh R, Zakeri A, Abedi L. Effectiveness of the Health complex Model in Iranian primary health care reform: the study protocol. Patient preference and adherence. 2016;10.

4.    Bhutta ZA, Ali S, Cousens S, Ali TM, Haider BA, Rizvi A, et al. Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? The Lancet. 2008;372(9642).

5.    Tabrizi J, Saadati M, Sadeghi Bazargani H, Abedi L, Alibabayee R. Iranian public trust in health services: evidence from Tabriz, Islamic Republic of Iran. EMHJ-Eastern Mediterranean Health Journal. 2016;22(10).

6.    Ozawa S, Walker DG. Comparison of trust in public vs private health care providers in rural Cambodia. Health policy and planning. 2011;26(suppl_1).

7.    Hall MA, Dugan E, Zheng B, Mishra AK. Trust in physicians and medical institutions: what is it, can it be measured, and does it matter? The milbank quarterly. 2001;79(4).

8.    Sofaer S, Firminger K. Patient perceptions of the quality of health services. Annual review of public health. 2005;26.

9.    Van Der Schee E, Braun B, Calnan M, Schnee M, Groenewegen PP. Public trust in health care: A comparison of Germany, The Netherlands, and England and Wales. Health Policy. 2007;81(1).

10.    Elgar FJ. Income inequality, trust, and population health in 33 countries. American journal of public health. 2010;100(11).

11.    Fikretoglu D, Guay S, Pedlar D, Brunet A. Twelve month use of mental health services in a nationally representative, active military sample. Medical care. 2008.

12.    Gullion JS, Henry L, Gullion G. Deciding to opt out of childhood vaccination mandates. Public Health Nursing. 2008;25(5).

13.  Saha S, Jacobs EA, Moore RD, Beach MC. Trust in physicians and racial disparities in HIV care. AIDS patient care and STDs. 2010;24(7).

14.  Keating F, Robertson D. Fear, black people and mental illness: A vicious circle? Health & social care in the community. 2004;12(5).

15.  Birkhäuer J, Gaab J, Kossowsky J, Hasler S, Krummenacher P, Werner C, et al. Trust in the health care professional and health outcome: A meta-analysis. PloS one. 2017;12(2).

16.  Murray B, McCrone S. An integrative review of promoting trust in the patient–primary care provider relationship. Journal of Advanced Nursing. 2015;71(1).

17.  Kelley JM, Kraft-Todd G, Schapira L, Kossowsky J, Riess H. The influence of the patient-clinician relationship on healthcare outcomes: a systematic review and meta-analysis of randomized controlled trials. PloS one. 2014;9(4).

18.  Benjamins MR. Religious influences on trust in physicians and the health care system. International journal of psychiatry in medicine. 2006;36(1).

19.  Guerrero N, Mendes de Leon CF, Evans DA, Jacobs EA. Determinants of trust in health care in an older population. Journal of the American Geriatrics Society. 2015;63(3).

20.  Gordon HS, Street RL, Jr., Sharf BF, Kelly PA, Souchek J. Racial differences in trust and lung cancer patients' perceptions of physician communication. Journal of clinical oncology : official journal of the American Society of Clinical Oncology. 2006;24(6).

21.  van den Berk-Clark C, McGuire J. Trust in health care providers: factors predicting trust among homeless veterans over time. Journal of health care for the poor and underserved. 2014;25(3).

22.  Thom DH, Hall MA, Pawlson LG. Measuring patients' trust in physicians when assessing quality of care. Health affairs. 2004;23(4).

23.  Van der Schee E, Groenewegen PP. Determinants of public trust in complementary

and alternative medicine. BMC Public Health. 2010;10(1).

24.     Zheng B, Hall MA, Dugan E, Kidd KE, Levine D. Development of a scale to measure patients' trust in health insurers. Health services research. 2002;37(1).

25.     Gille F, Smith S, Mays N. Why public trust in health care systems matters and deserves greater research attention. Journal of health services research & policy. 2015;20(1).

26.     Homayoun SB, farahbakhsh M, Tabrizi JS, Zare Z, Saadati M. Psychometric Properties of Primary Health Care Trust Questionnaire. BMC health services research. 2018;19(1).

27.     Abobakri O, Sadeghi-Bazargani H, Asghari-Jafarabadi M, Aghdam MBA, Imani A, Tabrizi J, et al. Development and psychometric evaluation of a socioeconomic status questionnaire for urban households (SESIran): the preliminary version. Health promotion perspectives. 2015;5(4).

28.     Sadeghi-Bazargani H, Aboubakri O, Asghari-Jafarabadi M, Alizadeh-Aghdam M, Imani A, Tabrizi JS, et al. Psychometric properties of the short and ultra-short versions of socioeconomic status assessment tool for health studies in Iran (SES-Iran). Journal of Clinical Research & Governance. 2016;4(2).

29.     World Health Organization. A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals. World Health Organization; 2018.

30.     Rezapour R, Tabrizi JS, Farahbakhsh M, Saadati M, Abdolahi HM. Developing Iranian primary health care quality framework: a national study. BMC public health. 2019;19(1).

31.     Sokhanvar M, Hasanpoor E, Kakemam E, Arab-zozani M, Haghgoshayei E. A critique of the hospital services provision in Iran after implementing Health Sector Evolution

Plan: A case report. International Journal of Epidemiologic Research. 2017;4(2).

32.    M. B, L. J. Graduate nurses experiences of developing trust in the nurse-patient relationship. Contemporary Nurse 2008;31.

33.    Di Blasi Z, Harkness E, Ernst E, Georgiu A, Kleijnen J. Influence of context effects on health outcomes: A systematic review. Lancet. 2001;357.

34.    Zhao D-H, Rao K-Q, Zhang Z-R. Patient trust in physicians: empirical evidence from Shanghai, China. Chinese medical journal. 2016;129(7).

35.    Zhao D, Hu W. Determinants of public trust in government: Empirical evidence from urban China. International Review of Administrative Sciences. 2017;83(2).

36.    Zhao D, Zhang Z. Changes in public trust in physicians: empirical evidence from China. Frontiers of medicine. 2019;13(4).

37.    Lorber NM, Selič P. Factors associated with patients' trust in their general practitioner at the General practice in Pernica. Zdravniski Vestnik. 2017;86(9-10).

38.    Bell RA, Arcury TA, Ip E, Grzywacz JG, Nguyen H, Kirk JK, et al. Correlates of physician trust among rural older adults with diabetes. American journal of health behavior. 2013;37(5).

39.    Platt JE, Jacobson PD, Kardia SL. Public Trust in Health Information Sharing: A measure of system trust. Health services research. 2018;53(2).

40.    Shaya B, Al Homsi N, Eid K, Haidar Z, Khalil A, Merheb K, et al. Factors associated with the public's trust in physicians in the context of the Lebanese healthcare system: a qualitative study. BMC health services research. 2019;19(1).

41.    Foss C. Elders and patient participation revisited–a discourse analytic approach to older persons' reflections on patient participation. Journal of Clinical Nursing. 2011;20(13-14).

42.    Vahdat S, Hamzehgardeshi L, Hessam S, Hamzehgardeshi Z. Patient Involvement in

Health Care Decision Making: A Review. Iran Red Crescent Med J. 2014 16(1).