

Progress towards Health Equity in I.R. of Iran through Last Three Decades

A Olyae Manesh¹, *AA Haghdoost², M Beheshtian¹, A Tehrani Banihashemi³, M Motlagh¹

¹Deputy for Health, Ministry of Health and Medical Education, Tehran, Iran

²Physiology Research Center, Kerman University of Medical Sciences, Kerman, Iran

³Deputy for Food and Drug, Ministry of Health and Medical Education, Tehran, Iran

Abstract

Background: After the Islamic Revolution, the Iranian government aimed to improve the health status and reduce the inequality simultaneously. This study was conducted to explore the impact of the implemented programs.

Methods: we extensively reviewed published papers in Persian and English journals and explored grey literature, mainly the formal reports of relevant organizations to find appropriate and valid statistics, which show the health status of Iranian population classified by sex, living in rural and urban areas and different provinces.

Results: We found that safe delivery index had been improved in the past 3 decades (delivery with unskilled birth attendance was decreased from 30.1 % to 10.4 %) and its standard deviation decreased from 15.3 to 10.9. Prenatal care visits in rural and urban inhabitants are comparable and their difference is around 5% now. The standard deviation of Infant Mortality Rate between provinces has decreased from 6.2 to 4.9 in recent decades as well. The adult literacy rate as one of the main social determinants of health has been raised from 54% to more than 80%, such a progress was observed in rural and urban areas, in nearly all provinces and in males, females, and more importantly the gaps have decreased. The positive trend of Human Development Index was also significant in recent years.

Conclusion: Constant improvement of main health indicators and fewer gaps between subgroups are promising. In addition, improvement in the literacy rate may imply sustainable improvement in following decade since it is one of the main health determinants. Nonetheless, more attention to remote areas is a sensible recommendation.

Keywords: *Social, Health, Equity, Equality, Health Improvement, Education, Human Development Index, Iran*

Introduction

Providing health for all is one of the main responsibilities of all governments; compatible with international consensus. The evidence from other countries shows that the role of governments is very important and they should help to promote health in all sections of the population. Well-designed governmental interventions are needed to decrease health inequities (1), while reduction in the engagement of the governments may have catastrophic impacts (1).

In the Islamic Republic of Iran, the government is forced to provide basic health care to all people based on the constitutional law, and the long term national strategic plan; "the vision for 2020". In four articles (number 3, 19, 29 and 100) of the Iranian constitutional law, the government of the Islamic Republic of Iran has the duty to provide health care, education, and wel-

fare to all without any discrimination(2). Article 4 in "the vision for 2020" stipulates clearly the matters of equity and equality in which health has been referred as a special item. This document deals with all components of Social Determinants of Health (SDH) apparently. At first, it brings up the community participation consequently as a national document which obtaining its goals is every one's responsibility and public participation is considered as a prerequisite of its principle implementation (3). Based on the above explanation, two main tasks were loaded to the government, improving the health indicators in general, and minimizing the level of inequality among different subgroups. The health indicators in the Islamic Republic of Iran have been improved in last three decades considerably (4, 5, 6). However, health outcomes in Iran are mainly expressed as a rate

which represents an average among the population, not taking into account the variance in outcome across different subgroups of population such as income quintiles. There is very limited published evidence, such as the study on "socioeconomic inequality in infant mortality in Iran" showing the level of inequality among the Iranian population. The above-mentioned study indicates that IMR in Iran is determined not only by health system functions but also by factors beyond the scope of health authorities and care delivery system and thus, there is a need to reduce inequalities in wealth and education (7). Generally, people's health is affected by many socio-economic factors, which cause health inequity. Indeed, social factors such as poverty, food insecurity, social exclusion and discrimination, poor housing, unhealthy early childhood conditions and low occupational status are important determinants of most of disease, death and health inequalities between and within countries (8). For instance, in Finland, 42% of people suffering from chronic diseases are placed in the lower level of incomes, while 18% of groups with high incomes are involved with such diseases (9). However, a few main variables generate the maximum inequality in health in a population. Based on the above explanation, we are discussing the achievement of Iran in this issue in the last three decades in this paper. To address this very important subject, we present the trend of some of the main health indicators and their distributions in subgroups.

Material and Methods

Having done a comprehensive systematic review of the literature, we explored the Persian and English published papers using standard key words. In this systematic review, we searched for those papers that have explored the trend of health indicators and its main determinates such as sex, living in rural and urban areas and in various provinces, literacy level and socio-economic status. We reviewed the main

databases including Scientific Information Database (SID), Statistical Center of Iran, Iranmedex; and Pubmed between 1970 and 2007.

In the same time, we reviewed the formal reports of the Iranian Ministry of Health and Medical Education, the Central Bank of Iran, and the WHO, UNICEF and other UN organizations. We looked for relevant statistics in other grey literatures as well.

In the next stage, we critically reviewed the findings and used only those ones that employed standard definitions and acceptable methodology in their computations.

Since, this paper was designed to explore the trend of health indicators in last three decades and also its variations between main subgroups, we only chose those indicators that their information was available in different points of time in different groups.

Results

It has been shown that estimated annual decline of under 5 mortality rate from 1990 to 2005 in Iran as a country with medium Human Development Index (HDI) was 2.5 per 1000 live birth which was much greater than the corresponding number in countries with medium HDI (1.85) and very close to countries with high HDI (2.67) (14). The rate of life expectancy at birth has been increased 17.4% between the years of 1986 until 2006 (5).

In addition, Iran has successfully reduced its infant mortality rate from 52 per 1,000 live births in 1990 to 28 per 1,000 live births in 2000 and the proportion of one-year-old children immunized against measles has increased to 96 percent in 2001 from 85% in 1990 (6).

The national statistics show that safe delivery index has improved considerably in the past 3 decades. Particularly between 1984 and 2000, this improvement was much more significant. Proportion of appropriate place of delivery has been increased from 62.8% to 87.6%. In the same time, delivery with unskilled attendance was decreased from 30.1 % to 10.4 % (11, 12).

Data of Vital Horoscope (Zij) in the rural regions showed that variation of delivery with unskilled attendance between different prov-

inces was decreased; in late 1990 its standard deviation was around 15.3, while it was around 10.9 in recent years (Fig. 1) (13, 14).

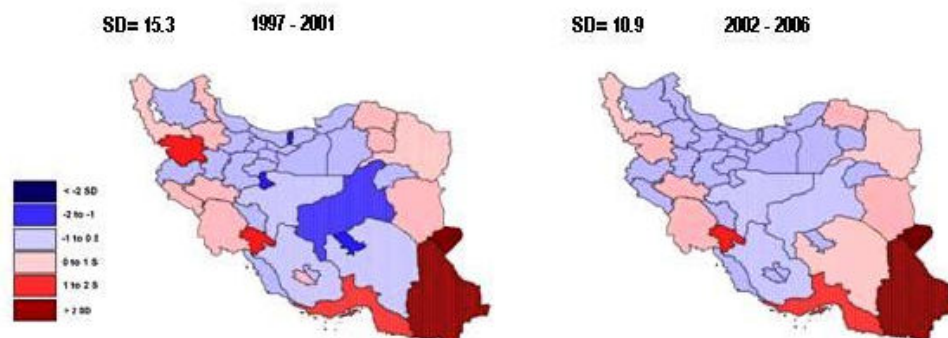


Fig. 1: Spatial distribution of delivery with unskilled attendance in rural regions of Iran (14)

As a result of this improvement, the maternal mortality ratio has decreased from 245 (per 100,000 live birth) in 1974, to 140 in 1984, 37 in 1994; and 24.6 in 2005 (11,15-17).

In the same time, Infant mortality rate (IMR) was decreased around 43% in the last two decades (37.1 to 21 per 1000 live birth), and its standard deviation between provinces was decreased 21% (6.2 to 4.9). Nowadays, the variation between provinces is low down, except in the Sistan-Baluchestan province in south-east of Iran which its health indicators has a big difference mostly because of its chronological outlying in infrastructures (14, 13).

Data from the Iran's Demographic and Health Survey (DHS in 2000), showed that 92.9 % of urban mothers and 87.9 % of rural mothers had at least 2 prenatal care visits during the pregnancy; there was around a 5% difference between rural and urban inhabitants in receiving this crucial health service which is an acceptable achievement (12).

The improvements in health outcomes can be attributed mainly to the improvements of the social determinants of health. One of the main determinants is education.

The adult literacy rate in Iran has been improved dramatically as well. In 1990, it was around 54% while it is more than 80% now (4). This improvement was much greater than that in other middle-east countries.

In the same time, the variations of adult literacy rate between different provinces and between male and females and in rural and urban areas have decreased. The standard variation between provinces is 3.2, minimum and maximum rates are in Sistan-Balouchestan (68%) and Tehran (91.3%) provinces. In 1986, the literacy rate in adult men and women were 71.4% and 51.9% respectively; while in recent years (2006) this difference is 8.4%. In addition, the literacy rate in adult inhabitant in urban areas is 88.9%, this number in adult rural inhabitants is 75.1%, while their difference 2 decades ago was about 25% (18, 19).

Table 1: Literacy rate in different groups of population in Iran

	1986	2006
Sex		
Male	71.4	88.7
Female	51.9	80.3
Living area		
Rural	48.2	75.09
Urban	73.1	88.93
Province		
Province with the highest literacy rate (Tehran)	78.2	91.3
Province with the lowest literacy rate (Sistan-Baouchestan)	36	68
Standard deviation between provinces	9.7	3.2

The Human Development Index (HDI), which represents the life expectancy, literacy, educational attainments and GDP per capita, has increased from 0.578 in 1981 to 0.615 in 1986,

0.670 in 1991, 0.711 in 1996, 0.729 in 2001 and 0.788 in 2006. The progressing trend of HDI is seen in all provinces and their gaps has reduced (Table 2) (17, 20).

Table 2: Human Development Index (HDI) trend in Iran between 1996 and 2006

	1996	2001	2006
Percent of provinces with HDI > 0.7	34	50	89
Province with the highest HDI (Tehran)	0.780	0.778	0.796
Province with the lowest HDI (Sistan-Balouchestan)	0.567	0.582	0.652
Standard deviation of HDI between provinces	0.040	0.042	0.028

Discussion

This paper presented the temporal variation of a few main indicators. It showed that some of the health indicators and some of its determinants such as the literacy rate and HDI have had a significant improvement in recent decades and its differences between provinces, between inhabitants in rural and urban areas and between males and females have decreased considerably. Unfortunately, although we search the literature extensively, we could not find the statistics of main health indicators particularly in different socio-economic groups in last three decades. For instance, there is very little valid data on the impact of poverty in health; nearly all the limited available data belongs to cross-sectional studies (21-23) which restricted our assessment in this paper. Hence, we strongly believe that the health system and other national organizations have to develop a standard methodology to monitor the impact of main determinants such as socio-economic status of people on their health. Therefore, we suggest that data on health should be collected with other socio-economic data.

Without any doubt, literacy is one of the main determinants of health (10). The available data shows a considerable jump in this indicator in the whole country; even in higher education, the presence of women is more prominent than that in men in recent years (18, 19). As the result of this improvement, we predict a constant

growth in the health indicators in next decade and a decrease in the gap between provinces and subgroups of population.

Although, generally the gap between different provinces was reduced in recent years, the gap of a few provinces with others remains. The Sistan-Baluchestan province in particular has a considerable gap with other provinces and a special attention is needed in this regard. This province is located in an isolated area; very big desert has pushed people to live in very scattered locations, recent severe draught and the impact of conflicts in Afghanistan and Pakistan have had very drastic effects on the social and economic status of people in this province. It seems that the trend of indicators has been promising but their growth was not comparable with other provinces; therefore, it needs a special support to speed up the process in this area. From other point of view, we found special attention to the health issues and SDH themes in the national programme. However, it is not clear how much the health system and its related organizations such as NGOs have used this legal prospect to obtain the maximum advantage. Therefore, we propose that the health system carries out a few studies in this regard to explore the barriers and finds how to flourish the capacities of these legal governmental commitments.

At the end, we think that the health issues and equality has had special position in the national plans in the last three decades and as the results

of this attention, the health indicators and health equity improved considerably. However, for a constant and sustainable progress, more specific interventions are needed predominantly in frail subgroups; therefore, we should work to generate more solid evidences compatible with the SDH and health equity concepts.

References

1. World Health Organization: Primary Health Care- Now more than ever - The World Health Report 2008.
2. Constitution of Islamic Republic of Iran, <http://www.majlis.ir>, access: January 2009
3. I.R. of Iran Vision in 2020, <http://www.maslehat.ir/majles/index.php>, access: January 2009
4. Movahedi M, Haghdoost A A, Pournik O, Hajarizadeh B, Fallah MS (2008). Temporal variations of health indicators in Iran comparing with other Eastern Mediterranean Region countries in the last two decades. *Journal of Public Health (oxf)*, 30(4):499-504, pubmed
5. National Portal of Statistics, Statistical Center of Iran, Selected Data, www.sci.ir, access: January 2009
6. MDG in Iran, UNDP, <http://www.undp.org.ir/MDG.aspx>, access: January 2009
7. Hosseinpour AR, Doorslaer EV, Speybroeck N, Naghavi M (2006). Decomposing socioeconomic inequality in infant mortality in Iran. *International Journal of Epidemiology*, 35:1211-19.
8. World Health Organization Executive Board, EB115/35/115th Session 25(2004). revisional agenda item 9.4, World Health Organization, www.who.int/gb/ebwha/df_files/EB115/B115_35-en.pdf, access: January 2009
9. Whitehead M (1985). The concepts and principles of equity and health, World Health Organization- Regional Office for Europe, whqlibdoc.who.int/euro/-1993/EUR_CP_RPD_414.pdf, access: January 2009
10. Commission on Social Determinants of Health FINAL REPORT (2008). Closing the gap in a generation, World Health Organization, www.who.int, access: January 2009
11. Shadpoor K (1993). Primary Health Care Network in Iran, Ministry of Health and Medical Education, Tehran, Iran
12. Report of Iran demographic and health survey (DHS -2000). Ministry of Health and Medical Education, Tehran, Iran
13. Naghavi M, Jafari N, Jamshidbeygi E, Vasegh H, Azad AM, Akbari ME (2005). Transition of Health Status in Rural Residents of Iran. Tehran, Iran
14. Movahedi M, Hajarizadeh B, Rahimi AD, et al. (2008). Trend and geographical inequality pattern of main health indicators in rural population of Iran. *Hakim Research Journal*, 10 (4):1- 10.
15. Malekafzali H (1992). Assessment of mothers and children health in IR Iran. Ministry of Health and Medical Education, Tehran, Iran.
16. Naghavi M (1996). Determination of maternal mortality rate (MMR) by reproductive age mortality survey (RAMOS), Tehran, Iran.
17. President Deputy of strategic planning and control of IR Iran. Barnameh weekly magazine, 2009-01-24, No 275. <http://www.pac.ir/barnameh/275/index.htm>
18. National Portal of Statistics, Statistical center of Iran, Iran Statistical Year Book, Tehran; 2006, <http://www.sci.org.ir>
19. National Portal of Statistics, Statistical center of Iran, Iran Statistical Year Book, Tehran; 1986. <http://www.sci.org.ir>
20. Human Development Report 2007/2008, Fighting climate change: human solidarity in a divided world. UNDP, 2007
21. Arsalanbod A (2004). Change in income distribution in rural and urban areas of Iran- Agricultural economic and development- No.45

22. Bounouri A, Ostavandi A (2005). Estimation and assessment on compatibility of economical inequalities indices with the use of small data in Iran. *Economical Research Journal*. 71:171-210.
23. Hosseinpoor A, Naghavi M, Alavian SM, et al. (2007). Determinants of Seeking Needed Outpatient Care in Iran: Results from a National Health Services Utilization Survey. *Arch Iranian Med* 2007; 10 (4): 439-35.

Archive of SID