



SHORT COMMUNICATION

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Applied investigation at Life Science, Hygiene, Biomedical Research in Medieval Islamic Civilization

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ABSTRACT

There is a hypothesis in history of medicine that is based on human heritage of medieval civilization and today in postmodern period it is referred to as medievalism or a return to medieval teachings for reconstruction of societies. A large part of this historical capital belongs to Islamic civilization in field of, hygiene, environmental protection and life sciences, which has a practical application in changing behaviors of individual and society. The subject of science of life and health is man and city as place of his creation, which is an international issue and belongs to the human race in all places and times. One of medieval events is emergence and movement of Islamic urban planning based on changes in lifestyle and health and environmental protection, The Islamic city was formed in an atmosphere of connection between preserving spiritual character of Man and preserving its material character, Part of social theology of Islam is teachings of life sciences and health, and in Islamic civilization, several specialized texts were compiled in this field. Islamic scientist as Avicenna, Averroes in medieval did a lot of research on biological which led to the emergence of hygiene, life science and nutrition. History of science have been attributed to Islamic scholars, many biological studies the most important of which are: Invisible micro-organisms As a factor in transmission of disease and pathological issues in recognizing blood components and controlling its disruptive systems, toxicology and its applications, exercise and nutrition and bath therapy and explaining the medical properties of food, the environmental effects of climate and embryology and finding models an animal biology that resemble and the causes and ways of treating epidemics, etc. In Islamic civilization, from advent of Islam to end of medieval, there is an evolving and evolving collection of research in field of health and life sciences which started from health teachings of Prophet of Islam and after six centuries of development has been compiled by Averroes (1198). As medical encyclopedia that is universal root of biological and health knowledge until twentieth century. special quarantine facilities and exclusive hospital for special life of some patients such as leprosy first appeared in Islamic civilization in north africa called;"AL- Demneh." paper applied finding is that a kind of individual and social hygiene theology was formed in medieval which still ensures individual and society health.

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Introduction

Preserving of Health and Hygiene the First Human Effort in Medicine

Hygiene in the Ancient Period

Preservation of health, which means maintaining health and well-being, is a collection of preservation of health and writing treatises on body planning, health, and these letters, starting point of medicine and prior to medicine. It has a long history and dates back to earliest center of civilization, Alexandrian seminary of ancient Egypt. The first researches effect on classic health sciences from Alexandrian area are Hippocrates's medical

works, especially his book on pervasive diseases called "epidemic", But in ancient times, science was not independent and was considered part of medicine [1]. Erasistratus, born in 304 BC in Alexandria, was a student of Aristotle's niece and emphasized the importance of exercising, abstaining from food, bathing, etc. The first work attributed to Aristotle's is in hygiene and the works of hygiene were among the first ancient heritage to be translated into Arabic in middle age [2]. But according to researchers in the history of medical medicine, the oldest classic treatise on infectious diseases and health in the Middle Ages was created by Razes and laid the foundation for European medical research from the beginning of the Renaissance. The oldest treatise on pervasive disease is a mystery that was translated into Latin

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in Venice in 1566 and is the oldest treatise on the history of infectious diseases. It was published in English in 1847 in London Sydenham society [3].

The Need of Hygiene in the middle Ages

In almost every king's court and every ruler and governor in east and west of the world, there was a special physician whose job it was to write a treatise to preserve the health of the sultan and the ruler and those around him. Based on this, a large number of these writings are the legacy of medieval medical texts [4].

Theology of Hygiene in Medieval

Social Theology of Environment and Health of Prophet PBUH and His Successors

Many scholars from past to present have tried to compile teachings of religious leaders of Islam on hygienic instructions and maintenance of personal and social hygiene, and this research continues with advancement of medicine. And this research on the medical words and statements of the religious leaders of Islam has become a historical phenomenon in the field of medical theology research and, social theology and environmental theology. The medieval writing about hygiene goes back to researchers of Islamic civilization. The research and collection of orders of religious leaders from the teachings of the Prophet began at the end of the eighth century AD and is still the subject of new research in the departments of science and the Qur'an and the science of the Prophet's life in the twenty-first century AD. The largest of these studies in the twentieth century, both quantitatively and qualitatively, was performed by a purebred clinical physician [5]. He has devoted his book, which is arranged in several volumes, to the study of the health and medical teachings of the Prophet of Islam, and has named his book the first university and the last prophet. The first discussion in this regard return to collection of Prophet's saying in health and medicine by Ibn Qayyim al-Jawziyya in 1350A.D and to thoughts of his successors in environment theology as Ali's medicine, Al-Sadiq's medicine, Reza's medicine were followed [6-9]. These books are a collection of health recipes on nutrition, bathing, and the head of the subjects of these health topics is in the independent part of this article. The legacy of the Prophet's sayings about this health and maintaining health is the theoretical basis of health knowledge. This was stated by special physician of Mansour Abbasid Caliph (777AD), a Christian Nestorian physician, when he asked if your book and your Prophet had brought anything about medicine, and when he described Prophet's words about hygiene and preserving of health, he thought your book and your Prophet have all of Galen's(210A.D) material on hygiene [10].

Head of Prophet's Orders in Hygiene and His Social Behavior Regarding Health

- A. Acceptance of AL-Harith, an Arab physician who graduated from Jundishapur University as his own physician [11].
- B. Maintaining the blessings of health and frequent advice to see a doctor in case of illness.
- C. Prohibition of overeating.
- D. Hygienic instructions during an epidemic (in the case of cholera): [12].
- E. Do not leave your place and city - Leaving the land has an epidemic is very dangerous.

- F. Calmness and relaxation and quitting any work causes excitement and mobility such as sports and baths
- G. Trusting in God and patience and peace and contentment with God's judgment and destiny
- H. Divide the clothes in terms of fabrics in terms of their material and the amount of heat they produce in the body and recommend the most moderate of them and their appropriate color and shape.
- I. prophet divided clothes in terms of fabrics, in terms of their material and amount of heat they produce in the body and recommend the most moderate of them and their appropriate color and shape.
- J. According to the Prophet, the physician is the guarantor of her wrong doing and being a guarantor of his ignorance.
- K. Prohibition of treatment with forbidden materials and things.
- L. Sitting shape while feeding and drinking water L: The benefits of milk and dairy products in
- M. Maintaining health, which became known as the Prophet of Friendship.
- N. Description of a health residential house. Natural sleep and wakefulness plan suitable for the health of the body
- O. Maintaining health with perfume.

Hygiene Sciences in Classical Texts and Academic Circles of Islamic Empire in middle Ages:

In the field of Islamic civilization, research in health began with the translation of ancient works on health including the translation the work of Galion by Rahawi [13]. Hygiene sciences soon became an integral part of the administrative system of Islamic states and became one of the royal decrees. And the main duties of the mayors of Islamic cities have been mentioned and in Islamic sources, the Prophet has been mentioned as the first accountant of urban in the environment [14]. In the Islamic city system, the accountant is responsible for the care of the guilds to control the observance of the principles of health by the guilds. On this basis, dozens of treatises were written on the protection of the urban environment and the observance of urban health and the need to control health and the environment by special police who were stationed in the bazaar and on the street. Dozens of medieval treatises were written based on the instructions of the Prophet and her successors on health and the environment the most important of these treatises were first published in Iran in Buyeds dynasty (132-1002 AD), and in Egypt, Ali ibn Rezwan (1087-998) wrote about the protection of health with the title Fi Ma'far Mudhar Al-Abdan about Egypt and Ibn Akhwa was written with the title of AL- Ma'alem Al-Qarba Fi Ahkam Al- Hasaba. Finally the most complete Islamic text was written in Islamic civilization by Averroes in his work Al-Kulliyat fi al-Tibb [15-18].

Hygiene Works in Europe in the Middle Ages

Averroes Source of Research on Hygiene in Europe, Emergence of Nutrition Sciences

The section of Averroes 's books on medicine is entitled Health. And this is the culmination of the advancement of health knowledge and the preservation of the health of the body in the middle Ages and its classical and academic form, which became

the model for writing health guidelines in Europe [19]. First his student, Ibn Maimun wrote book based on the second part of Averroes's encyclopedia in medicine [20]. The main purpose of Averroes is to introduce and describe a moderate body this is based on nutrition, and this is Averroes's prelude to formation of independent treatises on nutrition in his time. Nutrition Science and food properties; and the effects of foods and their elements and natural properties were of great importance in the era of Hafsid kingdom, and theoretical studies were conducted in this field. For example, Ali of Morocco wrote an instructional text on the language of poetry, which is a kind of educational poem in nutrition. He composed a poems (educational poem) on the value of many popular dishes, which was considered by the Hafsid royal family and arranged this book in nutrition and hygiene for Amir Abdul Rahman bin Abi Bakr [21, 22].

Effects of Islamic Hygiene Works in Europe

The writing of hygiene in Christian Europe began in Spain by Averroes and Ibn mymun and by, the site of legacy and experience of Muslim health and hygiene treatises the writing of health orders begins. in 1307, by Arnold, he wrote the Hygiene book for King of Aragon, and by Adam Carmonia in his saying about that the pilgrims and the elderly were in good health and etc. [23,24].

Evolution of Knowledge of Biological Sciences in Islamic Civilization

Production and Research in Different Branches of Biological Sciences in Islamic Civilization in the middle Ages

Islamic civilization is witnessing the evolution, research and initiative of the production of textbooks in the branches of biological sciences, Numerous treatises on toxicology, by Musa ibn Maymun, which are based on Averroes's book and others that have a work on toxicology and Hygiene [25]. Numerous treatises and researches in recognizing baths and hot springs and treating by them. Ibn Maymun's research based on Averroes's medical works and alusian scientist Ibn Wafid's treatise (1074AD) on bathing, which was translated into Latin, became the source of bath research in the west in Middle Ages. He believed in maintaining good health with food before treatment with medicine [26].

Issues of Hygiene in Islamic Civilization Six Centuries after Order of Prophet in Hygiene

The science of health in Islamic civilization is within the boundaries of Islam and Islamic philosophy of cleanliness, but the development of classical and experimental medical texts and the collection of human knowledge is based on a scientific method that has passed six centuries from Avicenna to Averroes. The starting point of the classic Arabic-Islamic works on health goes back to Iran and Avicenna, who wrote the first academic treatise on Greek medicine and dealt with various aspects of physical and mental health. [27]. At the end of the evolution of health science in the collection of Islamic medicine, Averroes has dealt with health in a regular and systematic way [28]. The most important common points of health science in field of Islamic medicine which is recommended by Ibn Sina are as follows:

Natural and light exercise was one of the most important topics in books of hygiene, which emphasized role of exercise in hygiene and providing health and eliminating disease.

- Living in the open air
- Mental austerity, morality and mental health;

- Food and water and normal sleep

Proper housing in terms of light and the type of building materials used in it; among other things, it was recommended that the walls be whitewashed with clean plaster.

- Recommendations for rural houses
- Permanent control of food by government officials
- Establishing baths in public places

Formation of Islamic City Based on Health and Environmental Protection in Hasbeh System

Islamic City Paradigm, System and Good Organization

The Islamic city is based on health and its theoretical foundations are in legal instructions of citizenship. In author's article, paradigm of Islamic urban planning and endowment and environmental protection which was presented as a lecture at University of Isfahan during one day workshop in 23 February 2000. The real face of Islamic city is a paradigm of city designed to protect human environment [29]. Based on bulk of material in these theoretical letters, which court of audit is responsible for enforcing, city provides personal hygiene and environmental protection. Hasbeh is a Islamic term used in field of urban planning in Islamic civilization, and Hasbeh has been considered by European orientalist more than any other Islamic organization including Cohen's French orientalist books [30,31]. And in entry of Hasbeh in great encyclopedia of Islam and it has been discussed in book of author, History of Islamic administration the author has studied Hasbeh in detail in different periods of Islamic states from Prophet to Safavid state and Ottoman Caliphate. Hasbah's system and organization, of which urban planning is part of its work has been a large, powerful, and connected organization to power of Islamic monarchy and caliphate. This large organization consisted of police force, judiciary, caliphate, royal administration, and a group of experts from various guilds and occupations. And they were in charge of day-to-day auditing of various sections of city's population, and city was at their disposal at all times of day and night.

Progress of Islamic City in Health in Medieval

Many researchers have compared the Islamic city in with European city in middle ages and have emphasized superiority of health and social security in medieval Islamic city over European medieval city. Among them is Ms. Hunke German orientalist in her doctoral dissertation, entitled "Islamic Culture in Europe," in which she writes in several places. The shape of European cities by those returning from the Crusades from the East in accordance with the environment of Islamic cities changed and progressed, and according to them, caravanserais, hotels, baths, etc, were built. Gustav Lubon is Another orientalist who has emphasized impact of Islamic pattern about urban environment in formation the health environment of medieval Europe [33]. He describes at end of his book, the culture and civilization of Islam and Arabia after a detailed description of Islamic civilization, such as his description of development of Spanish cities in Islamic period and medieval city of Paris with Cordoba, Umayyad capital. The night cleanliness of passages have been compared, and his end result is human changes in environment by Islamic civilization. In this regard, he writes: on extraordinary dominance and moral influence of born Arabs of Islam, who have trained the savage tribes of Europe through humanity, and opened to them gates of science, technology, and philosophy, which they were for six hundred years our master

[34]. One of reciprocal services of Islam and Iran after fall of Sassanid Empire is production of academic treatises in Persian on health. The main issue of these books is clothing, housing, weather, water, food, exercise, movement, stillness, sleep, wakefulness, bathing. Only three hundred years after conquest of Iran by Islam, the writing of orders to preserve individual and social environment in Iranian cities began, and this is due to religious background of ancient Iran in matter of health. The writing of treatise on health developed and expanded, and finally Avicenna presented first classical treatise on health. Part of the world heritage of health treatises is related to health instructions in Iranian culture and medicine from ancient, medieval and modern times, in contemporary period about four hundred of them in the world by European orientalisists such as Edward Brown has been identified. And at the top of them is Avicenna treatise on hygiene, several contemporary bibliographic works list and explain these works.

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