



# A Critical Study of Iranian Medical Heritage Based on Chardin's Travelogue

#### Abstract

Medicine is one of the important sciences thriving a lot in the Iranian civilization. It found its way into other fields of civilization by Jondi Shapur School at ancient times. By the emergence of Islam in Iran, Medicine continued to flourish, and Iranian medicine had a great impact on Medicine in the Islamic civilization. Throughout different periods of History of Iran, the science of Medicine has been a matter of interest by both people and rulers; one of these periods is Safavid, during which Medicine had a big progress, and one of the sources concerned with this science is travelogues. Travelogues deal with different political and social issues. In the Safavid period, the relation between the West and the East resumed, and accordingly many travelers came to Iran, as a result of which many travelogues were written at this time, one of the most important of which is the Travelogue by Jean Chardin, the French traveler. Chardin, in this great work, reported the political and social situations in Iran. One of his most significant reports is on Medicine. And as a foreigner, he wrote about physicians and medical treatments at that time. This report is very important due to his study of Iranian health care. The present research was done through a descriptive analytical approach and a critical study of Medicine, based on Chardin's travelogue. Research findings indicated although Chardin's travelogue is one of the most important sources on Sociology in Safavid period, it is also important in terms of Iranians' diseases and medical concerns. However

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#### Introduction

Medicine is one of the sciences which has achieved big breakthroughs and influenced the Iranian civilization to a great extent. Iranian medical heritage, with a very old background, has witnessed different periods of progress and decline throughout the history. One of the important periods in the history of Iran which made a great social, political, and religious influence on the Iranian society is Safavid period. In this period, owing to the West attention to Iran, a large number of travelers and explorers came to Iran, and after their return to their countries, wrote about their observations in the form of books and travelogues, which are now considered as first-hand texts for the researchers. These activities are important because of their attention to the social political situation of the Iranian people.

Although Western travelers had short trips to Iran, their observations are really important because they have been written from the viewpoint of a foreigner, and they show these travelers' sense of curiosity. One of the valuable travelogues of Iran in Safavid period is Chardin's. Chardin, on his two travels to Iran, visited some cities of Iran closely. On his return from Iran, he wrote a travelogue which illustrated the Iranian lifestyle.

One of the issues that aroused Chardin's sense of curiosity in his travel to Iran is the science of Medicine. In his work, Chardin pointed out the improvements in Medicine in Iran in Safavid time, and wrote that in this period, Iranian Medicine is at the same level as Western Medicine. After a period of suffering from a disease, Chardin himself was treated by the Iranian physicians. Thereby, he recognized the Iranian medicine system as successful. In his travelogue, he also confirmed that Iranians are physically healthy people, and the methods of treatment by Iranian physicians are effective.

Although Chardin's Travelogue is a valuable source for the study of Medical concerns in Safavid time, he committed some mistakes in it. Chardin described Iranian Medicine being at the same level with Western Medicine and even more

developed. However, Medicine during the Safavid era, was in fact a traditional form of Medicine influenced by previous eras while the Western Medicine was on the verge of entering into a modern Medicine phase at that time. Therefore, since Chardin did not have a true understanding of Iranian medicine in the Safavid period, his comparison of Iranian Medicine with that of the West and the other periods of history is not rational. Also, it is highly likely that by description, he tried to highlight Iranian Medicine. It is for this reason that the present research tries to do a critical study of one of the most important aspects of life, Medicine, in Safavid period based on Chardin's travelogue.

### **Background**

Chardin's travelogue has undergone various research studies owing to the importance that the researchers of Safavid period gave to it. Some of these research studies are as follows:

"Reidentification of the identity of ancient Iran from Chardin's viewpoint", written by Adel Shabani Moghadam. Another research entitled "The image of Iran and Iranian in Chardin's travelogue, a study of stereotypes and clichés in the travel writer's mind", published by Farzaneh Alavi Zadeh. Other works on this issue are; an Article entitled as "The effect of collective Unconscious on the tyranny of Safavid State from Chardin' viewpoint", written by Ali Akbar Kajbaf and Mohsen Momeni, as well as an Article entitled as "A Study of national-historical identity of Iranians in Chardin's travelogue", written by Ali Akbar Jafari and Azimeh Payandeh. These research studies focused on Chardin' travelogue from different political, sociological and historical aspects. Thus, the present study focusing on the medical heritage of Iran in Safavid period based on Chardin' travelogue and a critical approach in doing it is an innovative study.

#### Medical Heritage of Iran in Safavid Period

Iranian Medicine has a long history, and it dates to the Ancient times.<sup>1</sup> The oldest source of medical evidence in ancient Iran is Avesta by Zoroaster.<sup>2</sup> In Sassanid period, Medicine in Jondi Shapur School gained significant improvements<sup>3</sup>. The selection of Non-Iranian physicians by Sassanid kings and their recruitment in Jondi Shapur School indicates the importance of Medicine in Iran during Sassanid era<sup>4</sup>. Iranian Medical heritage influenced by Jondi Shapur teachings continued its life while influencing and being influenced by Medicine

- 1- Agha Mohammadi et al, 2017: 62.
- 2- Farshad, 1987: 669.
- 3- Salari, 2009: 28.
- 4- Montasab Mojabi, 2006: 17-18.

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From the 4<sup>th</sup> century A.H., after the publication of some works in medicine in Persian language, a change emerged in Islamic Medicine<sup>6</sup>. Throughout the Islamic era in Iran, prominent Iranian physicians made great efforts in the improvement of Islamic and Iranian Medicine. Avicenna, Abu Reihan Biruni, and Jorjani were amongst the most famous physicians who founded the basics of Iranian medicine. Then, Baha al-Din Razi, the renowned physician of Safavid period, took great steps in founding the field of Medicine in Iran.<sup>7</sup>

Iranian medicine flourished during the Safavid era. As a matter of fact, in this period, Iranian medicine got influenced by physicians from other countries, like India. Hakim Baha al-Dowlah was one of the Iranian physicians who knew Indian medicine<sup>8, 9</sup>. Also, it was during Safavid era that the first encounter of Iranians with the advanced Western medicine happened<sup>10</sup>. In this period, pharmacology had a big progress, and some treatises were published on the methods of making drugs and how to use them<sup>11</sup>. Hakim Bashi was a title given to some physicians in Safavid period, and one privilege of these physicians having this title was taking Safavid king's pulse. The emergence of such a title and position shows the importance of medicine at that time<sup>12</sup>. The duty of Hakim in this period was "the above-mentioned guru physicians were at the service of the dignified king, and a friend and companion of the honorable Shahs in public and special gatherings."13

The inappropriate social and political conditions in the late Safavid period led to the immigration of Iranian physicians from Iran to India.<sup>14</sup>

#### Iranian Medicine Background from Chardin's Viewpoint

Health and hygiene has been one of the most important issues in Iranian civilization throughout the history. Iranians, like other civilizations, had a great influence on medicine and pharmacology. Chardin also wrote about Iranian Medical heritage. He considered Iranians as one of the first civilizations paying attention to Medicine, and highlighted this in his travelogue. He believed that Iranians gave superiority to Medicine over other fields and crafts.

"Iranians call physicians *Hakim* which comes from the Hebrew word *Hafiz al-Hayat* (guardian of life), and since long time ago, they have considered Medicine as superior to other fields".<sup>15</sup>

Chardin introduced Iranian medicine in Safavid as a very

- 5- Montasab Mojabi, 2006: 674.
- 6- Velayati, 2010: 139.
- 7- Ibid.
- 8- Najafi Barzegar, 2014: 293.
- 9- Elgood, 2007: 419.
- 10- Nabi Pour, 2007: 71.
- 11- Shirazi, 2004: 100.
- 12- Jafari et al, 2014: 15.
- 13- Mirza Sameeya, 1999: 20.14- Pormann et al, 2014: 285.
- 15- Chardin, 1966: 17.

important profession, while Elgood in the book "The History of Medicine in Safavid" argued that there were no big or pronounced publications on Medicine at Safavid time, and only some reviews were done on other medical books and treatises. According to Chardin, Iranian medicine had a better status compared to its previous eras, and just the publication of some famous books in one era should not be considered as the yardstick for the improvement in medicine, but it was the access to the physician and drugs at Safavid time which indicated a big progress in this field. Moreover, during the reign of Safavid dynasty, some physicians started teaching this profession, which has been mentioned in some sources related to that time<sup>17</sup>.

Based on the interpretation and analysis of data on Iranian physicians, Chardin regarded the number of physicians during the Safavid era as countless. Investigating the works published on medicine in Safavid, we realize that the published works on medicine had been almost five times more than its previous era.<sup>18</sup>

Chardin also regarded the medical condition during Safavid period as more thriving than that of other regions, and this represents the fact that the physicians in Safavid era enjoyed a special social status.

"But certainly in all the East, there is no country which attaches value to Medicine more than Iran, and trains more physicians than Iranians. In Iran, it is always said that physicians and astronomers swallow the country". 19

#### Physicians' Wage and Perks from Chardin's Viewpoint

During Safavid era, Iran experienced one of the most dazzling periods in history socially and economically. Therefore, in such conditions, professions' wages were to increase as well. Physicians' positions were linked to the social status and the kind of diseases they treated. The physicians in Safavid era were categorized in two groups of court physicians and non-court ones. The physicians working for the court were called Hakim and were more famous and prominent. In this period, *Hakim Bashis* were accused of being moneyminded and greedy just working to amass their wealth.<sup>20</sup>

One of the key factors in Safavid time which enticed some people to turn to medicine and practice this profession was its high wage and perks received by physicians. This wage was so considerable that amazed Chardin.

"Their ordinary fees were over two million and five thousand Liras, and this money did not include gifts, tips, and

16- Elgood, 1978: 22.

17- Monshi, 2003: 169.

18- Montasab Mojabi, 2002 : 51.

19- Chardin, 1966: 7/17.

20- Jafarian, 2000: 1220.



Chardin mentioned the high amount of fees and perks for the physicians during Safavid reign and highlighted that the visiting fee to a doctor was halved when done for the second time.

"Another group call the physicians to their home. For the first visit, physicians are entitled to half a *Qiran* (ten *Shahis*) for their wage and examination of the patient, and for other visits, they are paid half of this money".<sup>22</sup>

Mirza Sameeya in the book "*Tazkarat al-Moluk*", one of the sources on the late Safavid period, also wrote about the wage and perks for the Iranian physicians.<sup>23</sup>

Floor stated that the physicians in Safavid time were mostly at the disposal of the affluent and the powerful people in the society, and the ordinary people were less treated by them<sup>24</sup>. However, this idea is different from what Chardin reported, as he declared the ordinary patients could purchase drugs, and he also confirmed the presence of the physicians to be available at that time. Likewise, some sources at the time of Safavid mentioned that even the most famous Hakim Bashis treated ordinary people as well. "Hakim Yar Ali Tehrani, known as Hakim Kheiri, a wise and famous man and one of the court members ...gave service to treat the others and the public...".<sup>25</sup>

"At times, patient pays up to five or six *Shahis* to the physician for each prescription, but the physician never asks for this money because the fee for their examination is included in the drugs they sell from their shop". <sup>26</sup>

From Elgood's point of view, at that time people preferred to be treated at home, and this was considered as a social prestige<sup>27</sup>. Also, self-treatment as referred to by Elgood, was due to the availability of some books like "Zad al-Mosafer-in", in some parts of which the treatment of some diseases was done without going to a physician. Thus, according to Chardin's travelogue, having access to physicians by the ordinary people was easy, and self-treatment was practiced as well; this cannot be a compelling reason for the weakness of Medicine during the Safavid reign.

#### Common Accounts on Physicians at the time of Safavid

Chardin recounted some anecdotes about the Safavid physicians, and in doing so, he argued on the physicians' performances in the treatment of the patients. These contradicted his previous reports on the significance and growth of medicine at the time.

- 21- Chardin, 1966: 18.
- 22- Chardin, 1966: 25.
- 23- Mirza Sameeya, 1999: 20.
- 24- Floor, 2014: 14.
- 25- Monshi, 2003: 169.
- 26- Chardin, 1966: 25.
- 27- Elgood, 1978: 32.





"It is said that whenever one of the physicians of this city passed by the cemetery in their locality, he would cover his face with a handkerchief. He was asked why he was doing this, and he replied: it is because many people here are in their graves due to my orders and prescriptions and I dread that one of them recognizes me and grabs me by the neck".<sup>28</sup>

Chardin's recount of this is probably taken from the tales people told about the physicians at the time, and Chardin heard and then reported it because of the humor hidden in it. Such an account has never been recounted in any of the sources belonging to the Safavid era.

#### Physicians' Tests Done on Patients

In Safavid period, physiology was based on four humors in the traditional medicine (Blood, Phlegm, Melancholy, and Bile)<sup>29</sup>. In his travelogue, Chardin named many physicians from Iran and the West, known as the physicians in Safdavid time. But he believed that the book "Zakhire Kharazmshahi" written by the great Hakim Sayed Ismaeel Jorjani was the best source for the Iranian physicians during Safavid time. "The greatest Iranian source on Medicine is Zakhire Kharazmshahi". The medical tests at that time were done according to Zakhire Kharazmshahi since this book was in Persian. The other books in this period like "Qanun" by Ave Sina were in Arabic, and there were just some reviews on them in Persian at the time<sup>31</sup>. Taking the pulse of the patients for the diagnosis of the disease at that time was a common practice amongst the Iranian physicians.<sup>32</sup>

In his travel book, Chardin talked about the sampling procedures and testing done on patients, which reveal different methods for the treatments of diseases.

"The physician, without getting up from his place, first asks for the urine sample, as the patients always have a small bottle containing their urine with them, then the physician orders the patient to stick out their tongue".<sup>33</sup>

### The Safavid Patients' Way of Dressing

Patients' clothes is one of the features for recognizing the patients from the healthy people in the society. At safavid time, there was a big change in the way people dressed, and this even influenced the patients' clothes. Chardin referred to the difference between the patients and the healthy people's clothes. Talking about the patients' clothes is one of the delicate issues dealt with in Chardin's travelogue. However, the way the patients dressed was not mentioned at all in other

- 28- Chardin, 1966: 19.
- 29- Najafi Barzegar, 2014: 293.
- 30- Chardin, 1966: 22.
- 31- Navaee et al, 2002: 374.
- 32- Monshi, 2003: 169.
- 33- Chardin, 1966: 24.



"In Iran, the patient is recognized through these ways, whether from the long white cotton cloth hanging from their neck up to their stomach, or from this cloth attached to their belt".<sup>34</sup>

# Physicians and the Challenge of Women's Examination

Limited historical evidence led to the lack of information on women's treatment.<sup>35</sup> Safavid women were also treated, and Chardin focused on this as well. Physicians in this period would take the women's pulse while women covered their hands in some cloth, or generally they avoided examining women.

"Women cover their arm in some delicate white cloth or satin and stretch it from under a curtain and the physician takes their pulse.<sup>36</sup>

Somewhere else, Chardin pointed to the fact that men were not allowed to treat women. With regard to patients' treatment, he wrote as follows:

"Iranian physicians diagnosed a disease through taking pulse or observing the urine, but for the treatment of the female patients, they do this without examining them"<sup>37</sup>.

#### **Prescribed Drugs for the Patients**

Safavid Pharmacology was a subbranch of Medicine and was influenced by Pharmacology in Teimuri period. In that period, some books were written about herbal medicine for self-treatment, and the patients were not required to visit a physician in person.<sup>38</sup> Also, there were some herbal shops which would sell people some medicine at this time<sup>39</sup>. Chardin also paid attention to the point that Safavid physicians prescribed some medicine taken from herbs to treat the patients. Chardin in his travel book talked about herbal medicine used by people at that time.

"Fever is cured by the extracts of some seeds and some other drinks, and the patient is forced to drink four to five cups of this mixture in the mornings at several times, and then the patient is treated with nutritious materials". 40

He also wrote about some diets suggested by physicians for the patient's food. Therefore, avoiding eating some foods is rooted in Iranian traditional medicine, which was also practiced by the Safavid physicians. 34- Ibid.

35- Alijani, 2015: 10.

36- Chardin, 1966: 20.

37- Chardin, 1966: 19. 38- Sharif, 2008: 67.

39- Ashrafi, 2013: 140.

40- Chardin, 1966: 20.



"First, bread is forbidden for the patient. The patients are fed some steamed rice and when the illness fades away, some almond oil is added to the food, and after a while chicken with rice along with some vegetable stew, mixed with unground pepper and lots of cinnamon is prescribed for them". 41

Safavid physicians' giving hope to the patients amazed Chardin, as he knew this was rooted in Islamic and religious beliefs of the people at Safavid time. So, the physicians talked to their patients with hope and never made them disappointed.

"The point if I hadn't witnessed, I wouldn't have believed it is the assurance that the Iranian physicians give to their patients regarding their recovery. Even in the case of really severe diseases and in the last days of the patient's life, they promise healing them without any hesitation. I realized this fact when in Kerman I caught fever and was treated for it". 42

## Surgery in Iran Based on Chardin's Travelogue

In Safavid, physicians training was similar to the instructions given for surgical purposes. So, Chardin thought that Iranians did not know anything of surgery<sup>43</sup>. But based on some medical work published by Iranians at that time, there existed some reports of surgical operations for which opium (narcotic drugs) was used to anesthetize the patients<sup>44</sup>. Chardin believed that in Iranian Medicine, there was no surgery. He considered *Dallaks* (masseurs) as surgeons, who in fact did not know anything about surgery.

"There is almost no surgery done amongst the Iranians, Iranian surgeons are the very masseurs who mostly know nothing more than bloodletting". 45

# The Effect of Climate on the Treatment of Diseases from Chardin's Viewpoint

The type of climate has always had a big role in people's lifestyle throughout the history; one of these effects is on the people's health. Considering Iran's climate, Chardin linked the public health and the scarcity of some diseases to the Iran's climate. He also knew the Iranians' peace of mind was due to its good weather. Likewise, Tavernier, the famous traveler and travel writer, also talked about the positive effect of Iran's climate on Iranians' health. 46

"Generally, Iran is a very healthy nation; except for the coastal regions, in all other places, Iranians enjoy as much health as in the other countries of the world. I believe there are two reasons to this matter: First, Iran's climate is very dry

- 41- Chardin, 1966: 37.
- 42- Chardin, 1966: 21.
- 43- Elgood, 1978: 22.
- 44- Najafi Barzegar, 2014: 293.
- 45- Chardin, 1966: 23.
- 46- Tavernier, 2003: 302.



and this type of climate is the best for physical health, and second, people are content and have peace of mind".<sup>47</sup>

### Iranians' Diseases in Safavid from Chardin's Viewpoint

Taking the Iranian society in Safavid era into account, Chardin noticed Iranians' diseases as well. In introducing Iran's diseases, Chardin made some serious mistakes and stated that Iranians know nothing of plague. However, in fact, based on some recent research conducted on plague, there was some information indicating massive life claims in the tenth century due to plague in Iran.<sup>48</sup>

"In Iran, they know nothing of the fatal disease we call plague". 49

Chardin, also, explained different diseases being epidemic in Iran's Safavid time.

"Saint anthony's fire, typhoid, colic, Pneumonia, and dysentery were known by Iranians as summer disease. Frequent fevers which begin with chills are called by Iranians as autumn disease such as polydipsia, alopecia in children, chickenpox etc." <sup>50</sup>

Regarding the diseases named by Chardin during the Safavid time, one can study them and learn about people's health care at that point in the history.

#### Conclusion

In Safavid era, writing travel books increased more than before. These travelogues are important as they deal with Iranian people's lifestyle. These sources are considered as the social history of Iran. Focusing on important matters and different sciences, travel books made a transformation in Iran's demography. Of course, it is undeniable that these travelogues had different motivations behind, and some political aims are also seen in their writers' views.

One of these is Chardin's travelogue, which is considered as one of the first-hand sources of the history of Iran during the Safavid era. Chardin was a travel writer who studied the political and social situation of Iran in Safavid era. In his travelogue, he dealt with the most important social events of the history of Iran like a sociologist or even a Western thinker. One of the topics of interest for Chardin was Iranian Medicine in Safavid time. He admired Iranian Medicine as he compared it to Western Medicine.

Chardin described Iran in Safavid era as pleasant in terms of hygiene and attributed it to the growth of medical science in previous eras. He also noticed the people's access to phy47- Chardin, 1966: 28. 48- Fazli Nejad, 2017: 164. 49- Chardin, 1966: 28. 50- Ibid.



Although Chardin had succinct expressions towards Iranian Medicine, he also made some mistakes in his observations. He thought that Iranians were ignorant of the knowledge of surgery. Considering the existing medical books and renowned physicians in that period, his view was refuted in this regard.

Chardin, likewise, believed that Iranians knew nothing about Plague, while in the tenth century, Iranians experienced massive human loss due to this disease. He also considered "Zakhire Kharazmshahi" as the greatest work in the history of Iranian medicine. Although "Zakhire Kharazmshahi" written by Hakim Ismaeel Jorjani was one of the best in Medicine, Chardin disregarded Avicenna's works which had influenced the West by the original Iranian Medicine.

#### References

Agha Mohammadi J, Rezaee. H. History of Medicine in Ancient Iran. *Quarterly of Study of Islam and Iran's History and Civilization*. 2016; **4**: 60-67. [in Persian]

Alijani M. Examination and Treatment of Women in Qajar; a report by Western travelers and doctors. *Quarterly of History of Medicine*. 2015; **24**: 45-47. [in Persian]

Ashrafi A. Industry of drug production in Safavid. *Quarterly of Knowledge and Health*. 2013; **3**:138-143. [in Persian]

Chardin J. *Chardin Travelogue*. Vol. 7. Translated by Abbasi M. Tehran: Amir Kabir, 1966. [in Persian]

Elgood C. A Medical History of Persia and the Eastern Caliphate. Translated by Forghani B. Tehran: Amir Kabir, 2007. [in Persian]

Elgood C. *Safavid Medical Practice*. Translated by Javidan M. Tehran: Tehran University, 1978. [in Persian]

Farshad M. History of Science in Iran. Tehran: Amir Kabir, 1987. [in Persian]

Fazli Nejad A. *Global Spread of Black Death in the Late Middle Centuries*. Shiraz: Markaz Nashr of Shiraz University, 2017. [in Persian]

Floor W. *Hospitals of Iran in Safavid and Qajar*. Translated by Nabi Pour I. Bushehr: Publication of Bushehr University, 2014. [in Persian]

Jafari A et al. Medical Risalah "Favayed al-Afzaliyeh" and its position in Medicine in Safavid. Iranian Journal of Medical History and Ethics. 2014; 2:13-26. [in Persian]

Jafarian R. Safavid in Religion Realm, Culture and Politics. Qom: Hozeh and Daneshgah, 2000. [in Persian]

Mirza Sameeya M. [*Tazkerah al-Molouk*]. Researched by Mohammad Dabir Siyaghi. Tehran: Amir Kabir, 1999. [in Persian]

Monshi I. History of Alam Ara Abbasi. Researched by Iraj Afshar. Teh-



Montasab Mojabi H. *A study of Shia Medical Texts on History of Medicine*. Kermanshah: Publication of Razi University, 2006. [in Persian]

Montasab Mojabi H. Shia Medical Texts on History of Medicine. *Quarterly of Ketab*. 2002; **49**: 48-57. [in Persian]

Nabi Pour I. *An Introduction on History of Medicine of Persian Gulf.* Boushehr: Medical University of Boushehr, 2007. [in Persian]

Najafi Barzegar K. *History of political, social, economic and cultural transformations of Iran in Safavid.* Tehran: Publications of Payam Nour University, 2014. [in Persian]

Navaee A, Ghafari Fard A. *History of Political, Social, Economic, and Cultural Transformations in Iran*. Tehran: SAMT, 2002. [in Persian]

Pormann P, Savage E. *Medieval Islamic Medicine*. Translated by Behzadian Nejad Gh. Tehran: Research Center for History of Islam, 2014. [in Persian]

Salari H. *Science in Ancient Iran*. Tehran: Mehrab Ghalam, 2009. [in Persian]

Sharif M. [Zad al-Mosaferin]. Qom: Jalal al-Din, 2008. [in Persian]

Shirazi E. *Risalah Bikh-i Chini* (with English Prologue). Tehran: Institute for the Study of History of Medicine, 2004. [in Persian]

Tavernier J. Tavernier Travelogue. Tehran: Niloofar, 2003. [in Persian]

Velayati A. *History of Islam and Iran's Culture and Civilization (Specialized for Medical Sciences)*. Qom: Publication of Daftar Ma'aref, 2010. [in Persian]

