Summary

Historical research shows that many physicians experienced in medical sciences are also talented in art, literature and poetry. Avicenna was a sage who was skilled in poetry in addition to philosophy and medicine. He wrote two different types of poetry: those meant to be enjoyed for their literary qualities of novelty and imagination, and his didactic Urjuzeh. Didactic poems are different from poetry evoked by imagination and feeling. In didactic poetry, the poets want to learn science and philosophy, whether spiritual, ethical or practical to the readers. Rhyme and poetry were often used for scientific writing in Avicenna’s era, and were considered a method for memorizing scientific information and raising students’ interest in difficult scientific concepts. Verse was used to simplify the didactic content, ease memorization and make difficult scientific issues more attractive. In medieval Persia, students of medicine had learned the basics of philosophy before starting medical courses. Poetry could help the students memorize the poem itself in combination with its meaning, in a way that was better and easier than prose. Avicenna’s masterpiece, UrjuzehTebbi, comprises a perfect course in traditional Persian medicine in rhyming text written in Arabic. This great work was translated into Persian at the research centre for traditional medicine and history.
of medicine. We hope that the Persian translation of Urjuzeh Tebbi will allow students and experts to better appreciate the role of didactic poems in compiling and transmitting the concepts of Iranian medicine.

Key words: Avicenna; Didactic Poetry; Traditional Persian Medicine; Urjuzeh-Tebbi

INTRODUCTION

Since the 19th century, the interests of doctors have shifted from clinical to laboratory and from prognosis and care to diagnosis and cure. Many historians believe that it has altered the patient-physician relationship [1]. Many people accused physicians of aloofness and of denying their emotions, however this attachment undoubtedly is needed in order to make the right decisions for their patients. They reward the outlet of their feelings with arts and poetry [2]. Historical research shows that many physicians experienced in medical sciences are also talented in art, literature and poetry [3]. Being a physician and poet at the same time was not considered a rare phenomenon in the medieval era [4].

In medieval Persia, students of medicine had learned the basics of philosophy before starting medical courses. Philosophy was called Hekmat, and was considered a base for all sciences. Hekmat included two parts: speculative (theoretical) and practical. The practical part included ethics, the scheme of the home and the scheme of cities. The theoretical part comprised supernatural sciences, natural sciences and the rules that existed in nature in the material world, such as music, mathematics and astrology [5].

Medicine was considered to be a division of the natural sciences [5]. Avicenna (c. 980-1037), the well-known Muslim Hakim (sage) and physician, is one of the most influential faces in Islamic culture and civilization [4, 6]. Living in the fourth century of the Hijrah calendar (tenth century of the Western calendar), the golden age of Islamic culture in Iran with extensive libraries gave the chance of being a noble face to him [7]. Avicenna believed medical students should start their studies in both fields of theory and practice [4]. The medical students had to memorize many difficult issues in a short time to be able to start their medical practice.

Avicenna wrote several treatises in poems to help students in their medical learning. These treatises were called Urjuzeh, which were in rajaz meter. The most important one is UrjuzehTebbi.
Poetry as a tool for treatment and training

Poetry communicates with people more easily; it passes through the heart and its effects are immediate, whether for training or therapy [8]. Poetry acts as a medium to preserve the culture of a nation [9]. Poets use poems to express their intentions and motivations combined with meaning. They use metaphors to deliver meanings in a condensed, but effective, form [10]. The poem gives a real sense of reality and of the fantasies in the mind of the poet, and communicates truly and easily with the mind of readers or listeners [11]. Aristotle believed that strings of facts do not convert the verse to the poem, but that the verse must evoke the imagination of the audience to consider poetry [12]. Plato declared a distinction between poetry and philosophy, and ignited a new analytical approach in poetry [9]. Poetry is an effective tool to verbalize emotions and release stress [13]. Prosody produces a rhythmic pattern in poetry, which distinguishes it from prose [14]. Poetry speaks to unconsciousness, communicates with spirits and evokes a powerful emotional response in readers and listeners [15]. In poetry, the emphasis should be on the person, not the poem, whether as a teaching tool or a medical therapy [14].

Didactic Poems

Didactic poems, meant to teach the reader worldly matters and the afterlife, have internal and external characteristics that distinguish them from other kinds of poetry [14]. Didactic poems are different from poetry evoked by imagination and feeling. They possess neither the imagery of poems nor the preciseness of science [16], but are useful in memorizing the basics of science. They act like a key that opens into a safe full of jewellery. In didactic poetry, the poets want to teach science and philosophy, whether spiritual, ethical or practical to the readers.

Hesiod, the Greek poet and contemporary of Homer, is probably the first didactic poet [16]. Poetry gives students an aesthetic feeling that goes further than comprehension of meaning [17], and can help them to memorize the poem in combination with its meaning in a better and easier way than prose [18].

Didactic Poems in Medieval Persia

The diction of philosophical and ethical teachings started in fourth Hijrah in Persia. Didactic poetry had two forms in medieval Persia: one form is simple and fluent like the poems of Ferdowsi in Shahnameh, and the other is
metaphoric and far from the mind. In the first form, the poet uses verbosity to deliver his experiences to readers. In the second, the poet uses metaphor and allegory to make readers think deeply about the world.

Didactic poems are commonly simple and tailored for [19]. Persian classic poets, including Attar, Rumi, Nezami and Sa’di are premiers of didactic poems in medieval Persia. Poetic metaphors were frequently used in their works, even in their didactic poems [10]. Mowlavi, in his masterpiece, Mathnavi, used prosody in combination with allegory and embellishments to teach deep concepts of love, wisdom and courtesy [20]. The poetic style of Attar comprised two forms of mystics and moral following didactic aims [21]. Poetry, however, is traditionally considered as an art and merely accessible to the elite [22]. In medieval Persia, it was used as a tool to teach students philosophy, medicine, astrology and mathematics.

**Avicenna as a physician**

Avicenna was a renowned philosopher, and published an important philosophical work titled *Shafa*. His universal fame is mainly the result of his *Canon*. He used the Hippocratic method in medicine and the Aristotelian method in philosophy [7]. Avicenna conceived a scholastic philosophy of medicine that, in more recent times, has come to be called holistic medicine [14]. Avicenna had a great influence on medical practice and in using logic in medicine. His logical thinking in medicine later inspired the concept of scientific medicine in the Western world that later led to the evidence-based medicine of today [23]. The oldest known disquisition on clinical trials was written by Avicenna [24]. He contributed to the development of medicine and pharmacology [25].

Avicenna, in the *Canon* of medicine, follows the way of Hippocrates and Galen in describing urine [26-28]. He described the implications of urine in the diagnosis of diverse diseases in detail, and recommended that colour, odour, consistency, volume and sediment be evaluated in patients. He rehearsed the implications of urine in his masterpiece *UrjuzeTebbi* precisely and briefly [26]. A comparison of the *Canon* with other books from the same general period shows that Avicenna had huge effects on the progress of medical knowledge through personal experiments. Avicenna’s work was the vehicle through which many scientific views and thoughts entered the body of Western medical knowledge, and his texts dominated medical teaching until the emergence of modern medicine in the 17th century [25]. Avicenna
declared the role of poetry therapy in the Canon of medicine and Urjuzehtebbi. If impotence had psychological causes, poetry therapy was recommended for the patients. [29]

**Avicenna as a scholar and poet**

Avicenna and AbuReynan Biruni (author of Tafhim and Seydaneh) and Mohamad-IbnAyyub Tabari (author of the Shomarnameh) were the first to understand the need to compile scientific books in Persian, and accordingly undertook this task, which was to prove important for Iranian culture. As shown in historical sources, most scientific works during the reigns of the Samanian and Ghaznavian Era were compiled in Arabic, the dominant language at that time. Of the 479 books credited to Avicenna, only 23 were written in Persian; the best-known works in this language are the DaneshnamehyeAlaie and the ResalehyeNabz, a book on pulsology [30]. ResaleyeGhalbieh in cardiac pharmacology, Resaleye-Gholanj in gastroenterology and AlMabdaa in psychology are some of the medical works of Avicenna excluding the Canon of medicine [31]. Besides several valuable works in medicine, philosophy and logic, he also produced literary works that described his views on poetry and elegy.

According to one analysis, Avicenna's contributions to poetry comprise 22 verses and quatrains in Persian; all in all, nearly 65 distiches. His poetic works in Arabic far outnumber those in Persian [32]. Most of Avicenna's poetry had been fairly disregarded under the shadow of his prose works, and his poetic texts thus represent excellent sources for further study into this fairly neglected aspect of Avicenna's work.

Avicenna wrote two different types of poetry: poems meant to be enjoyed for their literary qualities of novelty and imagination, and his didactic Urjuzehtebbi. Throughout his life Avicenna experienced many stressful events and hardships, including orphans, extensive travel, official posts as minister in two monarchs, and imprisonment, but he is also known to have taken part in enjoyable hobbies including festivities and parties. His poems showed his various experiences [33].

A didactic poem is intended to serve a scientific and didactic purpose, and, because of the lack of the imagination factor, it is called verse rather than a poem. Based on their length, didactic poems are further divided into Urjuzeh and short didactic poems. The verse is used to simplify didactic
content, ease memorization and make difficult scientific issues more attractive [32].

One of the little-known of Avicenna’s works is the UrjuzehTebbi (also known as the UrjuZe Sinaei and AlfiZeTebbi), which comprises a perfect course in traditional Persian medicine. This book was highly regarded as a teaching tool in medieval Europe, and several Latin, English and French translations in various editions were published [4]. Translation of a verse might be word-by-word or by concept. Furthermore, in poetry, it is sometimes necessary to add extra explanations to deliver the right meaning [33].

Avicenna’s influence on Persian language and literature has been analysed from three aspects. First, his scientific texts were widely distributed in Persian, and they contributed many new scientific terms to the lexicon [34]. Second, his taste and talent for art and literature, including poetry, was evident in his writings. Third, his influence on later writings was considerable, and many other writers and poets used Avicenna as a source and inspiration for their own works [30]. He defined medicine as a tool to maintain health in times of wellbeing, and to bring back health in times of disease [35].

**Descriptions of the Contents of UrjuzehTebbi**

Two copies of this work are held in Malek Library in Tehran; other copies are in the Library of Parliament of Iran (Tehran) and the Grand Library of Ayatullah alUzma Marashi Najafi (RA) in Qom. UrjuzehTebbi is a summary of Avicenna’s Canon, and was popular in medieval Europe. The title of the book suggests that this UrjuzehTebbi is about medical sciences, and the book is a perfect course in medicine and related techniques. It offers health advice in one or two distiches on a vast range of topics. The language used in the UrjuzehTebbi is clear and easy to understand. Most topics are dealt with in a summarized form with little accompanying detail. The book starts with an introduction that offers thanks to God and praise to Prophet Muhammad (pbuh). Then Teb (medicine) is defined and the subdivisions of medicine are explained [26, 36].

Avicenna divided medicine into speculative and practical. Speculative medicine studies the functions of, and changes in, the human body and the significant factors that lead to diseases or health and help physicians to reach a diagnosis. The first main part of the poem in UrjuzehTebbi introduces speculative medicine and describes natures (tabieiat) from the elements (arkan) up to the actions of different organs (af’al). The influences of the stars
and the sun on the weather and the six necessary principles (sette-ye-zarurieh) are described in the next part. Issues out of tabieiat are then described, including diseases, causes (asbah), symptoms (d’araz), signs (dalayel and alaem) and crises (bohran) [36].

In the second part of the UrjuehTebbi, practical medicine is explained in detail. Practical medicine comprises the methods used to maintain health (Hefz-e-Sehhat) or to restore health (moalejat). The science of moalejat comprises three parts: the scheme of foods, the scheme of medicines, and manual techniques for surgery, massage, hijamat (wet cupping) and fasd (bloodletting by knife to release blood and bad humours) [26]. From the view of traditional Persian medicine, diseases are caused by the loss of equilibrium among the four humours (blood, bile, black bile and phlegm). Thus prevention, which is based on the sette-ye-zarurieh (six basic rules), seeks ways to maintain this equilibrium. Treatment is also aimed at re-establishing equilibrium among the humours and at curing the disease [3]. The second part of the book covers the preservation of health (HefzeSehhat), schemes for travellers
(TadbireMosaferin), schemes for children (Tadbirekooodakan), schemes for the elderly (Tadbiresalmandan), schemes for convalescents (TadbireNaghehin), and restoration of health to patients through medicines and foods. In this part, medicines and their constituents are described, followed by different kinds of suemezaj (distemperaments), estefragh (depletion) and fasd (bloodletting).

The theoretical health part of the book explains natures (tabieiat), elements (arkan), temperaments (mezaj), humours (akhlat), members (aza), pneumas (arvah), faculties (ghova) and functions (af‘aal). Also covered are six principle necessities (setteye-zarurieh), i.e., air, food and water, sleep and wakefulness, movement and rest, emotional states (a‘arazenafsani), and depletion and retention (estefragh and ehteghan). This section also discusses pathology and symptomatology. The practical health part deals with health guidelines for choosing the perfect place to live, eating and drinking, sleeping, physical activity, seasons, travel, children’s health, choosing a wet nurse, convalescence periods, health in the elderly, and public health. The theoretical treatment section explains pharmacology, moshelet (medicines for excreting waste), energy producing medicines (heat, coldness, wetness, and dryness), medicines with a single effect (lenitive, astringent or anticoagulant), medicines with complex characteristics (lithoclasts and diuretics), knowledge and treatment of diseases that are independent of humours, and knowledge and treatment of diseases that are dependent on humours.

The practical treatment section explains vascular surgery, tissue surgery, bone surgery and orthopaedics [26].

The introduction to the English translation [37] starts with: Praise be to Allah, the Teacher, the Unique, and Majesty of the Heavens, the Exalted, and the Glorious.

The first section of the theoretical part [37] starts with the words ‘Medicine is the preservation of health and the cure of disease that arises from conscious causes that exist in the body’.

**Literary Aspects of Avicenna’s UrjuzehTebbi and Production of the Rhymed Translation of the UrjuzehTebbi into Persian**

Avicenna’s UrjuzehTebbi versed in Rajaz meter, one of the most popular in Arabic poetry [26]. Ramal meter was chosen for the Persian translation.
of this book entitled ‘Avicenna’s poem on medicine’ because, despite the Arabic language, rajaz is not as melodic as ramal in Persian [38].

In didactic poems, the poet sometimes has to sacrifice meanings for meter, so brevity is a distinct feature of didactic poems. This fact is obvious in Avicenna’s Urjuzeh-Tebbi, where he sometimes summarizes a section in one distich for the sake of brevity. In translation, we tried to compare all distiches with concepts derived from the Canon and then translated them into Persian. We did not change the number of distiches in the Persian translation. This rule inevitably led us to confront some limitations. We thus used footnotes to explain the main text and clarify some difficult words and concepts [36].

Conclusion

Rhyme and poetry were often used for scientific writing in Avicenna’s era, and were considered an effective method for memorizing scientific information and raising students’ interest in difficult scientific concepts. The sages were interested in poetry and rhyme, and used this method to compile materials in different areas of specialization. Using rhymed texts in science is a subject that offers many opportunities for further investigation. During the Medieval era, the UrjuzehTebbi was translated into Latin, French, English and German, and its broad dissemination in different languages illustrates the importance of this work among Europeans as a short but complete course of medicine. Until now, however, a Persian translation is lacking. Despite many challenges faced in this unusual translation project, the result has proved highly didactic and highly gratifying. We hope that the Persian translation of UrjuzehTebbi will allow students and experts to better appreciate the role of didactic poems in compiling and transmitting the concepts of Iranian medicine.
References


Sažetak
Povijesna istraživanja ukazuju da su mnogi liječnici, iskusni u medicinskim znanostima, također talentirani za umjetnost, književnost i pjesništvo. Avicena je bio mudrac koji je bio vješ u pjesništvu nastavno na filozofiju i medicinu. Pisao je dvije vrste pjesama: one koje su bile namijenjene uživanju u književnoj kvaliteti originalnosti i imaginacije te njegova didaktička poema Urjuzeh. Didaktičke poeme razlikuju se od pjesništva evociranog imaginacijom i osjećajem. U didaktičkom pjesništvu pjesnici žele podučiti čitatelje znanosti i filozofiji, bilo spiritualno, etički ili praktički. U Avicenino vrijeme srok i pjesništvo često su korišteni za znanstveno pisanje i smatrali su metodom zapamćivanja znanstvenih informacija i podizanja studentova interesa za teške znanstvene pojmove. Stih je korišten za pojednostavnjenje didaktičkog sadržaja, olakšanje zapamćivanja i činjenja teških znanstvenih pitanja pristupačnijima. U srednjovjekovnoj Perziji student je medicine morao naučiti osnove filozofije prije negoli je započeo medicinsku poduku. Pjesništvo je moglo pomoći studentu upamtiti samu pjesmu u kombinaciji s njenim značenjem, na način koji je bio bolji i lakši negoli je to kod proze. Avicenino remek-djelo UrjuzehTebbi uključuje savršenu poduku u tradicionalnoj perzijskoj medicini u rimovanu tekstu pisanu na arapskom. Ovo veliko djelo bilo je prevedeno na perzijski prije centru za istraživanje tradicionalne medicine i povijesti medicine. Nadamo se da će perzijski prijevod Urjuzeh Tebbi omogućiti studentima i stručnjacima bolje uvažavanje uloge didaktičkih poema u sabiranju i prenošenju pojmovi iranske medicine.

Ključne riječi: Avicena; didaktičko pjesništvo; tradicionalna perzijska medicina; Urjuzeh-Tebbi