

ORIGINAL ARTICLE

Medicine and Economy in Ancient Persia

Abstract

The relation between economy and medicine had a long history since ancient times. Supplying (providing) health care and the required drugs and medical equipments were the main concerns of the human communities even when they were at rather primitive stages of civilization. Later, in developed civilizations, trade was added to the concepts of medical economy. In this study, various economic activities, ranging from the physicians' income to the export and import of medicines in one of the old civilizations, ancient Persia (from the beginning of the history to 637AD), are discussed. In these eras, it is found that patients, based on their social and economic levels, had to pay the physician fees for the office visit. The governments, in turn, tried to prepare free medical facilities such as free-of-charge hospitals for patients. On the other hand, physicians had high earning and important statues in the society. The trade of medicine was another important economic in ancient Persia. Ancient Persia was actively involved in importing and exporting different articles, including medicines. The findings of the study showed a close relationship between medicine and economy in the ancient Persia as witnessed by the social and governmental policies.

Key words: Economy, Medicine, Pharmacoeconomy, Ancient Persia, History of medicine

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Introduction

The relation between economy and medicine had a long history dating back ancient times. Providing health care and required drugs and medical equipments were the main concerns human communities even when they were far from civilization. Later, in developed civilizations, trade was added to the concepts of medical economy. The export and import of drugs were one of the trade activities among nations.^{1,2} As example, India was one of the important sources of herbal medicines and many medicinal herbs were exported to other countries via sea as well as roads.³ Also, Silk Road or Spice Road was an important route connecting between the east and west for the sake of trading goods including medicinal plants.^{4,5} Throughout the history, many economic issues such as the income of medical practitioners, charges for health care, insurance, trade, etc were added to medical concerns of the authorities. Nowadays, these issues are as the main topics in the health care systems all around the world.^{6,7}

Ancient Persia was one of the great civilizations, dating back to the dawn of the history to 637AD when Muslim Arabs defeated the Sassanid kingdom (the last ancient Persian Empire).⁸ Despite the crucial role economy played in medical fields, few studies investigated medicine and pharmacy from economic point of view. In this regard, we tried to investigate medical economy in Persia during the ancient era. To meet this end, related manuscripts remained from ancient times as well as the findings of the more recent research conducted on this issue were used in this study.

Doctors, Patients and Social Economy

One of the most important evidence the fees paid for office visits was mentioned in the Vandidad, a part of Avesta (the holy book of Zoroastrians). It seems that this part of Avesta was added to the main book in the Sassanid period (224-637AD).

“He shall heal the wife of the master of a house for the value of a she-ass; he shall heal the wife of the lord of a borough for the value of a cow; he shall heal the wife of the lord of a town for the value of a mare; he shall heal the wife of the lord of a province for the value of a she-camel.

He shall heal the heir of a great house for the value of an ox of high value; he shall heal an ox of high value for the value of an ox of aver- age value; he shall heal an ox of average value for the value of an ox of low value; he shall heal an ox

- 1- Lyttkens, 2011.
- 2- Cilliers, 2000: 88-100.
- 3- Swamy, 1976: 33-48.
- 4- Christine et al, 2008: 347-61.
- 5- Neal, 2003.
- 6- Jolicoeur et al, 1992: 1741-7.
- 7- Friedman et al, 2012.
- 8- Zargarani et al, 2012: 3-6.



of low value for the value of a sheep; he shall heal a sheep for the value of a piece of meat.

Thou shalt cleanse a priest for a blessing of the just.”⁹

The above text shows the system of paying physician fees for office visits in ancient Persia, at least since the Sassanid dynasty. This system was based on the economic status of people. Therefore everybody could reach to the doctors.

On the other hand, some systems, such as free insurance, were founded for the benefit of the patient. Also, we can see the numerous facilities provided for patients in the ancient Persia. This may be because of the effect of religious texts which recommended providing facilities for patients. For instance, the texts considered increasing the price of medicine a big sin before God.¹⁰ According to Cyropedia, dating back to 2200 years ago, Cyrus the Great (500BC) ordered to provide public health facilities for patients. He tried to set up a medical system in his court in which clinical services as well as medicines (medications) were free for the patients.¹¹ One of the best examples was the privilege given to the pregnant women. They had maternity leave with salary in Achaemenid period.¹² Later, in Sasanid dynasty, people had access to free public medical services. By the King Khosrow I (531-579AD) hospitals were built in each main city and patients were cured and hospitalized free of charge.¹³ Gondi-Shapur University and teaching hospital was the most important example of such hospitals in southeastern Iran.¹⁴ Also, following King Khosrow's order, sever disable patients should not pay any taxes.¹⁵

On the other hand, the social and economic status of physicians was very important. They were expected to live in privileged district of the city, eat high food put on quality and appropriate clothes and have fast horse.¹⁶ Also, the fee for the office visit were paid before the doctor started the treatment.¹⁷ After Zoroastrian priests, princesses and commanders, physicians enjoyed the highest social status in Sassanid period.¹⁸

Pharmacoeconomy: Export and Import

It seems that Persia was actively involved in the medicine trade including the preparation of medicines as well as exporting or importing them. Historical evidence testified that wine, oils, drugs and honey transported wine, oils, drugs and honey.¹⁹ In Seleucid Empire (312-64BC), drugs were the most important goods exported from Iran.²⁰ Later, In Parthian

9- *Sacred Books of the East*, 1898: Fargards 7 and 9.

10- Elgood, 2007: 35.

11- Xenophon, 2006: 321.

12- Koch, 2008: 63.

13- Tadjbakhsh, 2006: 357.

14- Modanlou, 2011: 236-9.

15- Dinvary, 2007: 100.

16- Elgood, 2007: 35.

17- Ibid

18- Jahez, 2007: 94.

19- Ghrishman, 2003: 239.

20- Ibid: 308.



kingdom (250BC-224AD) the western beach of Persian Gulf was the trade center of olibanum.²¹ In addition, while valerian (*Valeriana officinalis* L.) and pepper were exported from Mad (today is called Hamedan) in Sassanid period, amber was imported via Black sea and some spices by transit from China and Arabia.²² Also, some medicinal herbs and drugs were sent to Iran as gift, tax or tribute for kings. for example, Arabs sent amber, aromatic gums and olibanum as tax and gift for Achaemenid Emperors.^{23,24}

21- Ibid: 263.

22- Ibid: 441.

23- Hinz, 2006: 207.

24- Gershevitch, 2006: 69.

Conclusion

The findings of the study depict the importance of public health, free access to medical care and medicines for people on the one hand and the physicians' right in terms of their income as well as their social status on the other. The aim of Persian social politics was providing of free and accessible health care for everybody. On the other hand, medicines were important goods in terms of economy. To sum up, as shown above, Persia in ancient times was actively engaged in the trade of various medicinal plants and medicines.

References

- Cilliers L, Retief FP. Poisons, poisoning and the drug trade in ancient Rome. *Akroterion*. 2000; 45: 88-100
- Dinvari AAD. [*Akhbar al-Tava*]. Tehran: Nashr Nei. 2007. [in Persian]
- Elgood CL. *A medical history of Persia and the eastern caliphate*. Translated by Forghani B. Tehran: Amir Kabir. 2007.
- Friedman C, Rigby M. Conceptualising and creating a global learning health system. *Int J Med Inform*. 2012 Jun 18. [Epub ahead of print]
- Gershevitch I (ed.) *The Cambridge history of Iran (Achaemenid)*. Translated by Saghebfar M. Tehran: Jami. 2006. [in Persian]
- Ghrishman R. [*L'Iran des origines a L'Islam*]. Translated by Moein M. Tehran: Doniaie Ketab. 2003. [in Persian]
- Hinz W. [*Darius and die Perser*]. Translated by Sadrieh A. Tehran: Amir Kabir. 2006. [in Persian]
- Jahez AOB. [*Taj*]. Translated by Nobakht H. Tehran: Ashianeh Ketab. 2007. [in Persian]
- Jolicoeur LM, Jones-Grizzle AJ, Boyer JG. Guidelines for performing a pharmaco-economic analysis. *Am J Hosp Pharm*. 1992; 49(7): 1741-7.
- Kaefer CM, Milner JA. The role of herbs and spices in cancer prevention. *The Journal of Nutritional Biochemistry*. 2008; 19(8): 347-81.
- Koch HM. *Darius speaking*. Translated by Rajabi P. Tehran: Karang. 2008.
- Lyttkens CH. *Health, Economics and Ancient Greek Medicine*. Jun 2011; available at http://www.nek.lu.se/publications/workpap/papers/WP11_7.pdf

Modanlou HD. Historical evidence for the origin of teaching hospital, medical school and the rise of academic medicine. *J Perinatol.* 2011; 31: 236-9.

Neal C. *Incense: Crafting & use of magickal scents.* San Diego: Llewellyn publication. 2003.

Sacred Books of the East, American ed. Translated by Darmesteter J. New York: Christian Literature Company. 1898. Available at: <http://www.avesta.org/vendidad/vd7sbe.htm#section7b>

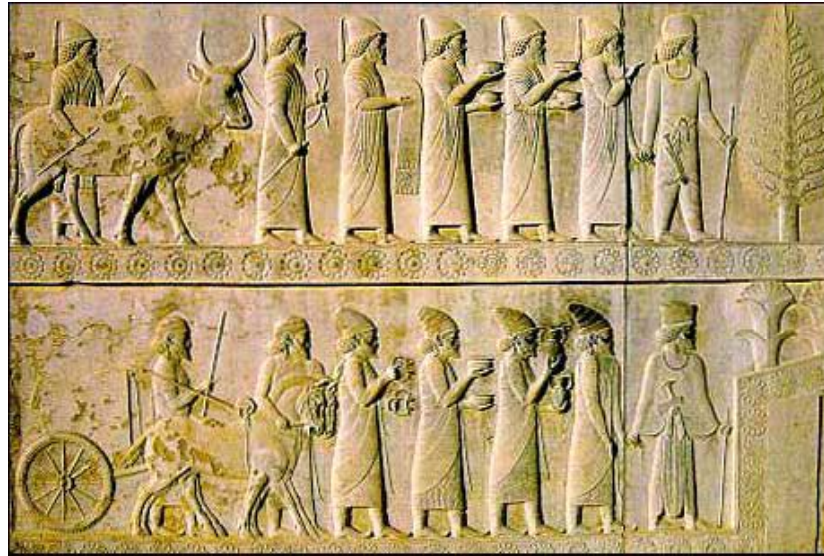
Swamy BG. Sources for a history of plant sciences in India. III. The maritime trade of ancient Tamils in plant products--a critique. *Indian J Hist Sci.* 1976; 11(1): 33-48.

Tadjbakhsh H. *The history of veterinary and medicine in Iran.* Tehran: Tehran University. 2000. [in Persian]

Xenophon. *Cyropedia.* Translated by Mazandarani V. Tehran: Doniaie Ketab. 2006. [in Persian]

Zargaran A, Mohagheghzadeh A. Jamasp, an ancient Persian pharmacist. *Res Hist Med.* 2012; 1(1): 3-6.





An Sculpture in Persepolis, the Capital of Achaemenid Empire (550-330 BC)