

<http://hdl.handle.net/1765/116524>

Assessment of the Effects of International Economic Sanctions on Iranians' Rights to Health and an Adequate Standard of Living

This part of the study was published in the International Journal of Health Policy and Management 2018; 7(5): 374-393.

5.1 ABSTRACT

Over the years, international economic sanctions have contributed to violations of the right to health in target countries. Iran has been under comprehensive unilateral economic sanctions by groups of countries (not the United Nations) in recent years. They have been intensified from 2012 because of the international community's uncertainty about the peaceful purpose of Iran's nuclear program and inadequacy of trust-building actions of this country. This review aimed to identify the humanitarian effects of the sanctions on the right of Iranians to health and the human rights obligations of Iran and the international community.

To assess the effects of international economic sanction policies and to identify violated rights as well as the obligations of states according to international human rights laws in this study, the Human Rights Impact Assessments (HRIA) tool is used. Applying this tool requires collection of evidence regarding the situation of rights. To provide such evidence, a systematic review of literature which involved 55 papers retrieved from the electronic databases and official webpages of Iran's government and the United Nations' health and human rights committees and organizations was done. All articles about the consequences of economic sanctions related to the nuclear activities of Iran for the welfare and health of Iranians published from January 2012 to February 2017 in the English and Persian languages were included. Search terms were: economic sanctions, embargoes, Iran, welfare, health and medicine. Additional studies were identified by cross checking the reference lists of accessed articles. All selected papers were summarised and entered into a matrix describing study design and findings, and categorized into a framework of themes reflecting the areas covered (health and its underlying determinants). According to the HRIA framework, related obligations of Iran and other states about adverse effects of the sanctions on Iranians' right to health were extracted.

The sanctions on Iran caused a fall of the country's revenues, and the devaluation of national currency, and increased inflation and unemployment. These all resulted in the deterioration of people's overall welfare and reduced their ability to access the necessities of life such as nutritious food, healthcare and medicine. Also, the sanctions on banking, financial system and shipment led to a scarcity of quality life-saving medicines. The impact of sanctions was more severe on the lives of the poor, patients, women and children. Humanitarian exemptions did not protect Iranians from the adverse effects of sanctions.

Economic sanctions against Iran have violated Iranians' right to health. The international community should have predicted every probable humanitarian effect of sanctions and used every necessary means to prevent it. Furthermore, Iran should have used every essential means to protect people from the adverse effects of sanctions. Now, they should work on alleviation of the negative effects of sanctions. Even though some effects such as disability and death, due to inaccessibility of life-saving medicines cannot be compensated. In future, before imposition of sanctions, decisions makers should advance global plans to prevent such impacts on the populations of targeted countries.

Keywords: Economic sanctions; Embargoes; Right to health; Right to medicine; Human rights; Iran

5.2 INTRODUCTION

Since the First World War, sanctions have often been applied by international organizations and nations as a routine policy tool to react to any nation's actions that they oppose.¹ Economic sanctions seem at first to be more humane ways of resolving international disputes than wars. However, multiple studies on Iraq, former Yugoslavia, Nicaragua, Burundi, Cuba, and Haiti showed that due to their long term impacts on the lives and health of a large population, the adverse humanitarian effects of economic sanctions are comparable to, if not more severe than wars.² Through worsening the economic situation and functions of social systems of a target country, they decrease the access of people to the necessities of life such as nutritious food and medical care.³ From a practical point of view, there is no difference between dying due to being shot or being deprived of life-saving medicines. Iran has been targeted by economic sanctions for more than three decades. In this study, the effects of the sanctions on Iranians' right to health, as well as international human rights obligations of Iran and of the international community regarding this issue are analysed.

5.3 RIGHT TO HEALTH

According to the United Nations Declaration of Human Rights (1948), everyone has a right to an adequate standard of living adequate for his health and well-being including food, medical care and social security without any kind of discrimination on grounds of sex, race and the political, jurisdictional or international status of the place to which a person belongs.⁴ The right to health has been reflected in several international human rights treaties such as the International Covenant on Economic, Social and Cultural Rights (ICESCR) Article 12. This right is a right to "the highest attainable standard of physical and mental health" based on ICESCR.⁵ Achievement

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- 1 Avis, L. Engerman, S. 'History lessons: sanctions-neither war nor peace' [2003] *Journal of Economic Perspectives* 17(2) 187-197.
 - 2 Allen, SH. Lektzian, DJ. 'Economic sanctions: A blunt instrument?' [2013] *Journal of Peace Research* 50 (1) 121-135; Garfield, R. Santana, S. 'The impact of the economic crisis and the US embargo on health in Cuba' [1997] *American Journal of Public Health* 87 (1) 15-20; Gibbons, E. Garfield, R. 'The impact of economic sanctions on health and human rights in Haiti 1991-1994' [1999] *American Journal of Public Health* 89 (10) 1499-1504; Peksen, D. 'Economic sanctions and human security: the public health effect of economic sanctions' [2011] *Foreign Policy Analysis* 7 (3) 237-251; Barry, M. 'Effect of the US embargo and economic decline on health in Cuba' [2000] *Annals of Internal Medicine* 132 (2) 151-154; Garfield, R, Devin J, Fausey J. 'The health impact of economic sanctions' [1995] *Bulletin of the New York academy of medicine* 72 (2) 454.
 - 3 Garfield, R. Santana, S. *supra* note 2; Gibbons, E. Garfield, R. *supra* note 2 ; Peksen, D. *supra* note 2; Garfield, R. Devin, J. Fausey, J. *supra* note 2
 - 4 Universal Declaration of Human Rights 1948 art 25
 - 5 International Covenant on Economic, Social and Cultural Rights 1966 art 12

of this level of health is one of the most important universal social goals. In the Constitution of WHO, the health of all human beings is defined as a necessary condition to the attainment of universal peace.⁶

According to ICESCR, the right to health includes a right to access timely and appropriate healthcare and the underlying determinants of health, such as safe water, nutritious food, housing, and a healthy environment. All the facilities, services and products related to health and its underlying determinants should be of good quality, acceptable, available and physically and financially accessible to all, without any kind of discrimination. States need to provide health insurance and financial aid for the poor to enjoy this right.⁷ The Committee on Economic, Social and Cultural Rights (CESCR) acknowledges resources limitations of states in realizing economic, social and cultural rights (ESCRs) in a limited time. Therefore, it requires states to fulfil minimum core obligations immediately after ratifying the covenant and to progressively realize these rights by taking steps and using the maximum available resources.⁸ The core obligations of the right to health include ensuring access to health facilities, services and products and minimum essential food, basic shelter, sanitation and safe water.⁹ While recognizing the possibility for states (which lack resources for providing the minimum of rights) to seek international assistance, the Committee requires all the states parties to realize the right to health and contribute to the improvement of international health.¹⁰

5.4 ECONOMIC SANCTIONS AND HUMAN RIGHTS

Sanctions are “measures taken by a state to coerce another to conform to an international agreement or norms of conduct, typically in the form of restrictions on trade”.¹¹ These measures are called countermeasures if they are resorted to against an international wrongdoer and are not decided upon the UN Security Council.¹² They may be comprehensive and prohibit commercial activities entirely with a country, or targeted (or smart) when they block transactions of and with certain businesses,

6 Constitution of the World Health Organisation 1948, Preamble

7 UN Committee on Economic Social and Cultural Rights. *General Comment no. 14 ICESCR: The Right to the Highest Attainable Standard of Health* (2000) para 12

8 International Covenant on Economic, Social and Cultural Rights, *supra* note 5 art 2

9 UN Committee on Economic Social and Cultural Rights. *General Comment no. 3 ICESCR: The Nature of States Parties' Obligations* (1990) para 10

10 International Covenant on Economic, Social and Cultural Rights, *supra* note 5 art 2

11 Simpson, JW. E. Oxford Dictionary online (2016) “sanction” <<http://www.oxforddictionaries.com/definition/english/sanction>> accessed 15 February 2016

12 Ronzitti, N. *Coercive Diplomacy, Sanctions and International Law* (Martinus Nijhoff Publishers, Leiden, Boston 2016) 1

groups, or individuals of a target country.¹³ According to Articles 39-43 of the Charter of the United Nations (1945), if the Security Council determines any threat to the peace, breach of the peace, or act of aggression, it can decide what measures shall be taken to maintain or restore international peace and security. These measures may include the use of armed forces, complete or partial interruption of economic relations and of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations. All members of the United Nations are required to collaborate on these issues with the Council.¹⁴

In 2003, because the International Atomic Energy Agency (IAEA) was uncertain about the scope and nature of Iran's nuclear activities, it asked Iran to be transparent, build confidence and suspend all enrichment related and reprocessing activities including research and development. In 2006, the IAEA declared that it was "unable to make progress in its efforts to provide assurances about the absence of undeclared nuclear material and activities in Iran".¹⁵ Therefore, the case of Iran was brought to the UN Security Council. At first, Iran was required to be transparent and suspend its nuclear activities. However, Iran's trust building attempts were not adequate according to the UN Security Council. In 2007, Iran was confronted with the Council's sanction resolution related to its nuclear activities.¹⁶ All the sanctions defined by the Security Council against Iran were concerned with limiting its nuclear and military industry. No economic sanctions against this country were initiated by the Council.¹⁷ However, some countries decided to use "coercive diplomacy" and unilaterally boycotted Iran with economic sanctions in 2012. Concerning the measures to be taken by the members of UN in order to maintain international peace and security, the Charter of the UN clearly states that "the measures shall be concluded between the Security Council and Members or between the Security Council and groups of Members and shall be subject to ratification by the signatory states in accordance with their respective constitutional processes."¹⁸ General comment no. 8 of ICESCR about the relationship between economic sanctions and respect for economic, social and cultural rights indicates that:

Whatever the circumstances, such sanctions should always take full account of the provisions of the International Covenant on Economic, Social and Cultural Rights. The Committee does not in any way call into question the necessity for

13 Masters, M. 'What are economic sanctions?' (Council on Foreign Relations 2016) <<http://www.cfr.org/sanctions/economic-sanctions/p36259>> Accessed 25 March 2016

14 Charter of the United Nations 1945, art 39-43

15 Board of Governors of International Atomic Energy Agency. *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran* (GOV/2006/27, 2006) para33

16 United Nations Security Council. *Sanction Resolution no. 1747* (2007).

17 United Nations Security Council. *Sanction Resolution no. 1929* (2010)

18 Charter of the United Nations 1945, supra note 14, art 43

the imposition of sanctions in appropriate cases in accordance with Chapter VII of the Charter of the United Nations or other applicable international law. But those provisions of the Charter that relate to human rights (Articles 1, 55 and 56) must still be considered to be fully applicable in such cases.¹⁹

Sanctions are called “brutal instruments” by the United Nations Food Program; the WHO has asked the international community to ban them altogether.²⁰ The Committee on the Rights of the Child also declared that economic sanctions can act as obstacles to the implementation of the Convention on the Rights of the Child (CRC).²¹ Through humanitarian exemptions for food and medicine, the sanctions are not usually designed to violate people’s right to health in target countries. But, still civilians of target countries suffer hardship, since it is not possible to separate the effects of economic sanctions on health and the general economy. The United Nations Human Rights Council declared in 2013 that there is reliable evidence about the serious consequences of sanctions on the rights of people, particularly vulnerable groups such as women, children, the elderly, the poor, minorities, indigenous people and persons living with disabilities.²²

Economic sanctions on countries such as Iraq, the former Yugoslavia, Nicaragua, Burundi, Cuba, and Haiti were associated with the deterioration of the health and welfare of the population.²³ In the sanctions period, a decline of revenues, the increase of poverty, unemployment, and inflation, as well as the deterioration of health services’ functions, school attendance and society’s development were reported. Also, the sanctions made essential goods more costly and difficult to produce and maintain.²⁴ In these situations, people’s ability to afford health services and maintain a healthy lifestyle has been reduced.²⁵ The rise of maternal, infant and child mortality rates has been considerable during the sanctions period in some countries. In addition, poor nutrition and the lack of access to health services and medical supplies brought severe public health problems such as epidemics particularly among the poor groups of society.²⁶ Furthermore, shortage of medicines and medical equipment damaged the practices of health systems. For instance, in Syria, sanctions limited

19 UN Committee on Economic Social and Cultural Rights. *General comment no. 8 ICESCR: The relationship between economic sanctions and respect for ESCRs*(2000) para 1

20 Maggie, O. ‘The Wake of War’. *Guardian*(Londen 1996) 2

21 United Nations. *Yearbook of the United Nations* (UN 1998) 1069

22 UN Human Rights Council. *Resolution no. 24/14 Human rights and unilateral coercive measures*(2013)para4

23 Garfield, R. Santana, S. supra note 2; Gibbons, E. Garfield, R. supra note 2; Garfield, R. Devin, J. Fausey, J. supra note 2

24 Garfield, R. Santana, S. supra note 2

25 Peksen, D. supra note 2

26 Garfield, R. ‘The impact of economic embargoes on the health of women and children’ [1997] *Journal of the American Medical Women’s Association* 52 (4)181-184

the import of essential medicines which were not produced locally.²⁷ Cuba also lost access to raw materials needed for manufacturing pharmaceuticals and lacked the currency to purchase medicines and medical equipment from the international market in the sanctions period.²⁸ Moreover, sanctions on the import of non-medical products and spare parts, and trade restriction on water and electrical supply systems reduced the effectiveness of health systems in Cuba, Iraq and Haiti, or trade embargoes on the agricultural sector such as limitation on the import of fertilizers and seeds caused food shortage.²⁹ In another case, the reduction of target countries' revenues has decreased the government's ability to finance the healthcare system. About Iran, sanctions on opening letters of credit for Iranian banks and the shipment of imported goods caused shortage of medicines. Therefore, it is clear that in order to ensure access of people to food and healthcare, the humanitarian exemptions and supplementary aid are not adequate.

5.5 SANCTIONS AGAINST IRAN

Poverty alleviation and social and health equity are prioritized in the Constitution and development plans of Iran. After the Revolution of 1979, a welfare state system which focuses on health, education and social aid has been established in Iran. As a result of a vast system of subsidies, material poverty has fallen significantly in this country. By improving urban infrastructure, providing electricity, safe water and sanitation facilities and universal free education, Iran has improved the living situation of Iranians to a great extent. In 2011, more than 95% of Iranians had access to improved drinking water sources and sanitation facilities. Total adult literacy rate was 85% in this year.³⁰ Also, for many years, Iran's government provided subsidized essential food stuffs such as flour, rice, cooking oil, sugar and milk to the entire population. In 2010, this country changed this policy to cash payment to everyone. Moreover, through establishing a successful primary healthcare network around the country, health outcomes have improved notably over recent decades. Life expectancy of Iranians increased from 63 to 73.3 during 1990-2012 and the rates of maternal, infant and child mortality fell considerably. Maternal mortality per 100,000 live births decreased from 91 to 24.6 and infant mortality per 1000 live births decreased

27 Sen, K. Al-Faisal, W. AlSaleh, Y. 'Syria: effects of conflict and sanctions on public health' [2012] *Journal of Public Health* 35 (2)195-199.

28 Barry, M. *supra* note 2

29 Peksen, D. *supra* note 2

30 United Nations Children's Fund (UNICEF). 'Statistics of Iran' (UNICEF 2017) <https://www.unicef.org/infoby-country/iran_statistics.html> accessed 12 May 2017

from 44 to 15 in this period. Communicable diseases have been controlled. They are no longer the major causes of mortality. Together, they cause less than 5% of annual deaths.³¹ The United Nations Children Fund (UNICEF) declared in 2011 that through a strong health and education network and infrastructure, Iran is on track to achieve most of the Millennium Development Goals including diminishing poverty and hunger, providing primary education, decreasing child mortality and improving maternal health.³² However, regarding the reduction of poverty, the country is facing major challenges such as an increase of people in need of support because of conditions including inflation and unemployment.³³

In recent decades, the people of Iran, having an oil-dependent economy and inefficient industry continuously faced numerous challenges including the effects of the Revolution of 1979, an eight-year-war with Iraq and several kinds of international sanctions affecting every sector from agriculture to the airline industry. After the Revolution, the sanctions were mainly imposed by the United States of America (USA) and their effects were limited, since Iran could find ways to compensate for the loss partly through other countries or by some mediators with higher expenses. Sanctions imposed by the United Nations Security Council that aimed to force Iran to stop its nuclear activities targeted the military and the nuclear industry of Iran. However, without a mandate of the UN, the USA, the European Union and some other countries imposed comprehensive multilateral restrictions on any co-operation with Iran in foreign trade. Embargos of the USA include secondary sanctions on countries and companies doing business with Iran.³⁴

When international sanctions (imposed without a mandate of the UN) were intensified in 2012 to target all sectors of Iran's economy, the country's ability to sell oil became limited. As an oil-dependent country, Iran's revenues and financial ability to purchase needed supplies from the world market decreased considerably. It became worse after freezing the properties of Iran's Central Bank and other financial institutions in other countries. A sharp decline in oil revenues and industrial production, severe restrictions on the import of items, shipment and payment channels, and a strong devaluation of the national currency caused a high rate of inflation in

31 Ibid; World Health Organization, Regional Office for the Eastern Mediterranean, *Country Co-operation Strategy for WHO and Islamic Republic of Iran: 2010–2014* (WHO, Genova 2010) 30

32 United Nations Children's Fund. *Revised country programme document, Islamic Republic of Iran (2012-2016)* (UNICEF 2011) 2

33 World Health Organization, Regional Office for the Eastern Mediterranean, *supra* note 31, at 17-18

34 US Department of State. 'Iran Sanctions' (US Department of State 2016) <<http://www.state.gov/e/eb/tfs/spi/iran/index.htm>> accessed 12 May 2016; European Union. 'European Union Restrictive measures (sanctions) in force' (EU 2016) <https://europa.eu/european-union/index_en> Accessed 12 February 2016.

every sector of Iran's economy.³⁵ Also, Iran had to accept payment in gold, local currencies and bartered goods from a few Asian countries that still bought Iran's oil. Therefore, Iran's access to the dollar and the euro which are needed for imports from most countries became limited. Furthermore, sanctions cut off Iranian banks from the global financial system; international banks which dealt with Iran faced severe restrictions by the international community.³⁶ It made transferring of oil revenues back to the country very difficult. As a result, Iran had to process the transactions by intermediary banks that was extremely difficult and expensive.³⁷ These all diminished Iran's industry and economy and deteriorated Iranians' welfare considerably. GDP per Capita decreased by 35% during 2012 -2014 (chart no. 1).³⁸ The Consumer price index increased from 100 to 178 (chart no. 2) and the inflation rate increased from 20 to 38% during 2011-2013 (chart no. 3). GDP per Capita Purchasing Power Parity (PPP) decreased by more than 10% from 2011 until 2013 (Chart no. 4).³⁹ Minimum wage decreased from 275.4 US dollars in 2010 to 155 in 2012 (Table no. 1).⁴⁰ While the unemployment rate was 11.3 in 2016; this indicator was 10.5 in 2008.⁴¹

In this article, after introducing the methods of the study for assessing the humanitarian effects of sanctions and identifying materials that form the basis of the analysis, the adverse effects of economic sanctions on Iran's economy, the living conditions of Iranians and the situation of the rights to health and medicine are reviewed. Next, the practice and legal obligations of Iran's government and the international community in the process of sanctions' management are analysed. Finally, some recommendations for improving the enjoyment of Iranians of their rights to a standard of life and health are provided. Moreover, a couple of recommendations for future sanction regimes, in order to better respond to the humanitarian effects of the sanctions are given.

35 International Campaign for human rights in Iran. *A Growing Crisis; The Impact of Sanctions and Regime Policies on Iranians' Economic and Social Rights* (International Campaign for human rights in Iran 2013) 9-15

36 Namazi, S. *Sanctions and medical supply shortages in Iran; Viewpoints* (Wilson center, Washington 2013)20.

37 International Campaign for human rights in Iran. *Supra* note 35, at 9-15

38 World Bank. 'Statistics of Iran' (World Bank 2017) <<http://data.worldbank.org/country/iran-islamic-rep?view=chart>> accessed 15 May 2017

39 Trending Economics. 'Iran GDP per capita PPP' (Trending Economics 2017) <<https://tradingeconomics.com/iran/gdp-per-capita-ppp>> accessed 12 February 2017

40 Ramezani, A. 'Raise in minimum wage not enough for Iranian workers' (ALmonitor 2014) <<http://www.al-monitor.com/pulse/originals/2014/03/iran-wages-inflation-economy-law-protest.html>> accessed 12 May 2017

41 World Bank. 'World Development Indicators' (World Bank 2017) <<http://databank.worldbank.org/data/reports.aspx?source=2&series=SL.UEM.TOTL.ZS&country=>>> accessed 12 May 2017

5.6 METHODS

In this study, to assess the adverse effects of economic sanctions on people's right to health and to identify the national and international obligations related to this violation, the Human Rights Impact Assessments (HRIA) tool is used. To tackle the adverse impacts of trade agreements on the right to health, policy makers have employed various impact assessment tools such as the Sustainability Impact Assessment of EU Trade Agreements. However, traditionally these tools focus on economic and environmental and not social effects. HRIA is preferred because it uses a legally binding framework of international human rights law which is based on a strong normative consensus and universally agreed principles. Also, it evaluates a full range of international human rights, while it focuses on empowerment and improvement. The HRIA first emerged in the late 1990s for anticipating and measuring impact of policies and programs on different human rights. HRIA is helpful in identifying various types of duty- and right-bearers and their responsibilities. HRIA has been applied in a broad range of different fields such as development (by the Norwegian Agency for Development Co-operation and the US Food and Drug Organization (FAO)), health (by the UN Special Rapporteur of the Right to Health), trade (by the UN Bodies and national parliaments) and multi-national co-operation (by the UN Global Compact and the UN Human Rights Council).⁴²

HRIA is based on a legal framework of human rights and promotes accountability which is one of the key contributions of a human rights perspective.⁴³ The purpose of this tool is to identify any inconsistency between international human rights obligations and other national and international obligations. HRIA identifies human rights violations that can be taken to the judicial bodies, and ignoring them might cause significant legal consequences for violating states and institutions. In this assessment, human rights obligations are extracted from the main human rights laws such as the Universal Declaration of Human Rights (1948), the International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966, General Comment no. 14 of ICESCR on the right to health and General Comment no. 8 ICESCR on the relationship between sanctions and the right to health. HRIA includes 8 steps for policy makers and 6 steps (as below) for scholars:

42 Baxewanos, F. Raza, W. *Human rights impact assessments as a new tool for development policy?* (Working Paper, Austrian Foundation for Development Research (ÖFSE) 2013) 7-8

43 Monash University Castan Centre for Human Rights Law. Prince of Wales International Business Leaders Forum. United Nations Office of the High Commissioner for Human Rights. *Human Rights Translated: A Business Reference Guide* (United Nations Publications 2008) Introduction

- 1) Screening: it requires selecting key human rights issues that are most likely to be affected. In this study, the screening is done through analysing the literature on the effects of economic sanctions on Iran and other countries.
- 2) Scoping: in this step, identifying the information needed, and formulating concrete questions are necessary.
- 3) Evidence Gathering: a quantitative as well as qualitative research techniques can be applied in this step. In this study, the content analysis of relevant papers has been done.
- 4) Consultation: it requires interviewing affected populations and other potential right-holders or using secondary material, such as reports, papers and experiences which provide primary data. In this study, a literature review about the effects of the sanctions policy on Iranians' lives is applied.
- 5) Analysis: in this step, by analysing the results of the literature review, the impact of the policy on specific human rights is concluded. In the case that sanctions negatively affected availability, accessibility, acceptability and quality of health (and of its underlying determinants) facilities, services, and products, it can be concluded that a violation of the right to health has occurred.
- 6) Conclusions and Recommendations: in this step, it is important to identify specific duty-bearers and assign them concrete responsibilities. (Figure no.1)⁴⁴

a) Search Strategy

The question of the study is: what are the implications of the economic sanction policies of 2012 (against Iran) on Iranians' right to health? A qualitative case study design involving a structured document review of relevant articles and policy documents was undertaken. Two sets of literature were studied; the first set was about the situation of Iranians' enjoyment of their right to health; while the second set was about the legal human rights obligations of Iran and the countries involved in the implementation of sanctions regarding Iranians' rights to health and a standard of living.

b) Selection Criteria

In order to determine keywords for search in databases, several articles about the subject were analysed. Collected documents included original articles, reviews, editorials, letters to the editors, interviews and short reports and communications. The papers that described the effects of economic sanctions on Iranians' right to health published from January 2012 until February 2017 were included. They were

⁴⁴ Baxewanos, F. Raza, W. supra note 42

written in the English and Persian languages. Articles related to the effects of sanctions on other countries, sanctions which were not about Iran's nuclear program and non-economic sanctions were excluded. The papers related to the justification of sanctions against Iran were included in the study if they discussed the health effects of sanctions. Moreover, papers about sanctions related to Iran's human right violations were not considered.

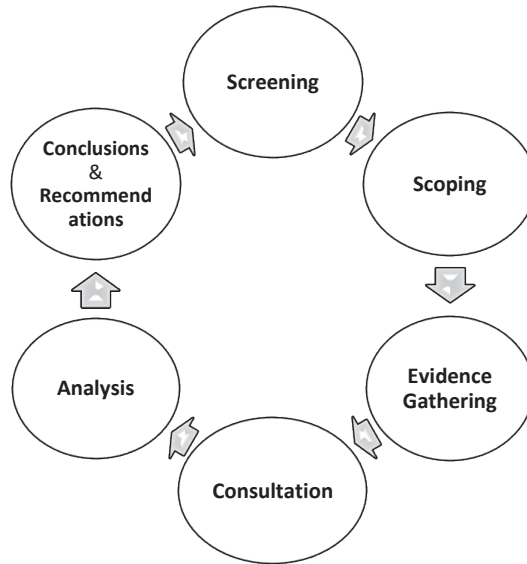


Figure 1. Human Rights Impact Assessments (HRIA) tool

c) Data Extraction

Data about the situation of Iranians' enjoyment of their right to health during the sanctions period were collected from electronic databases including EBESCO, PubMed, Web of Science, Scopus, Emerald, Elsevier, Cochrane library, Hein online, J Store, Project Muse, Science Direct Springer, Wiley Online Library, Oxford Journals, Embase, SID, and Google Scholar by searching keywords: "economic sanctions", "right to health", "healthcare", "embargoes", "medicine" and "Iran". More data was found by cross checking the reference lists of the accessed articles. Furthermore, the official webpages of Iran's government and the United Nations' health and human rights committees and organizations were studied to find the results of economic sanctions against Iran on people's right to health. The selection of papers was exhaustive to locate every available paper about the subject of the study. The collected papers were analysed in-depth in order to find evidence of humanitarian impacts of economic sanctions on Iranians' lives and their right to health. A total of 87 documents including papers (n=76), books (n=5) and reports (n=6) on the humanitarian effects of

economic sanctions were identified. The abstracts were reviewed, and duplicated articles, or those which were not pertinent to the study (because they were not about the effects of sanctions on health and its underlying determinants) or those which did not adequately address the impacts of sanctions on Iranians' livelihood and health (meaning that they did not clarify how the right to health is influenced) were put aside. 55 documents emerged to be related to the topic (Figure no. 2 PRISMA flow).

The other part of the study is about the obligations of targeted and targeting states about the right to health. For this part of the study, electronic databases including the United Nations Treaty Collections and the United Nations Official Document System were searched following the terms "human rights", "right to health", "embargoes", "medicine" and "economic sanctions". The number of relevant international laws which were identified was 13. All selected documents were summarized and categorized in two main parts: the effects of sanctions on Iranians' right to health and the obligations of Iran and the international community about protection of Iranians' right to health.

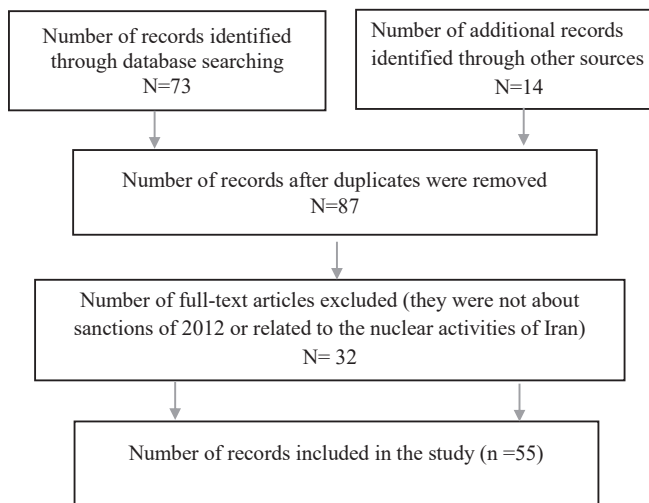


Figure 2. PRISMA flow

d) Data Analysis

Data gathering and analysis were organized according to the Human Rights Impact Assessments (HRIA) tool. All selected papers were summarised and entered into a matrix describing study designs and findings (see table no. 2). Findings were then categorized into a framework of themes reflecting the areas covered (health and its underlying determinants). The framework makes the structure of the review. The assessment was not quantitative; rather, it was simply heuristic to illustrate how

the right to health is affected by economic sanctions. Based on the findings, related obligations of Iran and other states about the effects of sanctions on Iranians' right to health were extracted. In the case of incompatibility of a certain policy with human rights obligations, HRIA suggests several options: the termination or amendment of the policy, the insertion of safeguards, and the adoption of compensation measures or other modification measures.⁴⁵

5.7 RESULTS

Economic sanctions have the potential to adversely affect the welfare and health of targeted populations. In the case of Iran, the results of the literature review indicated that the sanctions adversely affected affordability, accessibility and quality of health services and medicine and worsened the living standards of Iranians. In the next part of the article, these effects are explained. It is followed by the obligations of Iran and other countries about this issue.

Section 1) Iranians' Enjoyment of Their Rights in the Period of Sanctions

- *Effects of Economic Sanctions on Iranians' Standard of Living*

After releasing extensive reports by the media and the UN General Secretary about the humanitarian impacts of sanctions on Iranians' lives, particularly their access to food and medicine, the USA permitted its companies to sell selected medicines and medical supplies to Iran without requesting a licence from the Treasury's Office of Foreign Assets Control at the end of 2012.⁴⁶ Also, through the Joint Plan of Action, a channel for humanitarian support was established between Iran and six other countries in November 2013.⁴⁷ However, these exemptions of humanitarian trade did not guarantee access of Iranians to food, medicine and medical equipment. Since, limitations on trade, banking and financial system and shipment, made transferring of any goods including the exempted ones to Iran extremely difficult and expensive. The UNICEF described Iran in 2012 as a country under tightened unilateral sanctions which have adversely affected the environment, public health and socio-economic situation of ordinary people, especially children.⁴⁸ In the UN report on 5th October 2012, the General Secretary, Ban Ki Moon stated that "the sanctions

45 Baxewanos, F. Raza, W. supra note 42

46 George, MH, Z. 'Sanctions, government blamed for Iran's drugs shortage' (Reuters 2016) <<http://www.reuters.com/article/us-iran-medicine-idUSBRE8B40NM20121205>> accessed 15 June 2016

47 E3/EU+3. *Joint Plan of Action regarding Iranian Nuclear Program* (2013) 3

48 UNICEF. *Annual Report for Iran (MENA)* (UNICEF 2012) 1-2

imposed on Iran have had significant effects on the general population, including an escalation in inflation, a rise in commodities and energy costs, an increase in the rate of unemployment and a shortage of necessary items, including medicine {...} The sanctions also appear to be affecting humanitarian operations in the country {...} Even companies that have obtained the requisite licence to import food and medicine are facing difficulties in finding third-country banks to process transactions.”⁴⁹

Economic sanctions diminished Iran's economy considerably; from 2012 to 2014, GDP per capita fell dramatically by 35 % (chart no. 1).⁵⁰ While the value of the national currency declined by 80% during 2011-2013. In 2012, the overall inflation rate of the consumer price index was 36% and 41.4% respectively in urban and rural areas.⁵¹ Sanctions influenced all aspects of Iran's economy including public services that are necessary for the welfare of the population.⁵² They also contributed to an increase in the rates of inflation and unemployment (Chart no. 3).⁵³ The fall of Iran's revenues led to a decrease in the government's resources to pay its employees' salaries.⁵⁴ Almost all Iranian manufactures were hit by economic sanctions. Operating with partial capacity, they couldn't pay wages (which were below the poverty line) and had to lay off many workers; this worsened the living conditions of workers and their families considerably.⁵⁵ As a result, the purchasing power of the population decreased (Chart no. 3).⁵⁶ The minimum wage decreased by more than 50% from 2010 to 2012 (Table no. 1).⁵⁷

Sanctions influenced the socio-economic status of people, increased poverty, widened the income gap among different groups of Iranian society and decreased

49 Nichols, MC, L. 'General Secretary Ban Ki Moon, U.N. chief says sanctions on Iran affecting its people' (Reuters 2016) <<http://www.reuters.com/article/2012/10/05/us-iran-sanctions-un-idUSBRE89412Z20121005>> accessed 15 June 2016

50 World Bank, supra note 38

51 Plaut, S. 'the Collapse of Iran's Rial' (Gatestone Institute 2016) <<https://www.gatestoneinstitute.org/3597/iran-rial-collpase>> accessed 6 October 2016; World Bank. 'GDP per capita growth of Iran' (World Bank 2016) <<http://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG?locations=IR>> accessed 8 November 2016

52 Gordon, J. 'Crippling Iran: the UN Security Council and the tactic of deliberate ambiguity' [2012] Georgetown Journal of International Law 44 (3) 973-1006

53 Ibid; Palaniappa, S. 'Sanctions Without Humanitarian Implications-An Impossible Feat' [2013] HIM 1990-2015. 1538.

54 Dizaji, SF. *The effects of oil shocks on government expenditures and government revenues nexus in Iran (as a developing oil-export based economy)* (ISS Working Paper Series/General Series 540, 2012) 1-41.

55 International Campaign for human rights in Iran, supra note 35, at 116

56 Trending Economics, supra note 39; Taghdisinejad, AS, A. 'The impact oil embargo on economic security of Iran' [2015] Journal of Management and defense research 13 (76) 1-32.

57 Ramezani, A. supra note 40

the welfare of the most vulnerable individuals and groups to a great extent.⁵⁸ It was estimated that about 11% of Iranians were below the absolute poverty line and 30% were under the relative poverty line in 2016.⁵⁹ In rural and urban areas, the population below relative poverty line was respectively 15% and 13% in 2012.⁶⁰ By limiting the revenues of the government, sanctions decreased the capabilities of Iran to support the poor.⁶¹ In 2013, the UN Special Rapporteur on the situation of human rights in Iran highlighted the dramatic effects of sanctions on Iranians' standard of living.⁶² Sanctions adversely affected people's lives and violated their rights to education, health and development.⁶³ The sharp decline in the value of Iran's currency and being dependent on the import of food and related industries, and a change of country's policy on subsidized food contributed to a sharp rise in the price of food. After a significant increase of the unemployment rate, more Iranians reduced household expenditures by consuming lower quality and quantity food.⁶⁴

Moreover, along with the deterioration of the economic situation of families, more children left school to work, and got married to lower the financial burden on the shoulders of their parents. In recent years, the number of working and street children has also increased remarkably. These children have limited access to health services and education.⁶⁵ According to the Statistics Centre of Iran, formal child marriage increased more than 20% during 2012-2014.⁶⁶ In the province of Isfahan,

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- 58 Marzban, HO, A. 'The Impact of Economic Sanctions on Gross Domestic Production and Social Welfare in Iran: Generalized Stochastic Growth Model' [2015] *Economic Research* 20 (63) 37-69; Farzanegan, MR. Mohamadikhabbazan, M. Sadeghi, H. *Effect of oil sanctions on the macroeconomic and household welfare in Iran: New evidence from a CGE model* (Joint Discussion Paper Series in Economics Faculty of Business Administration and Economics, University of Marburg, No. 07-2015, 2015)7; Asadi-Pooya, AA. Tavana, B. Tavana, B. Emami, M. 'Drug adherence of patients with epilepsy in Iran: the effects of the international economic sanctions' [2016] *Acta Neurologica Belgica* 16 (2) 151-155 ; Kordzaeh, MK. 'Immorality and Illegality of Sanctions and Iranian Response' [2014] *Iranian Review of Foreign Affairs* 5 (1) 89-120.
- 59 Lilaz, S. '11% of Iranians are living under the absolute poverty line' (Eghtesad Online 2016) <<http://www.eghtesadonline.com>> accessed 8 February 2016
- 60 Presidential Institute of Education and Research on Management and Planning (IERMP). 'Poverty in Iran' (IERMP 2014) <<http://www.imps.ac.ir>> accessed 8 February 2016
- 61 Mousavi, SFJ, F. Mohammadi, O. 'Us Unilateral Sanctions Against Iran; Contradiction in Slogan and Conduct, Extreme Politisization of Human Rights' [2015] *Public Law* 16 (46) 23-103.
- 62 UN General Assembly. *Situation of human rights in the Islamic Republic of Iran* (Report A/68/503:2013) part VIII
- 63 Dizaji, SF. *Supra* note 54; Ebrahimi, M. Jalalian, A. Esfandyari, L. 'The impacts of economic sanctions on human rights in countries of Iran and Iraq' [2015] *World Scientific News* 10 (2015) 12-26; Portela, C. 'Are European Union sanctions "targeted"?' [2016] *Cambridge Review of International Affairs* 29 (3) 912-929
- 64 Palaniappa, S. *supra* note 53; Mousavi, SFJ, F. Mohammadi, O. *supra* note 61; Shahabi, S. Fazlalizadeh, H. Stedman, J. Chuang, L. Shariftabrizi, A. Ram, R. 'The impact of international economic sanctions on cancer care in Iran' [2015] *Health Policy* 119 (10) 1309-1318; Nematollahi, ZF. S. Hosseynzade, M. Abolhasani, L. 'The consequences of targeted subsidies, exchange rate and foreign exchange constraints arising from the imposition of sanctions on wheat, flour and bread' [2016] *Agriculture economy* 10 (1) 97-114.
- 65 UNICEF, *supra* note 48, at 1-2; UN General Assembly, *supra* note 62, part VIII; UN Economic and Social Council. *Concluding observations on the second periodic report of Iran* (E/C.12/IRN/CO/2; 2013) para 19
- 66 Keshvari, Z. 'Child widows in Iran' (Seminar on Child Marriage, Tehran, Iran 2016)

the number of street children increased by 120% during 2015-2016.⁶⁷ There is no official data about the number of street children in Iran. Statistics provided by different institutions range from two to seven million street children. Based on the reports of the National Statistics Centre of Iran, 1.7 million children work in Iran.⁶⁸ It was estimated that this number was about 700 thousands in 2009.⁶⁹ This situation exposed children to violence, drug addiction, HIV infection and harmful work such as selling drugs. There are cases of child trafficking; even though it is considered a crime by the laws of Iran.⁷⁰

In the sanctions period, women faced more socio-economic hardships; the job security and opportunities for women decreased.⁷¹ The effects were more serious for women who were economically dependent on the family or were heads of their family.⁷² A considerable number of Iranian women are unemployed and economically dependent on their spouses and children; they are vulnerable to the country's economic decline. Particularly female heads of households face poverty more than other women and often can not afford nutritious food and healthcare.⁷³ In addition, Iran is facing a new phenomenon of street women and significant increase of addicted women and sex workers. Chronic poverty is one of the main reasons of entering the illegal market of sex work in Iran.⁷⁴ Furthermore, the decline in financial ability of working age people made the living situation of the elderly worse too. Old Iranians usually are financially dependent to their children; in recent years, the number of the homeless elderly has increased.⁷⁵

A high percentage of young Iranians, including educated ones, are unemployed and live in poverty. In 2015, 57% of unemployed people were from the age group 15-29. The unemployment ratio of this age group has increased by 2.6% comparing

67 Farshad, M. 'An increase of 120 percent in street children in Isfahan' (Tasnim News 2017) <<https://www.tasnim-news.com/fa/news/1396/03/19/1430639/>> accessed 5 February 2017

68 Panahi, S. 'Ambiguity in the statistics of child work and street children' (Jahane Sanat 2017) <<http://jahanesanat.ir/?newsid=19418>> accessed September 2017

69 Abbasi, A. 'Child work in Iran' [2009] *Planning and Management* 1 (1) 15-22.

70 Daneshvar. 'Selling infants in Tehran' (Fars News 2016) <<http://www.farsnews.com/newstext.php?nn=13940816000307>> accessed May 2016

71 Chenoy, MA. 'Gender and Human Rights Violations as structural part of Unilateral Coercive measures' (Seminar of Experts on Unilateral Coercive Measures. United Nations, Geneva: Human Rights Council; 2013)

72 Gordon, J. *supra* note 52

73 UN Secretary-General. *Situation of human rights in Iran (A/HRC/25/75;2014) para29*; Hajizadeh, M. Nghiem, HS. 'Hospital care in Iran: an examination of national health system performance' [2013] *International Journal of Healthcare Management* 6 (3) 201-210; Seyedfatemi, N. Rafii, F. Rezaei, M. Hezaveh, MS. 'Factors influencing the health promotion in Female-Headed Households: Golden Triangle of Money, Time and Energy' [2015] *Journal of Knowledge & Health* 10 (4) 13-22.

74 Karamouzian, M. Foroozanfar, Z. Ahmadi, A. Haghdoost, AA. Vogel, J. Zolala, F. 'How sex work becomes an option: Experiences of female sex workers in Kerman, Iran' [2016] *Culture, Health & Sexuality* 18 (1) 58-70.

75 UN General Assembly, *supra* note 62, part VIII

to 2014.⁷⁶ The rate of mental illnesses such as depression and stress is high among unemployed young people.⁷⁷ Depression specifically increased after intensifying sanctions against Iran and the deterioration of people's economic situation.⁷⁸ Furthermore, Iran is one of the biggest hosts of refugees and asylum seekers in the world. Most refugees in this country are from Afghanistan and Iraq. The sanctions negatively affected the lives of refugees in Iran, and the operational and humanitarian assistance costs of the UN.⁷⁹

- *The Impacts of Sanctions on Iranians' Right to Health*

The rights to healthcare and social security are guaranteed by Article 29 of Iran's Constitution. In recent years, Iran has provided free primary healthcare throughout the country and improved the quality and quantity of health services to a great extent. However, over the years, the financial accessibility of health services has continuously declined; while the health insurance system of Iran has not provided universal coverage yet. Most uninsured people are from the lowest income groups. Patients' share of healthcare expenditure was 52% of total health expenditure and 88% of private health expenditure in 2012. The government and insurance companies paid the rest.⁸⁰

In 2012, when the sanctions against Iran were intensified, the inflation rate in the health sector was 44.3% and 45.6% respectively in urban and rural areas.⁸¹ Insurance companies reacted to the inflation by decreasing their services. It increased the patients' share of health services and ended in the withdrawal of healthcare and more reliance on self-treatment. Several studies showed an increasing tendency of Iranians to self-medication. There have been warnings about the adverse effects of reliance on self-treatment in Iran.⁸² Still services of public health facilities were cheaper than private ones, but they were overcrowded, lacked enough medicines

76 Jondoghi, M. 'Unemployment during three presidential priodes' (Mahr News 2017) <<http://www.mehrnews.com/news/3955759>> accessed 12 May 2017

77 Salehi-Isfahani, D. 'Iranian youth in times of economic crisis' [2011] *Iranian Studies* 44 (6) 789-806.

78 Sha'bani, M. Mahkoei, H. Ghorbani, E. 'Investigating Socio-economic Challenges of Iran During Sanctions' [2015] *The Open Access Journal of Resistive Economics* 3 (1) 18-37

79 UN Refugee Agency. 'UNHCR global appeal 2014-2015' (UNHCR 2016) <<http://www.unhcr.org/528a0a2fb.html>> accessed 8 May 2016

80 World Health Organization. 'Global Health Expenditure Database 2016' (WHO 2016) <<http://apps.who.int/nha/database/ViewData/Indicators/en>> accessed 8 May 2016

81 Iran Customs Administration. 'Annual statics 2011-2012' (Iran Customs Administration 2016) <<http://www.tccim.ir/ImpExpStats.aspx?slcImpExp=Import&slcCountry=&sYear=1391&mode=doit>> accessed 8 May 2016

82 Peykar, ZM, A. 'Economic and Institutional Factors Affecting Self Curing and Self-medication in Shahrekord' [2015] *Journal of Health Breeze* 4 (4) 7-14; Tahergorabi, Z. Kiani, Z. Moodi, M. 'Epidemiological study of self-medication and its associated factors among visitors to Birjand pharmacies' [2016] *Journal of Birjand University of Medical Sciences* 2 (2) 158-169; Ershadpour, RZ. H. Kalani, N. 'Review of the reasons of self-medication among the people of Iran' [2015] *Navidno* 18 (60) 16-23.

and had long waiting lists. In response, a few well-off patients travelled to other countries to get healthcare. Some other patients, especially with terminal and incurable illnesses, withdrew from health services due to inability to pay.⁸³ Sanctions with a large economic effect on a target country (similar to Iran's case) can have severe public health consequences which are very similar to the effects of major military conflicts.⁸⁴ Sanctions on Iran had the potential to disrupt the government's subsidized healthcare.⁸⁵ Economic sanctions decreased the revenues of Iran's government and its ability to invest on health, education and social security.⁸⁶ In this situation, the government had to change its priorities and cut the budget of certain public services, such as supporting the poor.⁸⁷ Therefore, the people's share of health services costs increased which adversely affected the access of people to healthcare.⁸⁸ Low income groups were more vulnerable to the effects of the sanctions. The poor paid a larger proportion of their income for healthcare.⁸⁹ In 2013, Iran enacted a law to reform its health system; one part of this law requires the government to cover at least 90% of hospital services' costs by public funds.⁹⁰ But still every year 1% of the population fall below the poverty line due to the catastrophic health expenditures.⁹¹

By limiting access to the necessities of life, sanctions against Iran endangered public health particularly the health of mothers, children and the poor.⁹² Economic sanctions have had other impacts on the health of people in Iran too. For example, due to the ban on fuel trade and related production knowledge and technology, locally produced poorly refined fuel was substituted that had the main role in polluting

83 International Institute for Peace, Justice and Human Rights. *The impact of sanction on Iranian People Healthcare* (Switzerland, International Institute for Peace, Justice and Human Rights 2013) 2-12; Health Deputy of Ministry of Health and Medical Education. *Report of Health Deputy* (Ministry of Health and Medical Education of Iran 2012) 2

84 Bastani, P. Dinarvand, R. SamadBeik, M. Pourmohammadi, K. 'Pharmaceutical strategic purchasing requirements in Iran: Price interventions and the related effective factors' [2016] *Journal of research in pharmacy practice* 5 (1) 35.

85 Zare, H. Trujillo, AJ. Leidman, E. Buttorff, C. 'Income elasticity of health expenditure in Iran' [2012] *Health Policy and Planning* czs 106.

86 Dizaji, SF.; Portela, C. *Supra* note 63

87 Kheirandish, M. Rashidian, A. Kebriaeezade, A. Cheraghali, AM. Soleymani, F. 'A review of pharmaceutical policies in response to economic crises and sanctions' [2015] *Journal of Research in Pharmacy Practice* 4(3) 115.

88 Ahmadi, AM. Meskarpour_ amiri, M. 'The public health effects of economic sanctions as a global concern in 21th century: Why economic sanction is a cruel strategy' [2015] *Journal of Health Policy and Sustainable Health* 2 (1) 145

89 Dizaji, SF. ; Portela, C. *Supra* note 63; Rezapour, A. Azar, FE. Aghdash, SA. Tanoomand, A. Ahmadzadeh, N. Asiabar, AS. 'Inequity in household's capacity to pay and health payments in Tehran-Iran-2013' [2015] *Medical journal of the Islamic Republic of Iran* 29:245.

90 Portela, C. *Supra* note 63; Directive on Budget Allocation for Health System Reform 2014, art 1

91 Jaarzade N. 'Hidden inequalities are increasing in Iranian society' (Mehr News 2016) <<http://www.mehrnews.com/news/3742159>> accessed 12 May 2016

92 Ahmadi, AM. Meskarpour_ amiri, M. *supra* note 88

the air all over the country.⁹³ Because of economic sanctions, production models changed from clean techniques to polluting ones and led to the more use of old technologies and air pollution.⁹⁴ About 45,000 deaths in one year and an increase of lung cancer incidences among children were reported to be linked to air pollution in Iran.⁹⁵ Another example is the ban on selling air-craft parts to Iran that resulted in unsafe flights and endangered the lives of people. The same happened to automobile industry equipment. The sanctions also might endanger the mental health of people because of continuous signals of threats and deteriorated living standards. Recently, the rates of mental diseases and drug addiction and the cases of suicide among Iranians have increased considerably. According to the report of Iran's Ministry of Health and Medical Education, the rate of mental diseases has increased by 4% in last four years. The suicide rate increased by 7.6% during 2012-2013.⁹⁶ Unemployment and financial distress are two main causes of mental illnesses in Iran.⁹⁷ A study in the province of Ghazvin showed that unemployment, inflation and inequality had a meaningful relation with suicide rates.⁹⁸ Another example is the impact of economic decline on drug addicts and their families. While the price of medicines for the treatment of drug addiction and drugs themselves increased, drug users tend to decrease spending on their family's life and use cheaper substances.⁹⁹ New substances are associated with high risk methods of use, such as injection, and high risk sexual practices and more acts of violence. They can have long term side effects on the body organs of the addicts.¹⁰⁰

The harmful effects of economic sanctions on health status can remain hidden for several years and become evident in a longer period. As an example, lack of financial resources caused by sanctions is known as an obstacle to achieving the goals of the

93 Mousavi, SFJ, F. Mohammadi, O. supra note 61; Roshan, NAM, Sh. Abbassi, M. 'The Impacts of Economic Sanctions on Sustainable Development: Focusing on Labor' [2015] *Cumhuriyet Science Journal* 36 (3) 3458-3476; Mashhadi, AR, M. 'The Effects of Imposed Sanctions against Iran on Environment, Energy & Technology Transfer in International Law' [2015] *Public Law* 16 (46) 103-123.

94 Mousavi, SFJ, F. Mohammadi, O. supra note 61

95 UNICEF, supra note 48, at 2

96 Fars News Agency. '23% mental disorders in Iran' (Fars News Agency 2013) <<http://www.parsnews.com>> accessed 5 May 2016; Shafaf. 'Suicide in Iran' (Shafaf 2014) <<http://www.shafaf.ir/fa/news/248795>> accessed 5 May 2016

97 White, WL. 'Congress 60: An addiction recovery community within the Islamic Republic of Iran' [2015] *Alcoholism Treatment Quarterly* 33 (3) 328-347.

98 Yaghubidoost, M. 'Frequency of suicide attempts and their effective factors in Qazvin province' (Msc Medicine, Ghazvin University of Medical Sciences 2017)

99 Haghdoost, AA. Mostafavi, E. Mirzazadeh, A. et al. 'Modelling of HIV/AIDS in Iran up to 2014' [2011] *Journal of AIDS and HIV Research* 3 (12) 231-239; Deilamizade, A. Esmizade, S. 'Economic sanctions against Iran, and drug use in Tehran: a 2013 pilot study' [2015] *Substance Use & Misuse* 50 (7) 859-868.

100 Shariatirad, S. Maarefvand, M. Ekhtiari, H. 'Emergence of a methamphetamine crisis in Iran' [2013] *Drug and Alcohol Review* 32 (2) 223-224

Prevention and Control of Non-communicable Diseases Program in Iran.¹⁰¹ Sanctions can have more direct and immediate adverse effects on health by limiting the availability and accessibility of medicine. Medicine has been theoretically exempted from sanctions against Iran, but in practice, the access of patients to quality medicine became limited from 2012. The report of the UN Special Rapporteur on the situation of human rights in Iran (2013) indicated that “humanitarian safeguards in the form of exemptions for foodstuffs, medicines, chemicals for the production of medications and medical supplies are failing to meet their intended purpose. Reports indicate that financial sector sanctions effectively frustrate the purpose behind humanitarian exceptions. They also stress that the supply of advanced medicines, which treat the most serious illnesses, are particularly affected. Advanced medicines are produced primarily by firms based in Western countries and are subject to 20-year patents, rendering it impossible to substitute products from an alternative source.” The ineffectiveness of humanitarian safeguards is apparent in Iran.¹⁰²

- *Effects of Sanctions on the Right to Medicine*

The universal right to safe, effective and affordable medicine is a fundamental element of the right to health; states should consider this right in their international agreements.¹⁰³ By having a national generic policy, a network for the provision and distribution of medicine and an overarching pricing system for medicine around the country, Iran had a satisfactory level of access to medicine and medical instruments before comprehensive sanctions.¹⁰⁴ Depending to the type of services, insurance companies cover 70-90% of the retail price of medicines. Iran produces about 96% of all the medications of its pharmaceutical market in the terms of number and volume. But, the value of imported medicine is about 40% of whole market.¹⁰⁵

With the tightening of sanctions in 2012, the situation changed; the government faced difficulties in the provision of medicine; locally produced and imported medi-

101 Takian, A. Kazempour-Ardebili, S. ‘Diabetes dictating policy: an editorial commemorating world health day 2016’ [2016] *International Journal of Health Policy and Management* 5 (10) 571

102 UN General Assembly, supra note 62, part VIII

103 UN Human Rights Council. *Resolution 12/24 on access to medicine in the context of the right of everyone to the enjoyment of the highest attainable standard of physical and mental health* (A/HRC/RES/12/24, 2009) 2

104 Kheirandish, M. Rashidian, A. Bigdeli, M. ‘A news media analysis of economic sanction effects on access to medicine in Iran’ [2015] *Journal of Research in Pharmacy Practice* 4(4)199; Kebriaeezadeh, A. Koopaee, NN. Abdollahiasl, A. Nikfar, S. Mohamadi, N. ‘Trend analysis of the pharmaceutical market in Iran 1997–2010; policy implications for developing countries’ [2013] *DARU Journal of Pharmaceutical Sciences* 21 (1) 52.

105 Hosseini, SA. ‘Impact of sanctions on procurement of medicine and medical devices in Iran; a technical response’ [2013] *Archives of Iranian Medicine* 16 (12) 736–738

cal equipment and medicines started to be scarce.¹⁰⁶ Medicines were not subject to sanctions, but limitations on licensing, purchase and shipment of goods to Iran made the import of medicines difficult. Iran is dependent on the import of pharmaceutical raw materials, and production and quality control technologies which were not exempted from the sanctions. Therefore, the sanctions crippled the domestic pharmaceutical industry and disrupted the production and quality of generic medicine.¹⁰⁷ International pharmaceutical companies (and banks) were reluctant to deal with Iran because of the potential threat of secondary sanctions and difficulties of receiving the payment.¹⁰⁸ Being cut off from the international banking network, Iran had to pay cash in advance that was very difficult, if not impossible, for mass imports of medicines. Moreover, a shortage of foreign currency and the decline of the country's currency value made medicines expensive.¹⁰⁹ In addition, the complex process of providing banking facilities to importers and the extremely lengthy process of importation caused a shortage of medicine. Therefore, the cheapest medicines such as contraception pills and simple medical instruments such as vaccines, sutures and endoscopy instruments were not available in 2012.¹¹⁰ These all indicate that the pharmaceutical system of Iran was not prepared for providing medicine in emergencies and unusual situations such as economic sanctions.¹¹¹

Following multilateral sanctions of 2012, the import of medicines and raw medical materials fell by 30-55%¹¹² and the average shortage of medicine from less than 30 reached 144 types.¹¹³ 44% of scarce medicines were classified as essential medicines (a minimum requirement for a functioning health system) by the WHO. A vast majority of these medicines were exempted from the sanctions.¹¹⁴ Access to nuclear

106 Palaniappa, S. supra note 53; Asadi-Pooya, AA. Tavana, B. Tavana, B. Emami, M. supra note 58; Menezes, WA. 'The effectiveness of international sanctions imposed on Iran and Cuba: a comparative study' [2016] *Revista Eletrônica de Direito Internacional* 19 (Jun) 431-466; Duttagupta, S. Yampolsky, D. Chowdhury, C. 'Economic sanctions and market access for pharmaceuticals: case studies with Russia, Cuba And Iran' [2015] *Value in Health* 18 (7) A569.

107 Moret, ES. 'Humanitarian impacts of economic sanctions on Iran and Syria' [2015] *European Security* 24 (1) 120-140; Iranian Society of Atherosclerosis. 'Acute shortages of essential medicines for chronic patients'(Fifteenth Congress of Cardiology, Iran 2013); Massoumi, RL. Koduri, S. 'Adverse effects of political sanctions on the health care system in Iran' [2015] *Journal of Global Health* 5 (2) 020302

108 Mohammadi, D. 'US-led economic sanctions strangle Iran's drug supply' [2013] *The Lancet* 381 (9863) 279.

109 Massoumi, RL. Koduri, S. supra note 107

110 Baradaran-Seyed, Z. Majdzadeh, R. 'Economic sanctions strangle Iranians' health, not just drug supply' [2013] *The Lancet* 381 (9878) 1626.

111 Hashemi-Meshkini, A. 'Making the Public Health and Industrial Objectives Balanced; the Big Challenge of Iran's Food and Drug Organization'[2014] *Iranian journal of public health* 43 (5) 693.

112 UN General Assembly, supra note 62, partVIII

113 Roshan, NAM, Sh. Abbassi, M. supra note 93

114 Setayesh, S. Mackey, TK. 'Addressing the impact of economic sanctions on Iranian drug shortages in the joint comprehensive plan of action: promoting access to medicines and health diplomacy' [2016] *Globalization and Health* 12 (1) 31.

medicines and radiotherapy pieces for the diagnoses and treatment of cancer were completely cut off, since they were in the list of sanctions due to the possibility of military usage.¹¹⁵ Several studies showed that access of about 6 million patients with life-threatening diseases such as asthma, thalassemia, haemophilia, chronic diseases, blood disorders, multiple sclerosis and HIV/AIDS to their medicines was limited.¹¹⁶ In addition, anti-rejection transplant medicines, and kidney dialysis instruments were scarce in 2013.¹¹⁷ Domestically produced replacements were scarce and not effective enough. Unavailability and unaffordability of medicines resulted in poor drug adherence.¹¹⁸ A number of deaths due to the lack of access to medicines were reported in 2012.¹¹⁹ Furthermore, the shortage of medicines reduced the ability of the health system to provide services even in emergencies; suspended operations were serious problems following sanctions in 2012.¹²⁰ Moreover, Iran does not produce drugs for eradicated diseases and raw materials for antibiotics that can threaten universal public health. For example, Iran could not produce the BCG vaccine until 2015. Moreover, shortages of medicines and medical equipment needed for diagnosis and treatment of some diseases might change the county's overall disease burden; the number of deaths by non-communicable diseases (including cancer, diabetes mellitus, congenital anomalies, and cardiovascular, digestive, skin and musculoskeletal diseases) has increased in recent years in Iran.¹²¹

To compensate for the 30-46% fall in medicines imported from the US and the EU during 2011-2012, Iran increased its purchase of medicine and medical equipment from countries that did not ban the oil trade with Iran. From 2012, the purchase of medicine from China and India increased respectively two and five times.¹²² However, the alternative medicines usually were of lower quality and had limited effectiveness than equivalents.¹²³ Moreover, medicines have to be registered, and their safety and effectiveness must be approved by Iran's Medicine and Food Or-

115 International Institute for Peace, Justice and Human Rights, *supra* note 83, at 4; Health Deputy of Ministry of Health and Medical Education. *Supra* note 83 at 2

116 Gorji, A.' Sanctions against Iran: the impact on health services'[2014] *Iran J Public Health* 43 (3) 381-382.

117 Ghiasi, G. Rashidian, A. Kebriaeezadeh, A. Salamzadeh, J. 'The impact of the sanctions against Iran on availability to asthma medicines in Tehran' [2016] *Iranian Journal of Pharmaceutical Research* 15 (3) 567; Karimi, M. Haghpanah, S. 'The effects of economic sanctions on disease specific clinical outcomes of patients with thalassemia and hemophilia in Iran' [2015] *Health Policy* 119 (2) 239-243.

118 Asadi-Pooya, AA. Tavana, B. Tavana, B. Emami, M. *supra* note 58

119 Iranian Society of Atherosclerosis, *supra* note 107; Bozorgmehr. 'In Iran, sanctions take toll on the sick' (*Washingtonpost* 2016) <https://www.washingtonpost.com/world/middle_east/sanctions-take-toll-on-irans-sick/2012/09/04/cc07ee2c-f6b2-11e1-8253-3f495ae70650_story.html> accessed 6 May 2016

120 Karimi, M. Haghpanah, S. *supra* note 117

121 Roshan, NAM, Sh. Abbassi, M. *supra* note 93

122 Iran Customs Administration, *supra* note 81

123 Namazi, S. *supra* note 36, at 5; Massoumi, RL. Koduri, S. *supra* note 107

ganization to be allowed to be produced, imported and distributed in Iran.¹²⁴ This process takes several months. In response to the shortages, Iran allowed medicines which were approved by the FAO or European countries to be imported without the assessment and national approval. It resulted in major side-effects and the intolerance of patients' bodies to changes in a long term treatment.¹²⁵ On the other hand, due to the absence of an official supply in health facilities and pharmacies, smuggled medicines were increased in the local market of Iran. They were often out of date, of poor quality, contaminated, or spoiled by climate extremes, while they were sold at several times more than the official price. It was also difficult to know if they were counterfeit or real.¹²⁶ In 2013, after eye surgery, 22 patients had a serious infection in their eyes and were at risk of losing their vision because of using a non-standard ampoule.¹²⁷

Economic sanctions also made medicines financially inaccessible. The increase in the medicines' price was 50-75% during 2012.¹²⁸ The price of most medications had been reasonable until recent years in Iran. To guarantee patients' access, Iran provides a subsidy for selected medicines. Usually, the amount of subsidy is determined at the end of each year based on the estimation of the medicine's price and country's revenues in the coming year. The sharp fall in revenues and the value of currency was not predicted in 2012. After facing shortage, Iran allocated more currency for the import of medicines and could establish companies in neighbouring countries in order to use their banking system for purchasing medicine. Now, medicine is available; but still it is expensive for the treatment of some diseases. Medicine is not affordable for the poor people who are also not insured. In this condition, some health services such as dental care has become a privilege which is inaccessible to the working and middle classes of the population.¹²⁹

- *Human Rights Impact Assessment of Economic Sanctions against Iran*

The results of the literature review prove that economic sanctions against Iran have resulted in decreasing the enjoyment level of Iran's population of their economic and social rights, specifically the right to health and its underlying determinants. About 80% of the papers studied indicated that the sanctions adversely affected ac-

124 Health Ministry and Medical Education of Iran. *Health and Treatment* (Vol 1, Iran Institution, Tehran 2005)87-88

125 Namazi, S. *supra* note 36, at 1-7

126 Cheraghali, AM. 'Impacts of international sanctions on Iranian pharmaceutical market' [2013] DARU Journal of Pharmaceutical Science 21 (1) 64.

127 Young Correspondents Club. '22 patients of Razi hospital were victims of American sanctions' (Young Correspondents Club 2016) <<http://www.yjc.ir/fa/news/5147664/22>> accessed 5 May 2016

128 Gorji, A. *supra* note 116

129 Butler, D. 'Iran hit by drug shortage: sanctions cause increasing shortfall in medicines and vaccines' [2013] Nature 504 (7478) 15-17

cess to health services and products. 63% of papers expressed inaccessibility and affordability of medicine during the sanctions period. Moreover, 56% of the papers showed that the sanctions negatively affected underlying determinants of health such as environmental health, employment and access to food. The sanctions on Iran caused a fall in the country's revenues, devaluation of the national currency, and increase of inflation and unemployment. These all resulted in the deterioration of people's overall welfare and lowered their ability to access the necessities of life such as nutritious food, healthcare and medicine. Also, sanctions on banking and financial systems and shipment led to the scarcity of quality life-saving medicines. The impacts of sanctions were greater on the lives of the poor, patients, women and children. According to the Human Rights Impact Assessment, economic sanctions against Iran as international policies have had detrimental humanitarian effects; therefore, they should be reconsidered. To limit the nuclear activities of Iran, other measures should be used instead that do not have such effects. While international peace should be preserved, human rights obligations should not be forgotten. Review of the international human rights obligations of Iran and the international community about Iranians' right to health is helpful in considering the compensation measures.

Section 2) States' Obligations in Sanctions Period

To protect people during the sanctions period, countries that are imposing sanctions, the international community and the target country, have human rights obligations. The fundamental part of these obligations is that everyone should enjoy his/her rights without discrimination of any kind.

- *Targeted Country's Obligations in the Sanctions Period*

The review of Iran's response to the sanctions indicates that this country was not prepared for the sanctions, delayed in responding to the shortages and could not manage the situation appropriately. Also, bureaucratic constraints, corruption and inefficient resource management contributed to the deterioration of people's enjoyment of their basic rights.¹³⁰ In the period between the announcement and implementation of the sanctions, Iran should have prepared a national policy with suitable measures to prevent people suffering from the adverse effects of sanctions and to ensure everyone enjoys his/her basic rights including the right to health. The failure to take appropriate steps towards progressive realization of the right to health and to enforce related laws is in contrast with international human rights obligations. Moreover, Iran should have prevented third parties including black market dealers, pharmacies and health facilities that provided unsafe medicines, as well as smugglers who sent

¹³⁰ Gordon, J. *supra* note 52; Moret, ES. *Supra* note 107

scarce medicine to the neighbouring countries from violation of people's rights. Failure to regulate third parties' activities is against the right to health.¹³¹

Countries targeted by sanctions should respect international peace and security and human rights to alleviate the humanitarian crisis.¹³² In the sanctions period, the government of the target country still has human rights obligations. Lack of access to nutritious food, primary healthcare, basic shelter and education indicates that the country has failed to discharge its obligations under ICESCR. The state is required to monitor the human rights situation and take maximum available resources to eliminate the suffering with low cost programs and international assistance and co-operation. Moreover, even in severe resource limitations, vulnerable groups of the population such as children and the poor should be protected. Non-compliance with the core obligations of the right to health (access to health facilities, products and services and minimum essential food, basic shelter, sanitation and safe water) cannot be justified in any circumstances.¹³³ The CRC also states that children are entitled to human rights; parents without enough means should be supported to provide an adequate standard of living for their children. Governments should prohibit child marriage, child trafficking, child work, violence against children and engagement of children in drug selling which occur more in the period of economic decline. The needs of child immigrants and asylum seekers should be taken into account too.¹³⁴

Generally, states are required to respect, protect and fulfil the right to health. They should ensure that everyone, without any kind of discrimination, enjoys this right. At all times, including the sanctions period, states are required to provide available, accessible, acceptable and good quality facilities, services and products related to health and its underlying determinants to everyone. In addition, they are required to use all necessary means and the maximum of their available resources and to adopt appropriate legislative, administrative, budgetary, judicial, promotional and other measures towards the full realization of the right to health.¹³⁵ There is the possibility to seek international assistance for the realization of the right to health too.

- *The International Community's Obligations*

The international community has two kind of obligations about the right to health. First, in co-operation with international organizations, all countries are required to provide conditions at international and regional levels to ensure everyone enjoys the

131 General Comment no. 14 ICESCR, supra note 7, para 51

132 UN Commission for Human Rights. *Resolution 2000/1 on Human rights and humanitarian consequences of sanctions, including embargoes*(E/CN.4/SUB.2/RES/2000/1; 2000) 1

133 General Comment no. 14 ICESCR, supra note 7, paras 43-44

134 UN General Assembly. *Convention on the Rights of the Child* 1989 art 22 & 27

135 General Comment no. 14 ICESCR, supra note 7, para 33

right to the highest attainable standard of physical and mental health. They should help developing countries to progressively realize this right by the establishment of effective and integrated health systems with an adequate, affordable and reliable good quality supply of medicine.¹³⁶ Second, they should avoid the violation of this right and prevent third parties such as international organizations and groups of countries from violating this right.¹³⁷ According to the United Nations Charter (1945), the Security Council may decide what measures including sanctions should be employed to maintain or restore international peace and security.¹³⁸ Generally, economic sanctions which are imposed by some countries against the others are inconsistent with the Charter's basic principles of equality and dignity of every human being. Resolution no. 39/210 of the UN General Assembly (1984) states:

Developed countries should refrain from threatening or applying trade and financial restrictions, blockades, embargoes, and other economic sanctions, incompatible with the provisions of the Charter of the United Nations and in violation of undertakings contracted, multilaterally and bilaterally, against developing countries as a form of political and economic coercion that affects their political, economic, and social development.¹³⁹

The Vienna Declaration and Program of Action (1993) urges states to refrain from adopting any unilateral trade measure (particularly affecting developing countries) that hamper the full realization of fundamental human rights especially the rights to an adequate standard of living, food, medical care, housing and social services.¹⁴⁰ Adoption of laws interfering with the enjoyment of the right to health, failure to take into account the legal obligations related to this right in bilateral and multilateral agreements, and to regulate activities of third parties in order to prevent them from violating the right to health are violations of the right to health. Imposing embargos and other measures that restrict the supply of medicine and medical equipment of another state should be banned. The CESCR prohibits restriction on these goods as a tool for political and economic pressure. States should respect the enjoyment of the right to health in other countries by refraining from denying or limiting the access of people to healthcare and medicine. They should ensure that their international agreements do not adversely impact upon this right. The member states of international

136 UN Commission on Human Rights. *Resolution 2002/31 the right of everyone to the enjoyment of the highest attainable standard of physical and mental health* (2002) 1-2

137 General Comment no. 14 ICESCR, *supra* note 7, para 39

138 Charter of the United Nations, *supra* note 14, Chapter VII

139 UN General Assembly. *Resolution no. 39/210 on Economic measures as a means of political and economic coercion against developing countries* (A/RES/39/210; 18 December 1984) 2

140 UN General Assembly. *Vienna Declaration and Programme of Action* 1993, para 31

and regional financial institutions should consider protection of the right to health in their credit agreements and lending policies.¹⁴¹

States are responsible legally for their policies that violate the human rights of people beyond their borders and for the policies that support this action by third parties. According to paragraph 39 of General Comment no. 14 ICESCR, states are required to prevent third parties from violating the right to health in other countries by way of legal or political means, if they are able to.¹⁴² Countries that impose, maintain or implement the sanctions should immediately take steps to respond to suffering experienced by people in target countries.¹⁴³ It can be done by facilitating the delivery of the necessary items for life and health such as medicine, food and medical equipment. The targeting states should carefully assess the effects of their policies and international agreements on the health of people in the target country. Subsequently, they should adopt laws and policies to alleviate the negative impacts of their agreements.¹⁴⁴ A country's population should not be deprived of their basic ESCRs due to any accusation that their leaders have violated international peace and security norms.¹⁴⁵

The international community should respect the ESCRs of the targeted population. The UN bodies should observe the situation of human rights and implement humanitarian and human rights laws. Otherwise, the basic principles underpinning international law such as equality of all human beings will lose credibility. In addition, the Security Council should alleviate sanctions regimes in order to eliminate the humanitarian effects of sanctions on target populations and to ensure that they have access to food, medicine and other necessities of preserving health.¹⁴⁶ It seems that regulations on humanitarian exemptions are formulated imprecisely and are confusing; they lack standards and an impact monitoring system. Also, exempted goods and their distribution are poorly understood and interpreted, and the rapid supply of humanitarian supplies is blocked.¹⁴⁷ These all have major implications for the basic rights of the population of a target country.

141 General Comment no. 14 ICESCR, supra note 7, para 39

142 Ibid, para 39

143 *General comment no. 8 ICESCR*, supra note 19, para 11

144 UN Commission on Human Rights. *Resolution 2004/27 the Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health* (2004)

145 *General comment no. 8 ICESCR*, supra note 19, para 16

146 UN Commission for Human Rights, supra note 132, at 1

147 Garfield, R. Devin, J. Fausey, J. supra note 2; Sponeck, HG. 'Sanctions and Humanitarian Exemptions: A Practitioner's Commentary' [2002] *European Journal of International Law* 13 (1) 81-87.

5.8 DISCUSSION AND CONCLUSION

According to the results of HRIA, economic sanctions against Iran have resulted in the violation of Iranians' right to health. There is incompatibility between obligations derived from economic sanction agreements and human rights. In this case, HRIA suggests several options: termination or amendment of the policy, insertion of safeguards, and adoption of compensation measures. The main principle of this assessment is that no policy at national and international levels should breach international human rights laws. This tool, at first, suggests that such policies should be stopped. However, it does not mean that countries should not face any limitation if they threaten international peace, rather it means such policies should protect people's basic human rights too. The assumption behind economic sanctions is that economic pressure on the population of a country forces the government to reconsider its policies. The statement that economic sanctions do not target humanitarian goods seems incorrect when they aim to diminish the main source of a state's revenue. The level of the realization of human rights is dependent to the state's income level. Therefore, economic sanctions endanger the people's enjoyment of their right to health by decreasing the available resources of a country to be spent on the health of the population.

Despite the international community's statement that sanctions are directed at the government of Iran for its nuclear program, during the sanctions period, the enjoyment of Iranians of their fundamental rights has been dramatically decreased. The sanctions affected the health of Iranians in two ways; first by worsening their living conditions through a rise in inflation and unemployment, and a decline of households' income and access to adequate nutritious food and healthcare; then, by direct effect on the availability, accessibility and quality of life-saving medicines. Humanitarian exemptions which were decided after serious shortages did not protect the population from the adverse effects of sanctions. If the purpose of sanctions was to pressure Iran not to develop nuclear weapons, they should have been about materials and the technology related to this program and targeted decision-making elites, not ordinary people. In fact, it seems that the world has overlooked countries that actively have nuclear weapons without ratification of the Non-Proliferation of Nuclear Weapons Treaty.

According to international human rights laws, the right to health is substantially a justiciable right.¹⁴⁸ Imposing countries, the UN treaty bodies and Iran should be accountable about the humanitarian effects of sanctions on Iranians' lives. Iran could

148 Kokabisaghi, F. 'Justiciability of the Right to Health in International Legal System'[2016]The Iranian Journal of Medical Law 10 (37) 33-37

not appropriately handle the humanitarian crisis caused by sanctions and maintain the level of basic rights. This country should have predicted the impacts of sanctions and planned for the protection of its population. But some consequences of the sanctions such as limitations in access to medicine (which were exempted from sanctions) were difficult to predict. It shows that laws on humanitarian exemptions solely do not protect the rights of people in targeted countries. On the other hand, almost all the countries around the world are committed, through joining the UN and ratifying human rights treaties, to respect human rights of everyone without any kind of discrimination. No international human rights treaty has questioned the equality of human beings in their inherent dignity and fundamental rights. It is against all these treaties to assume that the violation of people's rights in a country under the pressure of sanctions is acceptable.

Olivier De Schutter, the UN Special Rapporteur of the right to food in his report of 2011 stated that a state which uses its means of influence, such as its economic leverage to induce policies in another state's jurisdiction and undermines the targeted state's human rights obligations, is responsible for the violation of rights under international law.¹⁴⁹ Iran was not the first country that faced sanctions; therefore the adverse impacts of sanctions on this country were entirely predictable by the UN Security Council and imposing countries. In future, before the imposition of economic sanctions, the international community should use effective measures to protect the human rights of a target country's population. States should use every political and legal means to prevent the violation of the rights of these people by other countries or international organizations. International laws related to economic sanctions need improvement too. All the UN organs' resolutions about economic sanctions have similar content and their language is not deterrent enough. They are soft laws advising targeting and targeted countries to respect human rights. However, no accountability system is established for countries that do not conform to these laws. According to General Comment no. 14 ICESCR, effective judicial and appropriate remedies at national and international levels should be provided for people whose rights are violated.¹⁵⁰ In Iran's case, even after the dissemination of the reports of the Special Rapporteur on Human Rights and the UN General Secretary about the humanitarian effects of sanctions, the imposing countries were not required to lift sanctions. The UN as a "centre for harmonizing the actions of nations in the attainment of peace,"¹⁵¹ should take a clear position about bilateral sanctions imposed arbitrary by countries or groups of countries against another one.

149 De Schutter, O. *Report of the Special Rapporteur on the right to food to UN (A/HRC/19/59/Add.5;2011)* para2

150 General Comment no. 14 ICESCR, *supra* note 7, para 59

151 Charter of the United Nations, *supra* note 14, art 1

Moreover, in the case of Iran, humanitarian exemptions were decided too late, while the process of implementation was not clear. Before the imposition of sanctions, an international plan for the protection of people should be advised and international intermediate organizations, certain companies and financial institutions should be designated to facilitate the implementation of the exemption policy. Furthermore, the effects of sanctions should be continuously monitored; if basic human rights are adversely affected, the sanctions policies should be reviewed. Economic sanctions with the current way of implementation are collective punishment of the population of target countries and violations of human rights treaties. By putting pressure on the population of a country, other countries will not be safe too. The prevalence of diseases and internal conflicts in a country (resulted from economic sanctions) are threats to the international health and peace. People who find their rights violated in their countries seek asylum in other countries. Considering a human rights approach in foreign policies might be a better solution than economic sanctions for resolving international disputes.

The adverse consequences of economic sanctions will take a long time to be alleviated, if it is not impossible. The social impact of economic sanctions against Iran may extend beyond the sanctions period because the costs of imposing sanctions exceed the benefits of lifting sanctions. Moreover, lifting sanctions will not necessarily lead to improving the living standards and welfare of Iranians if this country does not invest more on the population. After improving access to medicine and allocating more funds to the health system, now, Iran needs to make considerable efforts to improve the living situation of people, especially the poor and children by using all necessary means and available resources. In addition, this country should consider new policies to protect civilians from the violation of their rights in similar situations. Imposing countries and the international community should be accountable about the results of their actions in other countries; they should help Iran by every appropriate necessary means to improve the enjoyment of Iranians of their human rights which have been affected by the sanctions.

5.9 TABLES AND CHARTS

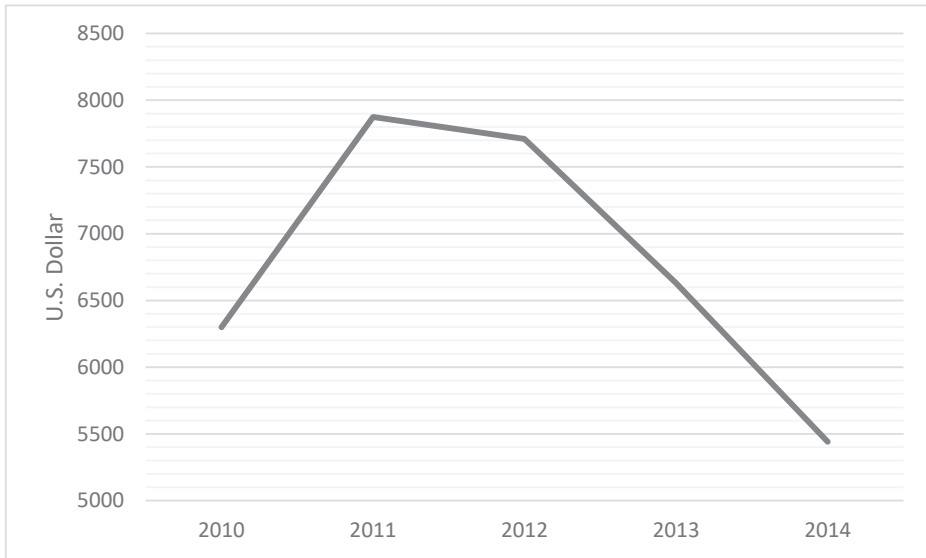


Chart 1. Iran's GDP per capita (US Dollar) during 2010-2014¹⁵²

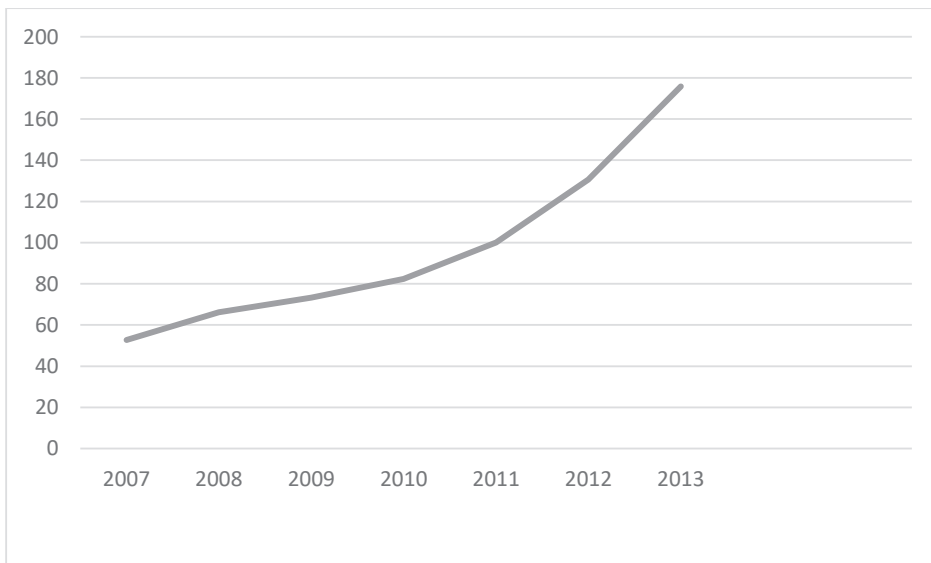


Chart 2. Iran's Consumer Price Index 2007-2013¹⁵³

¹⁵² World Bank. 'Iran's GDP per capita' (World Bank 2017) <<http://data.worldbank.org/country/iran-islamic-rep?view=chart>> accessed 9 February 2017

¹⁵³ Trading Economics. 'Consumer Price Index 2007-2013 Iran' (Trading Economics 2017) <<https://tradingeconomics.com/iran/consumer-price-index-cpi/forecast>> accessed 9 February 2017

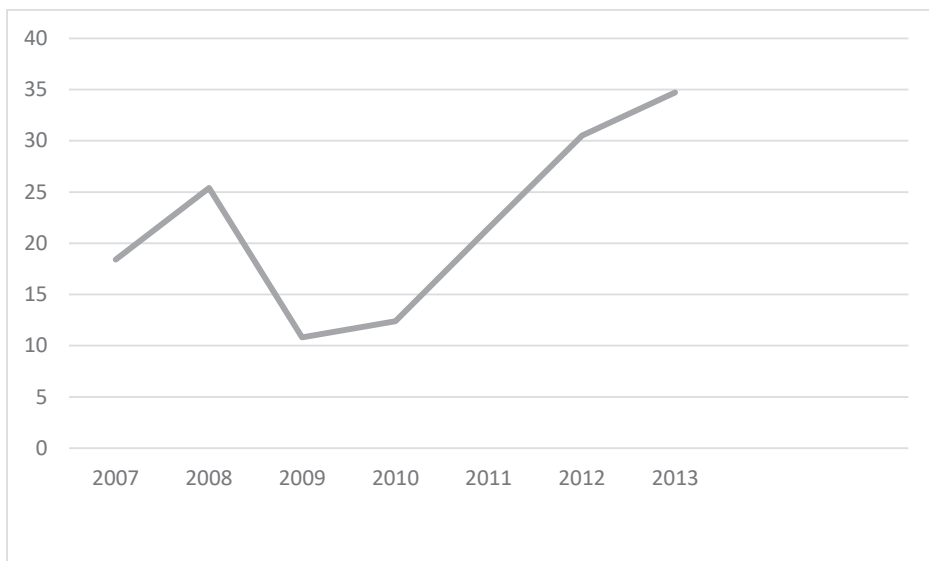


Chart 3. Iran's Inflation Ratio 2007-2013¹⁵⁴

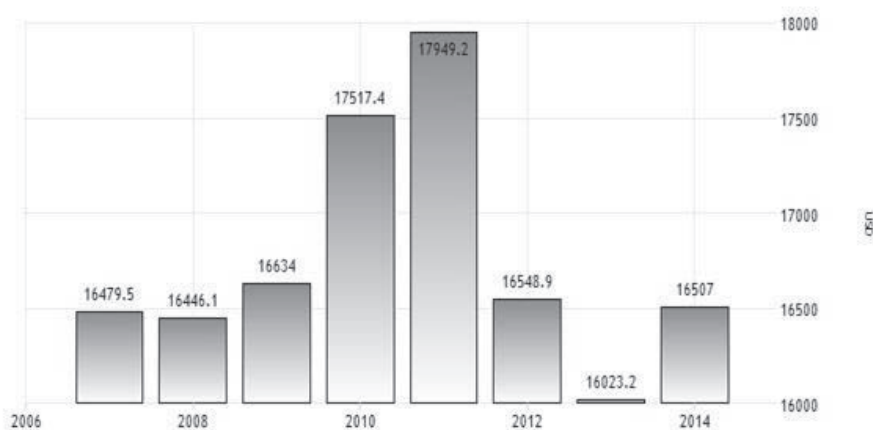


Chart 4. Iran's GDP per Capita Purchasing Power Parity (PPP) 2007-2014¹⁵⁵

154 Trading Economics, 'Inflation Ratio 2007-2013 Iran' (Trading Economics 2017) <<https://tradingeconomics.com/iran/consumer-price-index-cpi/forecast>> accessed 9 February 2017

155 Trading Economics, 'Iran's GDP per Capita Purchasing Power Parity (PPP) 2007-2014' (Trading Economics 2017) <<https://tradingeconomics.com/iran/gdp-per-capita-ppp>> accessed 9 February 2017

Table 1) Minimum wage in Iran 2005-2014¹⁵⁶

Year	Minimum wage (\$)	Minimum wage based on free market rate(\$)	Annual rise compared to the previous year (%)	Inflation rate of year before (%)
2005	135.6	135.6	14	15.2
2006	162.6	162.2	18	10.4
2007	195.7	195.7	22	11.9
2008	227.3	227.3	17	18.4
2009	263.5	263.5	18	25.4
2010	275.4	275.4	13	10.8
2011	173.8	173.8	9	12.4
2012	155.8	111.3	18	21.5
2013	194.8	192.3	25	30.5
2014	243.5	202.9	25	36.7

156 Al-monitor, 'minimum wage 2005-2014 Iran' (Al-monitor 2017) <<http://www.al-monitor.com/pulse/originals/2014/03/iran-wages-inflation-economy-law-protest.html>>accessed 9 February 2017

Table 2. Main findings of the literature review

Authors	Method	Relevant findings/message	Humanitarian effects	
			Healthcare	Determinants of health
1 Baradaran-Seyed, Z. & Majdzadeh, R ¹	Review of the reports of Iranian Academy of Medical Sciences, Iranian Medical Council and the UN Secretary General	Sanctions against Iran's financial system made medicine inaccessible.	*	*
2 Butler, D. ²	Interviews with health professionals	Economic sanctions against Iran caused acute shortages of medicines, vaccines and key medical supplies. Humanitarian exemptions on food and medicine did not work.	*	*
3 Cheraghali, AM ³	Observations from Iran's pharmaceutical market	Sanctions on foreign trade, financial and banking services against Iran resulted in inaccessibility of lifesaving medicines and, weakened the national health sector and affected ordinary people.	*	*
4 Ghiasi G. et al. ⁴	Analysis of the collected data from a group of pharmacies	Imported and locally produced asthma medicines were not accessible in community pharmacies of Tehran during 2012-2013 in which sanctions against Iran were intensified.	*	*
5 Golzari SE. et al. ⁵	Observations of pharmaceutical market	Economic sanctions against Iran had led to shortages of patented and generic cancer drugs while this country has the highest incidence of cancer in the Middle East.	*	*

1 Baradaran-Seyed, Z. Majdzadeh, R. 'Economic sanctions strangle Iranians' health, not just drug supply' [2013] *The Lancet* 381 (9878) 1626.

2 Butler, D. 'Iran hit by drug shortage: sanctions cause increasing shortfall in medicines and vaccines' [2013] *Nature* 504 (7478) 15-17.

3 Cheraghali, AM. 'Impacts of international sanctions on Iranian pharmaceutical market' [2013] *DARU Journal of Pharmaceutical Sciences* 21 (1) 64.

4 Ghiasi, G. Rashidian, A. Kebriaeezadeh, A. Salamzadeh, J. 'The impact of the sanctions against Iran on availability to asthma medicines in Tehran' [2016] *Iranian Journal of Pharmaceutical Research* 15 (3) 567.

5 Golzari, SE. Ghabili, K. Khanli, HM. Tizro, P. Rikhtegar, R. 'Access to cancer medicine in Iran' [2013] *The Lancet Oncology* 14 (3) e87

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects		
			Healthcare	Medicine	Determinants of health
6 Gorji, A. ⁶	Observations of pharmaceutical market	Economic sanctions against Iran influenced all branches of Iranian economy and affected vulnerable patients. Unavailability of medicine and raw materials for domestic pharmaceutical companies, and medical equipment for hospitals, and unaffordability of medicines were big challenges of Iran during sanctions' period. The weakened medical infrastructure decreased the ability of the health system to provide services even in medical emergencies. Establishing uniform operational criterion and definitions for the exempted medicine and medical products for the future sanction regimes is necessary.	*	*	
7 Hajizadeh M. & Nghiem, HS. ⁷	Investigating health system of Iran from financial, utilization, and quality perspectives	Quality of hospital care is different among different provinces of Iran. Economic sanctions seem to have negative impact on Iran's healthcare delivery system.	*		
8 Hosseini, SA. ⁸	Observation of pharmaceutical market of Iran	Because of sanctions on foreign trade, financial and banking services, Iran faced major difficulties in importing medicines and medical instruments. Quality, accessibility and affordability of medicines decreased during sanction's period. From a public health prospective, ordinary people and patients paid the cost of economic sanctions. Appropriate measures should be taken by the international community to facilitate access to medicine. To improve the process of medicine's importation, preparing a white list of Iranian pharmaceuticals companies and their foreign counterparts is necessary.		*	

6 Gorji, A. 'Sanctions against Iran: the impact on health services' [2014] Iran J Public Health 43 (3) 381-382.

7 Hajizadeh, M. Nghiem, HS. 'Hospital care in Iran: an examination of national health system performance' [2013] International Journal of Healthcare Management 6 (3) 201-210.

8 Hosseini, SA. 'Impact of sanctions on procurement of medicine and medical devices in Iran: a technical response' [2013] Archives of Iranian Medicine 16 (12) 736-738.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message		
		Healthcare	Medicine	Humanitarian effects Determinants of health
9 International Campaign for human rights in Iran ⁹	Review of scholarly material and journalistic accounts and interviews with a cross-section of Iranians	Economic sanctions against Iran and the country's policies resulted in a significant economic decline and deterioration of living standards of Iranians. Sanctions decreased the affordability and accessibility of healthcare and medicine.	*	*
10 International Institute for Peace, Justice and Human Rights ¹⁰	Interviews with health professionals, patients, health services managers and pharmacists	Sanctions on Iran have had destructive effects on healthcare system, and Iranians' lives and quality of life. Because of sanctions on banking system, import of medicines has become difficult. These are violations of people's basic human rights.	*	*
11 Karimi, H. & Haghpanah, S. ¹¹	Examining the effects of sanctions on access to healthcare from patients and physicians points of view	By adversely influencing accessibility of medicines, sanctions had considerable effects on public health and the health of patients with thalassaemia and haemophilia.	*	*
12 Kheirandish, M. et al. ¹²	Media analysis	Negative effects of sanctions on access to medicines in Iran after the sanctions of 2012 is proved.	*	*
13 Mohammadi, D. ¹³	Interviews with clinicians	Economic sanctions against Iran affected the availability of essential and life-saving medicines. So patients had to seek their medicines from an unregulated black market.	*	*

9 International Campaign for Human Rights in Iran. *A Growing Crisis; The Impact of Sanctions and Regime Policies on Iranians' Economic and Social Rights*(International Campaign for human rights in Iran 2013) 9-15

10 International Institute for Peace, Justice and Human Rights. *The impact of sanction on Iranian People Healthcare* (Switzerland: International Institute for Peace, Justice and Human Rights 2013) 1-20

11 Karimi, M. Haghpanah, S. 'The effects of economic sanctions on disease specific clinical outcomes of patients with thalassaemia and hemophilia in Iran' [2015] Health Policy 119 (2) 239-243.

12 Kheirandish, M. Rashidian, A. Bigdeli, M. 'A news media analysis of economic sanction effects on access to medicine in Iran' [2015] Journal of Research in Pharmacy Practice 4 (4) 199.

13 Mohammadi, D. 'US-led economic sanctions strangle Iran's drug supply' [2013] The Lancet 381 (9863) 279.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects		
			Healthcare	Medicine	Determinants of health
14 Moret, E. S. ¹⁴	Analyses of semi-structured interviews, official discourse and case studies	Economic sanctions negatively impacted the health of ordinary citizens in Iran and Syria through limiting the access to medicine and food.	*	*	*
15 Namazi, S. ¹⁵	In-depth interviews with Iranian importers, manufacturers, and distributors of pharmaceuticals and medical equipment as well as their Western counterparts	Economic sanctions against Iran have had severely affected the availability, accessibility and quality of medicines in Iran.	*	*	
16 Roshan, NA et al. ¹⁶	Review of literature on some health indicators before and during sanctions' period	Economic sanctions have had negative effects on people's health particularly in the fields of medicine, and healthcare and environmental health.	*	*	
17 Setayesh, S. & Mackey, TK ¹⁷	Review of key characteristics of drug shortage in Iran	73 scarce medicines were closely tracked with the disease burden of the country. 44 % of these medicines were classified as essential medicines by the WHO. A vast majority of these medicines were exempted theoretically from the sanctions.	*	*	

14 Moret, ES. 'Humanitarian impacts of economic sanctions on Iran and Syria' [2015] *European Security* 24 (1) 120-140.

15 Namazi, S. *Sanctions and medical supply shortages in Iran; Viewpoints* (Wilson center, Washington 2013) 1-12

16 Roshan, NAM, Sh. Abbasi, M. 'The Impacts of Economic Sanctions on Sustainable Development: Focusing on Labor' [2015] *Cumhuriyet Science Journal* 36 (3) 3458-3476.

17 Setayesh, S. Mackey, TK. 'Addressing the impact of economic sanctions on Iranian drug shortages in the joint comprehensive plan of action: promoting access to medicines and health diplomacy' [2016] *Globalization and Health* 12 (1) 31.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message			Humanitarian effects	
		Healthcare	Medicine	Determinants of health		
18 Shahabi, S. et al. ¹⁸	Literature review	Iran's National Cancer Control Program (NCCP) has substantial deficits, including a serious shortage of medicines for cancer care. Sanctions exempted medicines and food, but led to disruption of health services through making complications in the shipment of medicine or limiting access to foreign currencies for importing the medicine.	*	*	*	
19 Iranian Society of Atherosclerosis ¹⁹	Observation of pharmaceutical market	There was an acute shortage of essential medicines for patients with cardiovascular disease in Iran in 2012.	*			
20 Takian, A. & Kazempour-Ardebili, S. ²⁰	Review of Iranian National Action Plan for the Prevention and Control of NCDs and WHO framework	There are many obstacles hindering the achievement of the targets of the Iranian National Action Plan for the Prevention and Control of NCDs including the lack of financial resources. Economic sanctions exacerbated the situation. Safeguarding peoples' health and well-being in the post-sanctions era is necessary.	*			
21 UN Economic and Social Council ²¹	Review of reports and observations	In recent years, the number of street and working children has increased. They have limited access to healthcare and education.	*		*	
22 UN General Assembly ²²	Review of reports obtained from local newspapers and institutions such as the UNICEF and field observations	Sanctions adversely affected standard of living of Iranians particularly of children and elderly people. Medicine for the treatment of diseases such as cancer, heart disease, thalassemia, HIV/AIDS, haemophilia and multiple sclerosis were not accessible in 2012. Also, humanitarian exemptions for food, medicines and medical supplies could not meet their intended purpose.	*		*	

18 Shahabi, S. Fazlalizadeh, H. Stedman, J. Chuang, L. Sharifabrizi, A. Ram, R. 'The impact of international economic sanctions on cancer treatment in Iran' [2015] Health Policy 119 (10) 1309-1318.

19 Iranian Society of Atherosclerosis. 'Acute shortages of essential medicines for chronic patients' (Fifteenth Congress of Cardiology, Tehran, Iran 2013)

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21 UN Economic and Social Council. Concluding observations on the second periodic report of Iran (E/C.12/IRN/CO/2; 2013) para 19.

22 UN General Assembly. *Situation of human rights in the Islamic Republic of Iran* (A/68/503;2013) part VIII

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message		Humanitarian effects	
		Healthcare	Medicine	Determinants of health	
23 UN Refugee Agency ²³	Review of reports and observations	The sanctions adversely affected the life of refugees in Iran, and the operational and humanitarian assistance costs of UN.			*
24 UN Secretary-General ²⁴	Review of reports and observations	Unemployed women and female-headed families have been vulnerable to the country's economic decline of recent years in Iran. Since they are economically dependent, and more probable to face poverty.	*		*
25 UNICEF ²⁵	Review of reports and observations	Tightened unilateral sanctions against Iran have adversely affected the environment, public health and socio-economic determinants of health of ordinary people, especially children. In recent years, the number of working and street children has increased. These children have limited access to health services and education.	*		*
26 Zare, H. et al. ²⁶	Spline and quantile regression techniques	Income elasticity is lowest for the poorest Iranians living in urban and rural areas. Economic sanctions on Iran have the potential to disrupt government-subsidized healthcare services.	*		
27 Kebriaeezadeh, A. et al. ²⁷	Systematic literature review	Iranian pharmaceutical market has undergone a great growth. Before the sanctions, Iran's national pharmaceutical industry could provide essential medicines for patients.		*	
28 Hashemi-Meshkini, A. ¹¹¹	Literature review	Financial and trade sanctions revealed the weaknesses of Iran's domestic pharmaceutical industry in providing medicines and medical devices during political and international crisis.		*	

23 UN Refugee Agency. 'UNHCR global appeal 2014-2015' (UNHCR 2016) <<http://www.unhcr.org/528a0a2fb.html>> accessed 8 May 2016

24 UN Secretary-General. *Situation of human rights in Iran (A/HRC/25/75;2014) para29*

25 UNICEF. *Annual Report for Iran (MENA)* (UNICEF 2012) 1-2

26 Zare, H., Trujillo, A.J., Leidman, E., Buttorff, C. 'Income elasticity of health expenditure in Iran' [2012] *Health Policy and Planning (ezs)* 106.

27 Kebriaeezadeh, A., Koopaei, N.N., Abdollahiasl, A., Nikfar, S., Mohamadi, N. 'Trend analysis of the pharmaceutical market in Iran 1997-2010; policy implications for developing countries' [2013] *DARU journal of pharmaceutical Sciences* 21 (1) 52.

28 Kheirandish, M., Rashidian, A., Kebriaeezadeh, A., Cheraghali, A.M., Soleymani, F. 'A review of pharmaceutical policies in response to economic crises and sanctions.' [2015] *Journal of Research in Pharmacy Practice* 4 (3) 115.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects	
			Healthcare	Medicine
29 Kheirandish et al. ²⁸	Review of reports and articles	Iran faced major challenges in the provision of adequate access to medicines during sanctions of 2010–2014. Economic crisis might lead to changes of national priorities for investment and expenditure and reduce government's available resources. Thus it may affect the health system and access to medicines.	*	*
30 Asadi-Pooya, A. et al. ²⁹	Retrospective chart review study of drug adherence of patients with epilepsy	Unavailability and unaffordability of medicines resulted in poor drug adherence. Shortage of medicines and increase of the price were directly associated with the intensifying of economic sanctions against Iran. These sanctions brought about considerable socio-economic hardships for Iranians.	*	*
31 Duttagupta, S. et al. ³⁰	Examining healthcare financing and market access implications of pharmaceuticals in light of the introduction or removal of sanctions.	Lifting economic sanctions on studied countries including Iran will have a positive impact on pharmaceuticals, from the perspectives of market access and technology transfer.	*	*

29 Asadi-Pooya, AA, Tavana, B, Tavana, B, Emami, M. 'Drug adherence of patients with epilepsy in Iran: the effects of the international economic sanctions' [2016] Acta Neurologica Belgica 116 (2) 151-155.

30 Duttagupta, S, Yampolsky, D, Chowdhury, C. 'Economic sanctions and market access for pharmaceuticals: case studies with Russia, Cuba And Iran' [2015] Value in Health 18 (7) A569

31 Deilamizade, A, Esmizade, S. 'Economic sanctions against Iran, and drug use in Tehran: a 2013 pilot study' [2015] Substance Use & Misuse 50 (7) 859-868.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects		
			Healthcare	Medicine	Determinants of health
32 Deilamzade, A. & Esmizade, S. ³¹	Interviews with drug users, questionnaires, participants' observations, and statistical analysis of the existing data	Because of economic sanctions, the price of goods and services including drugs has increased in Iran. Major changes in the drug use patterns and an increase in use-related harms of drugs are expected in near future.			*
33 Massoumi, R.L. & Koduri, S. ³²	Interviews with physicians and review of literature	Sanctions caused limitations in the import of medicines (pharmaceutical ingredients and finished products) and access to patented ones. The quality of substituted medicines was not satisfactory, while these scarce medicines were not affordable for some groups of patients.		*	
34 Ahmadi, A. M. & Meskarpour_ amiri, M. ³³	Review of literature	Study of target countries by sanctions including Iran showed that through limiting the access to minimum basic needs, economic sanctions can threaten public health especially the health of the mothers and children of poor families. Reduction of target countries' revenues can lead to reduction of government capacity to finance healthcare system and to increase of the share of households of healthcare costs and to adversely affect people's access to healthcare services.	*		

32 Massoumi, R.L. Koduri, S. 'Adverse effects of political sanctions on the healthcare system in Iran' [2015] *Journal of Global Health* 5 (2) 020302

33 Ahmadi, AM. Meskarpour_ amiri, M. 'The public health effects of economic sanctions as a global concern in 21th century: Why economic sanction is a cruel strategy' [2015] *Journal of Health Policy and Sustainable Health* 2 (1).

34 Gordon, J. 'Crippling Iran: the UN Security Council and the tactic of deliberate ambiguity' [2012] *Georgetown Journal of International Law* 44 (3) 973-1006

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message			Humanitarian effects	
		Healthcare	Medicine	Determinants of health	Healthcare	Medicine
35 Gordon, J. ³⁴	Review of literature	Food security and access to healthcare and education were not supposed to be undermined by economic sanctions against Iran. The sanctions influenced every sector of Iran's economy and public services which were necessary for well-being of the whole population specifically poor women. Female heads of households faced much stress trying to feed their families, access medicines, and to buy necessary goods. In the sanctions period, unemployment and bankruptcies increased substantially.	*	*	*	*
36 Dizaji, SF. et al. ³⁵	Comprehensive set of vector autoregressive (VAR) models	Social impact of economic sanctions against Iran may extend beyond the sanctions period because the costs of imposing sanctions exceed the benefits of lifting sanctions.				*
37 Farzanegan, MR. et al. ³⁶	Examining the macroeconomic and household welfare consequences of oil sanctions in Iran by using social accounting matrix and developing a computable general equilibrium model	Iran's economy and households have been affected enormously by economic sanctions. The welfare of all income groups of urban and rural population has declined.				*

35 Dizaji, SF. van Bergijk, PA. 'Potential early phase success and ultimate failure of economic sanctions: A VAR approach with an application to Iran' [2013] Journal of Peace Research 50 (6) 721-736.

36 Farzanegan, MR. Mohammadkhazban, M. Sadeghi, H. *Effect of oil sanctions on the macroeconomic and household welfare in Iran: New evidence from a CGE model* (Joint Discussion Paper Series in Economics Faculty of Business Administration and Economics, University of Marburg, No. 07-2015, 2015) 7

37 Kermani, MK. 'Immortality and Illegality of Sanctions and Iranian Response' [2014] Iranian Review of Foreign Affairs 5(1) 89-120

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects		
			Healthcare	Medicine	Determinants of health
38 Kermani, M. Kh. ³⁷	Conceptual framework of political economy	Sanctions adversely affected people's livelihood in Iran. It is ignoring basic human rights of Iranians particularly the rights to national development, life, health, and access medicine. Promoting justice by discriminatory punishment of innocent people is impossible.	*	*	*
39 Chenoy, MA. ³⁸	Review of reports and papers	Smart sanctions against Iran have severely impacted the socio-economic pattern of society and the lives of ordinary people. Inflation and shortages of food have led to high prices of food. The decline in women's status and, job security and opportunities coincides with sanction regime.			*
40 Rezapour, A. et al. ³⁹	Concentration Index on inequality	In recent years, out-of-pocket payment for healthcare increased while the capacity of households to pay for the services decreased. The poor spend a greater portion of their capacity-to-pay for healthcare, in comparison to the rich. Sanction-borne inflation in economic and health sectors has caused financial crisis. Supporting the poor and decreasing out-of-pocket must be considered in the future policies of Iran.	*		
41 Ebrahimi, M. et al. ⁴⁰	Literature review	Sanctions limited Iranians' enjoyment of their rights to an adequate standard of living, health, education and development.	*		*

38 Chenoy, MA. 'Gender and Human Rights Violations as structural part of Unilateral Coercive measures' (Seminar of Experts on Unilateral Coercive Measures. United Nations, Geneva: Human Rights Council; 2013)

39 Rezapour, A. Azar, FE. Aghdash, SA. Tanoomand, A. Ahmadzadeh, N. Asiabar, AS. 'Inequity in household's capacity to pay and health payments in Tehran-Iran-2013' [2015] Medical journal of the Islamic Republic of Iran 29:245.

40 Ebrahimi, M. Jalalian, A. Esfandyari, L. 'The impacts of economic sanctions on human rights in countries of Iran and Iraq' [2015] World Scientific News 10 (2015) 12-26
41 Menezes, WA. 'The effectiveness of international sanctions imposed on Iran and Cuba: a comparative study' [2016] Revista Eletrônica de Direito Internacional 19 (Jun) 431-466.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message		Humanitarian effects	
		Healthcare	Medicine	Determinants of health	
42 Menezes, WA. ⁴¹	Theoretical conceptual approach		Because of economic sanctions, health system of Iran faced difficulties in the import of medicines and medical equipment.	*	
43 Neuenkirch, M. & Neumeier, F. ⁴²	Nearest neighbour matching approach		US sanctions have led to larger poverty gap in sanctioned countries including Iran compared to their nearest neighbours.		*
44 Palaniappa, S. ⁴³	Comparative study using literature review		Iran's health indicators used to be one of the best in the Middle East. The sanctions against Iran have had notable humanitarian implications, specifically on economic growth and health sector. The sanctions have decreased oil revenue and immensely destroyed economy of Iran. Unemployment, inflation, and commodity prices increased. They caused major shortages of medicine since the organizations with proper licenses were unable to find third-country banks for the import of medicine and food. Due to the rise in food costs and general inflation, many lower and middle class families could not afford food.	*	*
45 Sha'bani, M. et al. ⁴⁴	Content analysis of library resources and internet data		Socio-economic status of Iranians is influenced adversely by the sanctions in recent years. Iran is facing a great deal of different challenges such as unemployment, inflation depression, immigration to other countries, marriage problems, brain drain and economic downturn.		*

42 Neuenkirch, M. Neumeier, F. 'The impact of US sanctions on poverty' [2016] *Journal of Development Economics* 121:110-119.

43 Palaniappa, S. 'Sanctions Without Humanitarian Implications-An Impossible Feat' [2013] *HIM* 1990-2015: 1538.

44 Sha'bani, M. Mahkoei, H. Ghorbani, E. 'Investigating Socio-economic Challenges of Iran During Sanctions' [2015] *The Open Access Journal of Resistive Economics* 3 (1) 18-37

45 Asadi, A. Shahrvivar, MM. Esmaili, SM. 'Passing through sanctions by resistive economy' [2015] *The Open Access Journal of Resistive Economics* 3 (1) 50.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects		
			Healthcare	Medicine	Determinants of health
46 Asadi, A. et al. ⁴⁵	Content analysis	Studying Iran showed that sanctions with a large economic effect on a target country can have severe public health consequences which are very similar to the effects of major military conflicts. Using resistive economy might be helpful to improve the situation.	*		
47 Bastani, P. et al. ⁴⁶	Content analysis with an inductive approach applying a five-stage framework analysis (familiarization, identifying a thematic framework, indexing, mapping, and interpretation)	Sanctions can influence the final price of domestic medicines, the production quality and the hidden prices of imported medicines. In order to improve access to medicine in Iran, affordability of medicines, effects of exchange rate fluctuations on the cost of pharmaceuticals, influence of sanction on the final prices of pharmaceuticals, efficiency, and patient's ability to co-operate in the payment should be taken into account.		*	
48 Portela, C. ⁴⁷	Analysis of the design of different categories of sanctions instruments	In Iran, sanctions affected the economy, healthcare and environment, and caused a decline in the living standards of the population. It made acquisition and distribution of medical and pharmaceutical supplies difficult while legislation exempted the importation of humanitarian items from sanctions. No plan for monitoring of impacts of sanctions on this country was devised.	*	*	*

46 Bastani, P. Dinarvand, R. SamadBeik, M. Pourmohammadi, K. 'Pharmaceutical strategic purchasing requirements in Iran: Price interventions and the related effective factors' [2016] *Journal of Research in Pharmacy Practice* 5 (1) 35.

47 Portela, C. 'Are European Union sanctions "targeted"?' [2016] *Cambridge Review of International Affairs* 29(3) 912-929

48 Dizaji, SF. The effects of oil shocks on government expenditures and government revenues nexus in Iran (as a developing oil-export based economy) (ISS Working Paper Series/General Series 540, 2012) 1-41.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message		Humanitarian effects	
		Healthcare	Medicine	Determinants of health	
49 Dizaji, SF. ⁴⁸	Impulse response functions and variance decomposition analysis		The decrease in Iran's revenues limited the government financial ability to finance healthcare, education and social security and to pay its employees' salary which damaged the Iranians' standard of living.	*	*
50 Taghdisinejad, A. & Allahmorad, S. ⁴⁹	Interviews with the elite using Delphi		Sanctions led to the increase of inflation, and decrease of government's revenues, public investment, employment, job security and stability, households' income and purchasing power and government's abilities to support vulnerable groups.		*
51 Nematollahi, ZF. et al. ⁵⁰	General equilibrium pattern		Economic sanctions against Iran and change of Iran's policy about subsidized food have increased food price and decreased the purchasing power of households, and food security.		*
52 Mostafavi, SM. et al. ⁵¹	Hsiao causality procedure		Economic sanctions led to the change of production models from clean techniques to pollutant ones and more use of old technologies and air pollution.		*
53 Mashhadi, A. & Rashdi, M. ⁵²	Literature review		Iranians' right to a healthy environment is violated by recent sanctions on the import of gasoline and energy sector, and limitation of access to related knowledge and technology.		*

49 Taghdisinejad, AS, A. 'The impact oil embargo on economic security of Iran' [2015] *Journal of Management and Defense Research* 13 (76) 1-32.

50 Keshvari, Z. '2000 child widows in Iran' (Seminar on Child Marriage/Iran News 2016) <<http://www.iran-newspaper.com/NewsPaper/BlockPrint/162159>> accessed 8 May 2016

51 Mostafavi, SM. Ghaemiasl, M. Hoseyni Ebrahimabad, S. A. 'Investigating the causality relationship among economic sanctions, Macroeconomic factors and environmental polluters in Iran' [2014] *Quantitative Economics* 11 (1)103-128.

52 Mashhadi, AR, M. 'The Effects of Imposed Sanctions against Iran on Environment, Energy & Technology Transfer in International Law' [2015] *Public Law* 16 (46) 103-123.

Table 2. Main findings of the literature review (continued)

Authors	Method	Relevant findings/message	Humanitarian effects		
			Healthcare	Medicine	Determinants of health
54 Mousavi, SF, et al. ⁵³	Content analysis of international human rights laws and review of reports and literature	Sanctions against Iran influenced the livelihood of Iranians and resulted in more poverty and less welfare. Because of economic downturn, inflation, and decrease of households' purchasing power, some groups of the population cannot access the necessities of life such as food and shelter. Particularly the sanctions resulted in the violation of Iranians' right to health by adversely affecting accessibility of medicine and medical devices, increasing healthcare costs, decreasing government's financial ability to support the poor and limiting the import of quality gasoline.	*	*	*
55 Marzban, H. & Ostadzade, A. ⁵⁴	Extension of a generalized growth pattern despite a random exchange rate boycott	Since the economy of Iran is dependent to oil revenues, the sanctions resulted in the decrease of Iranians' welfare.			*

53 Mousavi, SFJ, F. Mohammadi, O. 'Us Unilateral Sanctions Against Iran; Contradiction in Slogan and Conduct, Extreme Politization of Human Rights' [2015] Public Law 16 (46) 23-103.

54 Marzban, HO, A. 'The Impact of Economic Sanctions on Gross Domestic Production and Social Welfare in Iran: Generalized Stochastic Growth Model' [2015] Economic Research 20 (63) 37-69.