

ORIGINAL ARTICLE


Investigating the Content of the First Iranian Medical Book in Persian: “*Hidayat al-Muta’allemin fi al-Tibb*”

Abstract

The Iranian cultural attitude of Samanid epoch, on top of their attention to various sciences, led to the emergence of some scientific works in Persian in this era. Under this circumstance, Al-Akawayni Bokhari wrote the first medical book in Persian entitled *Hidayat Al-Muta’allemin fi Al-Tibb*. In his book, in addition to his own experiences, he benefited from the experiences of ancient physicians. This helped him to move the medical knowledge forward; he, in fact, wrote a ground piece of work in this area. This paper investigated the content of this book and revealed that the author was proficient and expert in ancient scientific resources. Taking advantage of these resources and adding his own experiences to them, he wrote a comprehensive medical book in the Islamic era. As such, in addition to various innovations employed in the book, it is shown to be an outstanding work, firstly because the book was written in Persian, known as the first Persian medical book in the Islamic era and secondly because the book took an empirical and deductive approach.

Key words: Islam, Iran, Physicians, *Hidayat al-Muta’allemin fi al-Tibb*

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Introduction

The Samanids attitude (819-999 AD) created certain significant cultural changes in Iran.¹ One of the most important manifestations of these changes was their special attention to the Persian language. Scientists agree that the Samanids were the first Iranian dynasty paying particular attention to the comprehensive development of the Persian language in the Islamic era (Foroozani, 2002, p. 179-180; Mousavi and Gholipour, 2012, pp. 29-44). During that era, in addition to verse, many prose works were written, among which *Shahnameh* was one of the prominent examples. In fact, the support of Samanids rulers for Persian prose contributed to the creation of this work. Their effort to continue employing the same language used during the pre-Islamic era in Iran (Persian) played a critical role in maintaining the national solidarity, establishing political dominance, and preserving the territorial integrity of its territory (Naji, 2007, pp. 688-689).² Their attention to Persian prose led to the emergence of numerous works in different fields in this era, such as *Kalam* (Islamic scholastic theology), commentary, jurisprudence, history, geography, mathematics, astronomy, medicine, pharmacology, philosophy, literature, and ethics.

During this era, in Iran, medical knowledge, like other branches of science, was on the path of progress. From the middle of the 8th century AD, thanks to the translation movement, the heritage of ancient Greeks and Iranians (Nasr and De Santillana, 1968, pp. 194-197; Sajjadi, 2017, pp. 38-47), Muslims studied and expanded their medical experiences under the attention of the Abbasid Caliphate, generating some novel works in this field. In the next centuries, the progress of Iranians in this knowledge began with the emergence of the greatest physicians in the Islamic civilization, and as a result, the physicians appointed for taking care of the Abbasid Caliphates were mostly Iranian physicians (Elgood, 2010, p. 341). In such an environment, physicians were encouraged to write their works in Persian. They are as follows: *Hidayat Al-Muta'allemin fi Al-Tibb*, *al-Abniya an Haqayiq al-Adwiyah*, *Encyclopædia Meysari*, and *Al-Tanwir fi Al-Tibbiyat* by Abu Mansur Al-Hasan ibn Nuh Al-Qumri (Rezaei Bagh bidi, 1996, pp. 61-64; Seddighi, 1966, pp. 56-126; Mahmoud, 2009, pp. 69-82).³ This trend continued and increased during the next decades and centuries by creating the works of great Iranian physicians. We conducted the present paper to investigate the content of *Hidayat Al-Muta'allemin fi Al-Tibb*, one of the works written in the above-mentioned era. The current

1- One of the most important manifestations of this cultural change was the renewal of the national identity of the Iranians, which was reflected in their attention paid to ancient Iran. For instance, in the art of this era, much attention was paid to Parthian and Sasanian art. (Sattari and Esmaili, 2012, pp. 172 – 175)

2- The Samanids' efforts in promoting the Persian language caused this language to function with strength after the downfall of that government, and for instance, in Transoxiana (MaWaraan-Nahr), it was considered not only the official language of correspondence, but also the language enjoying various functions, including writing of various books. (Ghofrani, 2008, p. 281)

3- For more information about these works, see: Rezaei Bagh bidi, 1996, 152 – 3. This article is remarkable about the first works written in Persian in the first centuries of Islam: Seddighi, 1966, No 4, 56 – 126.



research, while taking advantage of the achievements of the preceding research, has analyzed the book from new viewpoints (Minovi, 2002, pp. 40-45; Rezaei Bagh bidi, 1996, pp. 61-64; Khajehdehi, 2008, pp. 37-42; Keramati, 2001, pp. 177-184; Kalantari Meibodi, et al, 2015, pp. 99-108; Lazaro, 2008, pp. 189-196).

The Author of *Hidayat Al-Muta'allemin fi Al-Tibb*

The book, *Hidayat Al-Muta'allemin fi Al-Tibb*, conducted by Abu Bakr Rabee Ibn Ahmad Al-Akhawayni Bokhari (about 982 AD), is the first Persian medical book. There are currently three copies of this book held in the Bodleian Library of Oxford, Fatih library of Istanbul, and Malek library of Tehran; the version of Bodleian, by Farhad Mirza Motamed Doleh, son of Abbas Mirza, compared to the other two copies, is believed to be complete and closer to the time of its authorship (Kalantari Meibodi, et al, 2015, pp. 99-108). According to Mehdi Bayani, this version was held in Tehran during the Pahlavi era. He attempted to buy it, but he did not succeed, and after some events, the book was taken out of Iran and was sold (Bayani, 2002, pp. 501-503).⁴ In an extensive paper, Mojtaba Minovi narrated the sad story of the most exquisite version of the *Hidayat Al-Muta'allemin fi Al-Tibb* (Minovi, 2002, pp. 40-45). The book was then edited by Mojtaba Minovi and subsequently by Jalal Matini, a professor at the Faculty of Literature of Ferdowsi University of Mashhad, and was published in 1965 in Mashhad⁵ for the first time. Not much information was available about the Al-Akhawayni Bokhari' approach while writing *Hidayat Al-Muta'allemin fi Al-Tibb* or about at what age he wrote the book. However, based on the content of the book, it was understood that he was a physician from Bukhara, treating patients for many years, and was a contemporary of the Samanid government (Akhawayni Bokhari, 1992, p. 526). Nevertheless, the exact date of writing *Hidayat Al-Muta'allemin fi Al-Tibb* or the date of birth and death of the author, is unknown. There is no mention of these issues either in his own book or in other previously mentioned books. Regarding the fact that Al-Akhawayni Bokhari was a student of Muhammad ibn Zakariya Al-Razi, and the point that Razi died in 924 AD, Mojtaba Minovi reported that Al-Akhawayni Bokhari died in 982 AD.

Moreover, he believed that the date of writing the book was probably a few years prior to this date.⁶ Moreover, Razi's school strongly influenced Al-Akhawayni Bokhari. In addition to *Hidayat Al-Muta'allemin fi Al-Tibb*, he wrote two other books, *Graphidion* and *Nabz*. but except for the fact that

4- To see the description of this story, see (Bayani, 2002, pp. 501 – 2); about the further description of this version, Afshar: 2007- 8, No. 13 – 14, 487 – 8.

5- The editor has written a detailed introduction to the book.

6- Quoted from: Matini, 1965, No. 1, 51.



he himself wrote about them in *Hidayat Al-Muta'allemin fi Al-Tibb*, there is no trace of them.

The Subject of the Book

As its name implies, and as the author states, the book intends to facilitate medical education for those who seek this knowledge. At the beginning of his book, Al-Akhawayni Bokhari said to his son⁷: "As you, my child, asked me to speak about the medical approach in a clear and simple language [so that you inherit this from me and others, in turn, benefit from this". (Akhawayni Bokhari, 1992, p. 14)

The Objective and Method of the Book

By creating this book, Al-Akhawayni Bokhari aimed to systematically and continuously⁸ provide the ground for teachings medical knowledge in a comprehensive way in an independent book; therefore, the author could find the opportunity to write about his own experiences there and could also solve problems that arose while treating patients based on the medical findings of his time. The content of the book confirmed that Al-Akhawayni Bokhari was perfectly aware of the findings of the medical knowledge before him and believed in experience and experimentation. He took advantage of the findings of the experts in this field to test and carry out experiment, and after ascertaining their advantages and disadvantages, he wrote about his own experiments. In this regard, the accuracy in the text and style of writing the book confirmed the great mastery of Al-Akhawayni Bokhari on the subject and his experience, knowledge of the basic science, methods, and educational principles of medical knowledge. Furthermore, the book was written in a simple style, comprising short and explicit sentences with no semantic and lexical errors.

Compilation of the book

The book includes three parts and 200 chapters. In the initial part, there is a long introduction giving some general knowledge about the organs and tissues of the human body. The first chapters are related to the medical science and its divisions. These chapters also enumerate physicians' duties and the importance of preventing and maintaining the patient's health. Subsequently, it reminds the reader of the importance of the science of anatomy and as stated in Galen's will, one should master the knowledge of anatomy. In this regard, the descriptions of diseases, diagnosis from head to

7- His audience in all books is his child

8- A part of the comprehensive of his book is that he has focused on prevention as much as treatment. For more information: Davati, et al, 2019, pp.7-13.



toe, following the traditional approach and their treatment are included in the book. Furthermore, there are 2,535 names of medicines and foods in the book, *Hidayat Al-Muta'allemin fi Al-Tibb*, indicating the high frequency of natural and herbal ingredients found in the book.

Book references

In order to measure the frequency of the references Al-Akhawayni Bokhari used, it is necessary to assess the frequency of the citations in the content of the book as follows in Table 1:

9- "This book is read by Jewish Aknash now," said Al-Akhawayni Bokhari.

Table 1: The Frequency of citations to scientists in *Hidayat Al-Muta'allemin fi Al-Tibb*

Scientist name	Frequency of citations	Scientist's name	Frequency of citations	Scientist's name	Frequency of citations
Galen	50	Hippocrates	29	Yohannan bar Serapion	22
"Ostad bozor"	16	Razi	10	"ancestors" (Moteghad-deman)	7
YahyaIbn Masawaiyh	5	Hunayn ibn Isaac	5	"Khodavandan Tashree"	4
Isa Sahar Bakht	4	Rufus	4	Abu Zakar Neyshabouri	2
Boules	2	Ahern	2	Aristotle	2
Abu Al-Qasim Muqane'i	2	Jacques	1	Giorgis	1
Shamoon raheb	1	Yaghoub ibn Isaac Al-Kindi	1	Dioscorides	1
Soleiman ibn Imran (Author of Phakh-Makh ⁹)	1				

He referred to his ancestors and respected them in a way that whenever he wanted to cite Galen or Hippocrates, he wrote it at the very beginning of his writing to show the importance of the topic under discussion. For instance, in manifesting the importance of anatomy, he first referred to Galen's will on its status and then explained about it (Akhawayni Bokhari, 1992, p. 56). Moreover, in certain cases, he accepted and referred to the words of Galen or that of other great men without making some experience or observation on their claims; for example, in muscles counting, he says "*Those muscles mentioned by Galen, I [also] mention without my own observation*" (Akhawayni Bokhari, 1992, p. 14). It seems that Al-Akhawayni Bokhari, among the ancestors, considered Galen's opinion superior: "*There were some contradictions in the words of the preceding scholars (Moteghaddeman) ... but Galen [rejected] their opinion and said*"



He also followed Galen's method in treatment (Akhawayni Bokhari, 1992, p. 335) and utilized Galen's Commentary on the Epidemics as a model for writing his own. Thus, it could be said that although Al-Akhawayni Bokhari relied heavily on the knowledge of his ancestors and referred to their medical information, this reliance and citation was not blindfolded, but quite critical and experimental. "I told you in this book what I have tried myself, and if I did not try something, I would declare that in the book" (Akhawayni Bokhari, 1992, p. 587). Table 2 represents the evaluation of the frequency of his citations to the works of his ancestors:

Table 2: The frequency of the citations to books in *Hidayat Al-Muta'allemin fi Al-Tibb*

Scientist name	Frequency of citations	Scientist name	Frequency of citations	Scientist name	Frequency of citations
<i>Graphidion Zakariya al-Razi</i>	10	<i>Graphidion, son of Sarafyun</i>	9	Hunayn ibn Ishaq	9
<i>Konnash Ibn Sarafyun</i>	8	<i>Hippocrates</i>	4	Mansouri	3
<i>Epidemics book</i>	2	<i>Book of Qatajarns</i>	1	Graphidion Marvazi	1
<i>Tarkib Al Eyan: Hunayn ibn Ishaq</i>	1	<i>Book Of Hippocrates Identity, times, water, and countries,</i>	1	The book of Galen in the strong of the soul subject to the temperament of the body	1
Navader Taghadome Al-Maerefat	1	<i>Tadbir Al-Seha book</i>	1	Graphidion Saher	1
Anatomy book	1				

The use of words and expressions of different languages

In the book, *Hidayat Al-Muta'allemin fi Al-Tibb*, various languages are employed to introduce and talk about some drugs, organs, and terms. Table 3 depicts their frequency:

Table 3: The citations to various languages in the book, *Hidayat Al-Muta'allemin fi Al-Tibb*

Scientist name	Frequency of citations	Scientist name	Frequency of citations	Scientist name	Frequency of citations
<i>Arabic</i>	47	<i>Persian</i>	43	Greek	5
<i>Sogdian</i>	1	<i>Bukhari</i>	2	surrey language	1

The Experimental and Deductive Methods in the Book

Since some physicians of the Islamic era used to follow experimental methods and gave priority to the originality of understanding for diagnosing and treating diseases, they were known as "experimentalists" (*Ashab-e Tajrobe*). However, others, considering experimental methods insufficient to achieve an efficient treatment, in addition to medical experiment, considered analogy as prime importance. They were known as the "analogists." (*Ashab-e Ghias*) Moreover, there was a third group known as the "Companions of the Al-Heil" who believed that one should be specialized in summarizing medicine and eliminating the extras that the experimentalists and analogists believed in (Hindu, 1989, p. 231). Al-Akhawayni Bokhari agreed with and followed the first two groups: experi-



mentalists and analogists. Of course, as he was a follower of the Razi's school¹⁰, his tendency was more towards conducting experiments than drawing analogy.

During his years of practicing medicine, Al-Akhawayni Bokhari used to referred to the treatment history of his ancestors, in which had faith, in order to introduce and treat diseases. Then, he worked on the data survived , as well as those he presented: "*And I have treated many diseases, and what I mention here is what I have experienced; But let me not teach him what I have not experienced yet, And I was a student of Abu al-Qasim Muqani'i, and his name was Taher, son of Muhammad ibn Ibrahim, and a student of Muhammad ibn Zakaria and my teacher accompanied him while he was treating patients, And I follow him that I think is good.*"(Akhawayni Bokhari, 1992, p. 303).

Or he says elsewhere: "*I healed someone who was bearded. And I tried very hard ...*" "*And I treated the Tebeli disease and treated the Lahemi disease, but I could not treat Zakhi.*"¹¹ It is with this empirical approach that he seldom mentions the opinions of earlier physicians without having tried their approaches.

In his most important method, for instance, the analogy method, Al-Akhawayni Bokhari advises: "*You always compare, as I said.*" Elsewhere, he accused traditional chiropractors (*shekasteband*) of using analogy and said: "*These people who are claiming to be traditional chiropractors are mostly women, Kurds, Moghans, villagers, and ignorant people. I closely observed them, they understand not and use not analogy, using false claims only.*" The other positive point about Al-Akhawayni Bokhari is that if he achieved a scientific success, he would reported it and if he failed to understand something or did not know the meaning a concept, he would explicitly state that : "*I don't know the meaning of this*", or "*I have not tested it, you'd better test it.*"

The Author's Innovations

The innovations of Al-Akhawayni Bokhari could be seen in several parts of *Hidayat Al-Muta'allemin fi Al-Tibb*. For instance, he discusses women's fallopian tubes and the functions of the ovaries , and in a section of the book , he even prescribes incense as a contraceptive method (Akhawayni Bokhari, 1992, p. 404; Bioos, et al, 2015, pp. 69-97) Al-Akhawayni Bokhari devoted chapters of the book to the structure, nerves, and muscles of the eye and gave detailed descriptions. He also described various types of eye diseases, their causes, symptoms, and treatment methods, most of which are

10- See, in the following of the current research

11- See also. . Later, the use of this experimental method was considered by other Islamic physicians; Sardari, 2014, No. 20, 145.



the topics introduced in *Al-Muta'allemin Fi Al-Tibb* for the first time. In addition to including the name of the drugs previously mentioned in the works of his ancestors, Akhawayni introduced 10 new drugs. Hence, one of the most obvious aspects of the importance of this book is the recording of many of these drugs in Persian.¹² (Javadi, Sahebkar and Emami, 2013, p. 1; Khaledpour, 1998, pp. 589-593; Yarmohammadi, Dalfardi and Ghanizadeh, 2014, pp. 643-645; Ashtiyani, et al., 2014, pp. 111-137; Shariatpanahi, 2015, pp. 133-168; Azizi and Bahadori, 2013, p. 0; Golzari, et al, 2012, p. 229; Darvish-Mofrad-Kashani, et al, 2016, pp. 73-90)

Discussion

One of the fundamental questions about this book is whether the book *Hidayat Al-Muta'allemin fi Al-Tibb* is a book good for the lay people, for semi-learned people or for medical students. Nezami argued that: "medical students should first read the chapters of Hippocrates, the *Hanin* Problems, and Mohammad Zakaria Razi on *Ostad Mushfiq*, followed by Abu Mansouri's *svasat-e zakhir-e sabet*, Mohammad Zakaria, *Hedayeh Ababkar or Kefayeh Ahmad Faraj*, or Seyyed Ismail Jorjani's *Eghraz* on *Mushfiq*." Then he obtained from one of the comprehensive books, for instance, the group of the ten tribes of Galen, or containing Muhammad Zakaria, or Kamel al-Sana'a, or one hundred chapters of Abu Sahl al-Masihi, or the Qanun of Abu Ali, or the *Zakhireye Khwarazmshahi*." (Sajjadi, 2017, p. 152) Therefore, it could be said that *Hidayat Al-Muta'allemin fi Al-Tibb* was not a book that everyone could understand, and only an enthusiastic and talented medical student could use and understand this book. The book, *Hidayat Al-Muta'allemin fi Al-Tibb* is important because it is the first medical book written in Dari Persian.

It is worth mentioning that a language in order to be considered a language of science should be rich in lexicon and derivation to accommodate writing a scientific book. Furthermore, even though the book under study is a medical book, it is an important resource in pharmacology, as well. Throughout the book, the author listed more than 3,000 herbal, mineral, and animal medicines, as well as compound medicines, and devoted a portion of the book to foods and beverages (Samarqandi, 1910, pp. 68-69).

Conclusion

Hidayat Al Muta'allemin Fi Al-Tibb was written as the first medical work in Persian in the Samanid era. The Samanids paid special attention to the Iranian-oriented cultural ap-

12- The Al-Akhawayni Bokhari' innovations have been discussed in numerous other studies. He is considered to be one of the first physicians of the Islamic era to speak about the medicinal properties of saffron; (Javadi, Sahebkar and Emami, 2013, Vol. 16, No. 1, 3). For the first time, Al-Akhawayni Bokhari' has provided some innovative ideas on the description and treatment of febrile seizures, sleep paralysis, meningitis, hypertension and sexually transmitted diseases, as well as diseases related to organs such as the kidneys, bladder, urinary tract, nerves and brain. (Khaledpour, 1998, pp.589-595; Yarmohammadi: 18 – 19; Changizi: 2014, No. 19, 120 – 5; Darvish : , 2016, No. 27, 79, 82; Shariat panahi, 2014, No. 20, 22; Ibid, 2015, No. 22, 140, 143, 154; Azizi and Bahadori, 2013, Vol 16, No. 2, 131 – 135; Golzari, et al, 2012, pp. 229–234; Yarmohammadi, Dalfardi and Ghanizadeh, 2014, pp. 643-644; Ashtiyani et al; 2011, Vol. 5, No. 5, 302, 305.)



proaches. The book's importance lied in the fact that it was the first medical book in Persian, which showed the establishment of this language as a scientific language within the Islamic civilization in the 10th century AD. In fact, the author's main motivation for writing the book was the systematic presentation of the basic principles of Islamic medicine to the novices of this field in an independent book. The author's citations to the validated works of ancient physicians and the use of references in various languages, revealed the dominance of the medical tradition before him in the past and in various areas.

Al-Akhawayni Bokhari, in writing his work, in addition to using the deductive method following the tradition of ancient medicine and medical experiences of other scholars, also relied on and paid attention to his own medical experiences and subjects. In some sections of the book, he discussed his medical innovations, presenting various diseases and different treatment methods for each malady.

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