

# MEDICINE AND PSYCHOLOGY OF IBN SINA (AVICENNA) - A UNIQUE SCIENTIFIC AND RELIGIOUS APPROACH

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## SUMMARY

Ibn Sina (Avicenna) is primarily known for his philosophy and medicine, but there is almost no scientific discipline in which this great man didn't leave a significant mark. This paper gives a brief overview of his contribution to medicine and psychology through which his unique scientific and religious approach to the study of the phenomena of human being can be best seen. Medical works of Ibn Sina represent a pinnacle of most important medical achievements of his time. These works contain synthesis of all Greek, Indian and Iranian medical schools, but also new breakthroughs achieved by Muslim scholars through their own experimentation and practice. Although he wrote many medical works, his most important one is *El-Kanun fit-tib*, which can be translated as *The Canon of Medicine*. It's made out of five books which systematically show everything known in the area of medicine up until that point in time. In it, Ibn Sina discusses, among other things, the structure of psychological apparatus of human being and the connection of psychological functions with the brain. He considered psychology to be very important for medicine, so in his psychological works he discusses, in great detail, the essence of human soul, consciousness, intellect and other psychological functions. He observed a man in his entirety, taking into consideration all aspects of his existence, paying special attention to spiritual knowledge and spiritual perfection, religiosity, and methods of achieving inner peace and well-being.

**Key words:** Ibn Sina – Avicenna – medicine - psychology –spirituality – cognition – well-being - hodegetics

## INTRODUCTION

With the arrival of Islam in the 7th century AD, the Arabic world experienced a remarkable transformation. A new, Islamic civilization was developed, which spread to all four sides of the world and became leading in many aspects of human life for

centuries to come. In that context, medicine took special place considering the tradition of Prophet Muhammed (PBUH) that God had given a cure for every disease except old age and death and that knowledge is the lost thing of a believer, so that they should seek it „even if they had to do so in China”.

After the quick spread of the new Islamic Arabic state and the great blossom of Islamic culture, a need for educating professional medical workers arose as well as the need for improving medical science altogether. Prominent Arabic leaders, especially those from the Abbasid dynasty, invited scientists from all sides of the world to the newly founded capital, Baghdad. Through 150 years (750. - 900. AD) in that new cultural center, all of the most famous works of Greek, Roman, and Indian physicians were translated to Arabic, especially the works of Hippocrates, Galen and Dioscorides. They were translated by expert translators directly from Greek, and partly from translations to Syrian and Persian language. Towards the end of the 7th century, a certain translator school was founded in Baghdad, in which the foundations were set for medieval Arabic (Islamic) medicine. That translator school later became the Academy of sciences. Most deserving of that were the rulers of the Islamic theocratic state, who had open-handedly and tolerantly accepted and helped cooperation between Muslim, Jewish and Christian experts in medicine, philology, and other scientific and philosophical disciplines (Karamehmedović 1961).

However, they weren't only translating medical works, because even in that period we can find original medical works in the Islamic world. The number of medical authors in the classical period of Islamic medicine was huge, but the most significant ones were: Abu Bakr Muhammad ibn Zakariyya al-Razi (in the Western world known as Rhazes) (854-925), Ali ibn Abbas al-Majusi (930-994) and Abu Ali al-Ḥusayn (Ibn Sina) (980-1037). The third one is by far the greatest and the most famous of all physicians of the Islamic world. In the West, they called him Avicenna. During his life, he wrote *The Canon of Medicine*, the book that was the basis for studying medicine in the East and the West for multiple centuries. Aside from somatic diseases, some mental illnesses were described, even in that period of time, with their etiology, symptomatology, diagnostics, and therapy.

## SHORT BIOGRAPHY

Ibn Sina, in the West known as Avicenna, also known as The Prince of Physicians, was born near the city of Bukhara (today's Uzbekistan) in the year 980. Even in his early childhood days, he was showing incredible fondness for science. When he was 10 years old he had finished studying Qur'an and grammar and

then started studying logic and mathematics. Since he mastered these sciences quickly, he started studying physics, metaphysics, and medicine. At the age of only 16, he had mastered all of the sciences of his time. Ibn Sina's knowledge of medicine contributed to his reputation, so he became sought-after and a favorite of local rulers. Political instability in Central Asia made his life in his birthplace hard, so he had to leave Bukhara and go to Gorgan (Iran). However, when he got there he soon found out that the ruler whose protection he was seeking had passed away. He took it hard, so he spent a few years living alone in some village. Between 1014 and 1015 he goes to Ray (Iran), and from there to Hamadan (Iran) where he meets the ruler of Hamadan. As soon as he arrived in the city he was invited to help the ruler who was sick. When he healed him his reputation had grown so much that he eventually became vizier, a duty he performed for several years, until the death of the ruler. After refusing to keep performing his duties as a vizier, he was arrested. During the siege of Hamadan, he seizes the opportunity, escapes the prison, and leaves Hamadan. When he got out of those troubles, he moved to Isfahan (Iran), a big scientific center of the time. The ruler of Isfahan acknowledged him, and following 15 years he spent in piece in Isfahan. During that time he wrote a couple of significant books. He even started studying astronomy and undertook the building of an observatory. Because of the attack on Isfahan, by the same ruler because of whom he had to leave his birthplace, he went back to Hamadan where he died in the year 1037 aged 57 and where he is buried. During this attack, many of his important works have disappeared. Later, in Hamadan, he was built a mausoleum that exists even to this day. (Khan 2020; Nasr 1991; Corbin 1977)

Ibn Sina had many ups and downs in his life. As a physician, he spent most of his time serving different rulers which got him involved in the matters of state, and for a time, he himself was performing a high state duty. At the same time, he was living a very intense intellectual life, proof of which are numerous works he wrote as well as the quality of his students. Despite being that involved in social life and political problems, he had managed to set the foundation of middle age scholastic philosophy, to synthesize Hippocrates's and Galen's medical tradition, and make a great impact on Islamic science and philosophy as no one before him nor after him had done (Nasr 1991). Husejn (1987) says that he was above other physi-



cians because he was the greatest philosopher of the middle age, and that he was above other philosophers because he was the greatest physician of his time.

## MAJOR WORKS

Ibn Sina wrote more than two hundred and twenty works, ranging from the vast book *Kitāb al-Shifā'* (The Book of Healing), which is the largest encyclopedia of knowledge compiled by one person, to treatises of several pages. These works encompass almost every branch of knowledge, from metaphysics to medicine, in accordance with the unifying and at the same time encyclopedic genius of Ibn Sina.

*Kitāb al-Shifā'* consists of four books dedicated to logic, natural philosophy (*tabī'īyyāt*), mathematics (*riyādiyyāt*) and metaphysics (*ilāhiyyāt*). *Kitāb al-najāt* (The Book of Salvation) is a brief summary of *Shifā'*, while *Kitāb al-ishārāt wa-t-tanbīhāt* (The Book of Directives and Remarks) is Ibn Sina's last significant philosophical work and the most personal exposition of his philosophical views. His other important philosophical treatises include *Kitāb al-hidāyah* (The Book of Guidance), 'Uyūn al-ḥikmah (Fountain of Wisdom), Al-Mabda' wa'l-ma'ād (The Beginning and End) and Dānesh-nāme-ye 'alā'ī (The Book of Knowledge for 'Alā' al-Dawlata), and the visionary narrations of Ḥayy ibn Yaḳẓān (The Living Son of the Awake), *Risālat al-ṭayr* (A Treatise on Birds) and *Salāmān wa Absāl* (Salaman and Absal) which complete a cycle in which the main components of his "eastern philosophy" can be found. Ibn Sina also wrote a series of short treatises on hidden sciences and mystical, theological and religious topics, including interpretations of the Qur'an.

His most important scholarly works are the chapters on natural philosophy and mathematics in the works of *Shifā'* and *Al-Qānūn fī'l-ṭibb* (The Canon of Medicine), which is perhaps the most famous work in the history of medicine in both the East and the West. Ibn Sina also wrote about forty other medical works, including *Al-Urjūzah fī'l-ṭibb* (A Poem on Medicine) which medical students used to memorize the principles of medicine and pharmacology.

Ibn Sina wrote important treatises on language, grammar, and phonetics and devoted many pages of *Shifā'*'s work to the study of politics and sociology. He was also a great poet, and many of his poems dealing with philosophical and medical themes in Arabic and Persian have survived to this day. (Nasr 2013; 1991)

His works on music are worthy of attention from several aspects. He treated music as a science and paid attention to its theoretical and scientific dimension. The explanations he gave about musical intervals and ratios, as well as his subtlety and precision that he shows in defining basic musical concepts, are a real rarity. Likewise, his discussion of the connection between music and poetry and the comparison of these two sublime arts, may represent a pioneering study of music and poetry. (Bodžnurdi 2011)

Ibn Sina (Avicenna) is primarily known for his philosophy and medicine, but there is almost no scientific discipline in which this great man didn't leave a significant mark. In this paper, we will limit ourselves to a brief overview of his contribution to medicine and psychology through which his unique scientific and religious approach to the study of the human phenomenon can be best seen.

## IBN SINA IN MEDICINE

The Canon of Medicine is undoubtedly one of the biggest accomplishments in world history. It represents for medicine what Aristotle's works represent for philosophy, Euclid's works for geometry, Ptolemy's works for astronomy, and Sibawayh's works for grammar, the ultimate reach of scientific thought in a certain scientific branch (Husejn 1987). It's the biggest medical work of Ibn Sina and it's the most suitable source for comprehending the great contribution this author gave to natural sciences using, even in those times, methods of observation and experimentation. The Canon had gone through 15 different editions in Latin and Hebrew and for almost 600 years it was a fundamental medical literature in madrasas in the East, as well as in universities in the West, especially in England and Scotland. The first official recognition of The Canon of Medicine was in the 13th century in Poland (Cerić & Mehić-Basara 1997). That's the work that contains and systematically presents the complete medical science of that time. Ibn Sina in The Canon defines medicine: "Medicine is the science by which we learn the various states of the human body in health and when not in health, and the means by which health is likely to be lost and, when lost, is likely to be restored to health. In other words, it is the art whereby health is conserved and the art whereby it is restored after being lost." (Avicenna 1999). This medical encyclopedic work is made of five books in which the following crucial medical questions are dis-

cussed: description of the human body, constitution of the human body, temperaments, physical capabilities, somatic diseases, hygiene, death, description of diseases that affect the whole body instead of just one organ or location, and then the final chapter is related to pharmacology that is especially important from an experimental point of view. The Canon is the synthesis of teachings and traditions of Hippocrates, Galen, and Dioscorides, however it also contains many things that don't exist in Greek sources. It contains a lot of new discoveries that came as a result of medical experiments and conclusions of Ibn Sina himself, such as the usage of certain herbs, the discovery of antiseptic effects of alcohol, and the discoveries of brain tumors and stomach ulcer. In physiology and anatomy of the eye in his theory of eyesight Ibn Sina states that the light comes into the eye from the outside but at the same time a certain reflex emits from the eye and reaches the object. The Canon, alongside his other works, serves as a witness to Ibn Sina's great knowledge of medicine and as an argument for why he was known as The Prince of Physicians for a period of about a thousand years.

Ibn Sina had shown great skill in observation and experiment. He set the rules for experimenting and therefore was the first one who founded the contemporary scientific method (El-Ehvani 1984). His methods of analysis and observation, with adequate use of logic and reason, his strict determinism and insistence on controlled experiment, had the medicine be recognized as a natural science (Mašić et al. 2010). This is best seen in his medical works where he, while discussing a diagnosis of a disease and the effect of certain pharmaceuticals in its therapy, usually talks about his personal experience in work with patients. With the classification of general and specific diseases, Ibn Sina explained the way of identification of a disease and the way of treating each affected organ. Using his original experimental methods, Ibn Sina had found the cure for many a disease. He was the first one to correctly describe inflammation of meninges, meningitis, and tell the difference between meningitis and other similar diseases. He invented the administration of remedy by injection needle and was the first one to use anesthesia during surgical operations (El-Ehvani 1984). Ibn Sina discussed anesthetic agents as well as the diet for patients needing surgery. He cited 43 plants and their blends as mukhaddar (anesthetics) and taskin (pain relievers) applied before surgery by oral, nasal, or rectal route

of administration. Papaver somniferum var. album, Mandragora officinarum, Conium maculatum, Cannabis sativa, Cannabis indica, Lactuca virosa, Solanum nigrum, Fumaria officinalis, Vitex agnuscastus, Lolium persicum, Datura metel, and Commiphora myrrha are some examples. Current findings show that many of his suggested analgesics or anesthetic agents have important pharmacological properties (Ahmed S & Zargaran A 2020). He was one of the first who recognized psychological influence in the origin of somatic diseases. For example, he considered there to be two different causes of dyspepsia. The first one is mental, which leads to certain disorders, and the second one is organic, due to which, the ulcer actually appears on the stomach (Mašić et al. 2010). Besides that, his clinical observations often discuss psychology, which is according to him, and according to other Islamic physicians, tightly connected to medicine (Nasr 1991).

## IBN SINA IN PSYCHOLOGY

The main text in which Ibn Sina discusses psychology can be found in the 6th chapter of his Kitab al-Shifa (The Book of Healing) called „Natural sciences”. In Kitab al-Najat (The Book of Salvation) and Al-Isharat wal-tanbihat (The Book of Directives and Remarks), as well as in some shorter writings, he discusses psychology in different ways. Ibn Sina's psychology is fundamentally Aristotelian but in his psychology, he surpasses Aristotle's paradigm. The first question that comes to his attention is the question of proving the existence of the soul. We encounter organisms that feed, grow and reproduce. These activities aren't caused by their physicality, so there has to be something else that exists within them. The origin of mentioned activities controlled by willpower is called the soul (nafs). This word isn't just the name for that phenomenon regarding its essence, but regarding its relation to those activities. This clearly shows that the soul isn't the body, but it's that aspect of a being that can be considered its form or perfection (Bodžnurdi 2011).

His evidence of the soul's existence within man Ibn Sina bases on the thesis of man's self-consciousness, therefore he can be considered Descartes's predecessor. We know how this famous French philosopher from the seventeenth century (so 6 centuries later) in his famous statement: „I think, therefore I am/Cogito ergo sum“, had in a way summed up Ibn



Sina's demonstration of proof of the human soul's existence. Namely, Ibn Sina had already said that in a somewhat different way: „My awareness of myself is my own being/my own existence.” (Bodžnurdi 2011)

The evidence of soul's existence through man's self-consciousness Ibn Sina in a different place gives concisely and clearly: „If you think correctly, you will see that your pointing to yourself when you say 'I' has a different meaning which isn't the same as the meaning when you say 'it' because when you say 'I' you are pointing to your own being, but if you want to point out any of your organs or a part of your body you will say 'it', and by doing that you are pointing at something that is outside of the 'I', it's not the 'I' itself nor a part of it, because the 'I' isn't made of group of identities because the essence of individual parts isn't the same as the essence of the entirety they make. Therefore, when you say 'I' you should be thinking about something that isn't your body nor any of its parts. That something is 'the soul' and the essence of every human is exactly that substance we point to when we say 'I', or what others think of when they say 'you'.” (Ibn Sina 2013, Bodžnurdi 2011)

The following thesis Ibn Sina tries to prove is the spirituality of man's soul, or its independence from physical matter. He says: „There is no doubt that there is something within a man, a substance that perceives concepts (intelligible). This substance that perceives concepts isn't the body nor does it depend on it, rather it's the special kind of strength within it. Soul isn't imprinted in the body nor does it exist by it.” (Rizvi 2020, Ibn Sina 2013, Bodžnurdi 2011)

Soul is immaterial according to Ibn Sina. His predecessors have been proving the immateriality of the soul by logical evidence. Ibn Sina was the first one who was proving this by mental experience: „Let's imagine a man, created without eyesight, so that he can't see any of his skin; his limbs are separated so none of his body parts touch each other; let's say he is floating in empty space, where there is no air so he can't feel or hear anything. Won't this man be completely unaware of his body? Won't he be able to understand only one thing, and that is the existence of his soul, the existence of 'he'. Therefore, the existence of the soul is immaterial and unrelated to the body.” (Rizvi 2020, Handžić 1999)

Ibn Sina dedicated a special chapter to the question of mental faculties (strengths, functions, drives) classifying them based on their qualitative characteristics by which they differ, emphasizing the necessity of a single integrative bond between them. He claims that vegetative and perceptive faculties in a man are specifically different from those in plants and animals considering the fact that man is gifted with reason which permeates and changes the nature of these faculties. Principle that ties all of these faculties he calls the mind.

Animal soul has besides physical senses (five of them: sight, sound, smell, taste, and touch), the interior senses. Some of these perceive shapes, and others perceive meanings of sensations. Among these abilities of perception, there are some that can perceive and act, while some of them can only perceive; some can perceive only shapes, and others can perceive only meanings. The difference between these two is that shape can be perceived by both, interi-



or senses of the soul and external, physical senses. It's first perceived by an external sense which then transfers it to the soul. On the other hand, meaning is something that the soul perceives from the object without it previously being perceived by an external sense. According to Ibn Sina, the most important interior sense is the 'common sense' or the 'composite drive' (his *al-muštarak/sensus communis*). Within us, there is a power that gathers sensations of external senses, while within the external senses there is no such thing that would gather so many sensations. Sometimes we perceive something yellowish and we can immediately tell that it's honey, which is sweet, of a beautiful smell, and is fluid, without even tasting, smelling, or touching it. We can discern that thanks to the already mentioned faculty (*sensus communis* – common sense). Therefore, within us, there is an integrative faculty whose function is to gather all of the sensations and make them into one shape, one single image. That is an imaginative faculty, also called common sense, and according to Ibn Sina's classification of interior senses, it is the primary (first), faculty. Its place is in the frontal part of the brain and it perceives all information through the senses. Second, or secondary faculty is pictorial or formative faculty. Its function consists of preserving what was perceived by common sense, *sensus communis* through external senses. The third faculty with regard to the animal soul is called imaginative, and with regard to the human soul, cogitative. Its function is to select, combine and separate what was kept by formative faculty. Following faculty is a judgment that perceives meanings that cannot be perceived by external senses such as love, hate, usefulness, harmfulness in material objects and it represents the basis of our character, whether it's under the influence of reason or not. The final faculty is memory, which is located in the posterior part of the brain, and its function is to retain what was processed by the faculty of imagination or thinking. These are interior faculties. All of them have their own centers in the brain and with them, they represent a tool, an instrumentarium (organon) which is used to carry out orders of the soul. According to this, all of the faculties perceive through the brain except the rational soul, which is inherent only to man. It perceives without intermediation of the brain, e.g. man's perception of his own existence or the ego feeling. It's done not by the brain rather by direct cognition (Rizvi 2020, Ibn Sina 2013, Bodžnurdi 2011, Eydi 2010, Corbin 2009, Avicenna 2005,

Avicenna 1999, Cerić & Mehić-Basara 1997, Rahman 1988; Husejn 1987).

## SPIRITUALITY, KNOWLEDGE, WELL-BEING

Ibn Sina was a devout Muslim, of a deeply religious nature, which is manifested not only in his poetry and commentaries on the Qur'an but also in his philosophical works where he tries in every way to reconcile different views with Islamic dogmas and, in fact, in many aspects his beliefs were inspired by the teachings and the meaning of Islam. Whenever he faced difficulties in solving scientific and philosophical problems, Ibn Sina went to the mosque to pray. He wrote several treatises on the benefits of prayer, on the performance of daily religious rites, on pilgrimage, and on other forms of piety. He considered all sacral rites useful because, according to his general view of the world, there is sympathy between different degrees of reality, and especially between human souls, God and heavenly souls, and that sympathy is strengthened by prayerful actions prescribed by different religions. The sympathy that fills the entire universe and that gives meaning to all prayer actions stems from the love that flows through the veins of the cosmos and which is the driving force and cause of the existence of a given order. This love originates from the love towards God who is the most sublime object of love, and also its most sublime subject. In all beings, love is either the cause of their existence or is identical with their existence, which means that there is no being without love (Nasr, 1991).

In the *Logic of the Eastern (Mantiq al Mashriqiyyeen)* Ibn Sina gives the following recommendations for attaining sublime spiritual knowledge and states:

*"The Exalted God represents the first and final thought a man should be occupied with, observing Him should strengthen and beautify his gaze and while in a state of humility embark on a mental journey through the sublime Heavenly World, observing God's signs. When such a state is deeply rooted in the devotee of the way, the Heavenly world (Melecut) is outlined in his soul, the Divine world (Lahut) is revealed to him and he acquires intimacy with the Exalted. Then he tastes the sweetness of ultimate pleasure and takes from his soul what is most important to it. He is filled with calmness, and with security inside. He masters The most distant world, i.e. The World of Matter in a way that he is merciful to its inhabitants, facilitates their paths, and with the view of reason sees This World*



*as beautiful. His soul is constantly preoccupied with the thought of God. As an attainment of this spiritual journey, he is overtaken by ineffable joy and happiness.*

*The best act of worship for man is salah (Islamic prayer). The best serenity and relaxation is fasting. The most useful good deed is charity. The purest secret is patience.*

*The most pointless effort is to discuss untruth. Man, as long as his attention is on what someone has said and his soul is devoted to discussion, cannot get rid of his weaknesses nor can his condition change.*

*The best deed is one that is done with sincere intent. The most valuable intent is the one that came from the source of knowledge. The root and foundation of every virtue and good is wisdom. The first and foremost is the knowledge of Allah.” (Eydi 2010)*

The method proposed by Ibn Sina to attain this sublime spiritual state is the one that is very close to him, the Sufi (Tasawwuf) path of self-knowledge and perfection through self-control and development of moral virtues on the basis of which one should organize one's feelings, thoughts, behavior and lifestyle. It is a complex holistically oriented approach which, from the perspective of modern psychotherapeutic science, contains elements of spiritual, psychoanalytic, existentialist, cognitive-behavioral and gestalt approaches in psychotherapy. Ibn Sina (1999) says:

“Therefore, a reasonable person is obliged to be afraid of shortcomings and flaws, and to be pleased with everything that perfects him. He is obliged to seek everything that will complete him, perfect him, bring him honor, elevate his degree and free him from his restraints in a way that he will be safe from danger, and not in a way that he will be even more restrained, more complicated, and connected. He is obliged to be completely assured that the holy divine substance, when it gets rid of gross bodily substances becoming purer and clearer rather than connected and murky, ascends to the highest world, becomes happy, returns to its kingdom, approaches its Creator. It manages to come into the neighborhood with the Lord of the Universe, mixes with good souls like itself and others similar to it, and saves itself from what is contrary to it. On the basis of this we know that the soul which parts with the body, longing for it and fearing that parting, will be unhappy to the extreme and in great pain in regard to itself and its essence; it will turn to the farthest side of its permanent

abode and always seek peace and tranquility there.”

To understand this method, it is necessary to understand the concepts of spirit, soul and heart and their mutual relationship in the psychodynamics of spiritual improvement. The spirit is the essence in man and the soul is the appearance of that essence before the mental cognition. A heart, which in addition to signifying the bodily organ, in philosophy and religious psychology, today still represents a symbol of all-perceptibility and sensibility. Understanding and interpretation of these terms in Tasawwuf (Sufism) partly anticipates the psychodynamic understanding of psychic life. According to this understanding, these terms sometimes come in the same sense depending on which properties dominate the human spirit. If the spirit is dominated by bodily desires, instincts, it is denoted by the term *selfish soul* (as a center of passion / sexuality and anger / aggression, which would largely correspond to the psychoanalytic Id, which functions on the principle of pleasure, at the level of the primary process). If the spirit overcomes the instincts and puts them under the control of reason, in the frameworks of reality, it is then called the mind, intellect, reason (the self-critical soul, the closest psychodynamic term is Ego, which functions according to the principle of reality, at the secondary process level). When the spirit is inspired by belief, it is then dominated by religious and moral feelings (*inspired soul*) and is then called *the heart* (the closest psychodynamic term is *Superego*). Usually, the spiritual reality of the heart is veiled by the awareness focused on *the self* (self-preoccupation); which can manifest as either thought or feeling in accordance with the aspirations of a particular being and his personality traits. If these contents sublimate and the aspirations move (relocation) towards the noble spiritual virtues embodied in the divine ideal (somewhat hinted at by the psychodynamic ideal-ego) the spiritual reality of the heart is reached, the true self, the divine in man, which is the very essence of man's individuality. By the true cognizance of God, the soul rejoins the Spirit and finds its peace, serenity (calm soul). This is the point where mental and spiritual meet, where man transcends himself and strives for the divine. The soul that has been reunited with its source (religion from the Latin *religare* - re-establishing a connection with God) enters the spiritual realm and there can further improve and ascend to different degrees, which is described in detail in the mystical teachings of different religious and spiritual tradi-

tions. (Pajević et al. 2021a, 2021b, Pajević 2014, 2010, 2009, El-Gazali 2006a, 2006b, Ibn Sina 2000, Wilcox 1995, Shafii 1985).

## **HODEGETICS OF IBN SINA: EDUCATION FOR GOOD PHYSICIANS, HUMANISM AND EMPATHIC CIVILIZATION**

Digital revolution is changing significantly all fields of society, science, education and medicine and new technologies have a huge potential to change current regimes and methods of knowledge production, publication and education, generally speaking as well as specifically in medicine. Education in medicine faces a number of challenges and dilemmas and the onus is on medical hodegetics, an important but almost forgotten discipline, to address them effectively. Hodegetics (greek hodos – way, guidance, indicator of the way, pointing the way), an important pillar of the triad of medical deontology is closely associated with medical professionalism. Medical deontology (greek deon – duty or obligation; logos – meaning opinion) is a discipline for the study of norms of conduct for the health care professionals, including moral and legal norms as well as those pertaining more strictly to professional performance. In today's culture of narcissism and individualism, many forgot to love one another and they make money instead. According to Pinditrao (2014) the term medical hodegetics refers to the “the guidelines for the study of medicine which cover the ideal principles which students of medicine must learn as were once envisioned by the ancient Fathers of Medicine”. Ibn Sina is an excellent hodegetic, he really loved God, people, science, art and medicine. His Canon is the synthesis of teachings and traditions of Hippocrates, Galen, and Dioscorides, but it also contains a lot of new discoveries that came as a result of his own medical experiments and conclusions. He was one of the first who recognized psychological influence in the origin of somatic diseases. Medical hodegetics represents an art and practice of learning organization for developing three core learning capabilities: fostering aspiration (personal mastery, shared vision), promoting reflective conversation (mental models, dialogue) and understanding complexity (systems thinking). Hodegetics supports humans to continually expand their capacity to create the results they truly desire through the mission

discovery process, reviewing what they have learned, creating rapport and good and therapeutic relationships, discovering the values of others, understanding self-esteeming and building self-confidence, discovering positive intentions, making creative visualization, utilizing criticism comfortably, securing positive mental attitude, modeling and achieving peak performance. Ibn Sina was a real master of the learning organization and hodegetics in science, art and religion. Through hodegetics learners are supported to grow as persons, psychologically, socially and morally in their role identification. The values/principles that should be respected and practiced in medicine are: 1. Autonomy – “nothing about patients, without patients”; 2. Benevolence – act in the best interest of the patient; 3. Primum non nocere – first, do not harm the patient; 4. Justice - fairness and equality; 5. Dignity involves both the patient and his physician; 6. Truthfulness and honesty; 7. Medical privacy; 8. Confidentiality; 9. Fidelity - being faithful or loyal to their patients; 10. Veracity - truth telling or obligation to full and honest disclosure (Pinditrao 2014). Professional formation in medicine is the process by which some individuals become physicians who serve the calling of medicine by their knowledge, attitudes and skills. Today we can recognize three models of professionalism: 1. the virtues model based on humanism, virtues, and ethics; 2. the behavioral model based on adoption of professional competencies, and 3. the identity formation model based on progressive incorporation of the values, aspirations and missions of the medical profession into the personal identity (see Jakovljević et al. 2019). Ibn Sina practiced the virtues model based on humanism, spirituality, faith, virtues and universal ethics.

By getting acquainted with Ibn Sina's legacy, we learn, among other things, that man should be observed as a unique divine creation that combines all the wisdom of creation. That all aspects of his existence should be respected and special attention should be paid to spiritual cognitions and spiritual training, religiosity and methods of achieving internal peace and prosperity. That it is necessary for the doctor to have a spiritual background and philosophical basis that will consolidate all the facts related to the patient and based on which they will create their therapeutic approach adapted to patient's needs. That religion, philosophy, science and art are intertwined and that they complete each other. That the acquired knowledge should be applied, systematized



and transferred to others. That one should not be satisfied with superficial knowledge, but strive to reach the very essence of the problem and grasp the basic laws of events. That one should be patient and persistent in research and never give up whether it is a philosophical, scientific or practical problem from everyday life. That one should think, give his best to the limits of his possibilities and then seek help through devotional prayer to the Omniscient Creator. That through belief in God, adherence to religious laws and religious moral and ethical principles, through self-knowledge, one can perfect himself, realize the potentials given to him and rise to unimaginable intellectual and spiritual heights.

## CONCLUSION

Ibn Sina's whole scientific and philosophic legacy, especially psychological and medical theory and practice, had had such an impact on the development of medicine in the East and the West for five centuries, that there are theories that even the word medicine was derived from the name Avicenna, the name they called him in the West. Starting from the thesis that psychology and medicine are tightly connected, in his *Psychology Ibn Sina* discusses the question of man's being, proving the existence of the human soul, describing mental faculties and intellect, and discussing questions of human happiness and longing. He links man's mental faculties to corresponding centers in the brain and notes that emotional states can have a direct impact on somatic functions. He observed man in his entirety taking into consideration all aspects of his existence, paying special attention to spiritual knowledge and spiritual perfection, religiosity and methods of achieving inner peace and well-being, to which modern secularized medicine, psychiatry, psychology and psychotherapy have only gradually returned in recent decades.

### Contribution of individual authors:

Ahmed Pajević: conception and design of the manuscript, collecting data and literature searches, analyses and interpretation of literature, manuscript preparation and writing the paper; and gave final approval of the version to be submitted.

Izet Pajević: made substantial contributions to conception and design, analyses and interpretation of data, participated in revising the manuscript and gave final approval of the version to be submitted.

Mevludin Hasanović: made substantial contributions to conception and design, and interpretation of data, participated in revising the manuscript and gave final approval of the version to be submitted.

Miro Jakovljević: made substantial contributions to conception and design, and interpretation of data, manuscript preparation and writing the paper; and gave final approval of the version to be submitted.

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