

The Development Of Medicine In Western Europe During The Renaissance.

Awaish Asim

SamSMU Faculty of International Education 3 year student

Usmonova Laylo Rakhmatullaevna

Associate Professor of the Department of Social Sciences and Humanities

Annotation: The Renaissance, also known as the "Rebirth", was a significant societal shift in Europe spanning from the 14th to the 17th century. Therefore, the beginnings of the Renaissance were not at all intentional but rather the outcome of various unconnected events and occurrences. The dissection of human cadavers was forbidden by both the Catholic Church and the Coran, which resulted in a slow advancement in the understanding of anatomy. During this period, influential medical figures and scholar humanists achieved significant progress in the fields of medicine and surgery. First to be examined will be Linacre, Erasmus, Leoni cello, and Sylvius, as they all belong to the early classic Renaissance period. Andreas Vesalius and Ambroise Paré then made significant contributions to anatomy and surgery, respectively, through the publication of their works "Human Factory" (1543) and "The Apologie and Treatise of Ambroise Paré." During the transition from the Renaissance to the New Science era, William Harvey, a renowned British doctor and researcher in the field of cardiovascular health, uncovered the concept of general circulation. In 1628, he released his discoveries in the book "The Motu Cordis."

Keywords:

Introduction. The Medical Renaissance involved numerous skilled doctors and surgeons who made significant advancements in the field of Medicine. The Renaissance was characterized by a prevalence of religious and supernatural beliefs and practices that were far removed from the modern scientific realm. Certain irregular actions were viewed as instances of demonic possession and addressed through exorcisms. Many sources back it up. Yet, certain significant sources of the Renaissance present an alternative view. They indicate a movement towards explaining many diseases, such as epilepsy, with naturalistic causes. The idea of the Renaissance as a period in history was created by French historian Jules Michelet during the 19th century. Nonetheless, men who were educated in the Renaissance were aware that they were engaging in activities that differed from those of the recent past, which had experienced a decline in comparison to the classical antiquity. It was named the Middle Ages, but later the concept of the Dark Ages was created. According to Aristotle and other Renaissance philosophers, medicine was considered a component of the practical branch of philosophy. Yet, writers such as Reisch, influenced by Arab and Medieval thinkers, viewed medicine as possessing elements of theory as well as practice. During a time when the focus was mainly on humans, Andreas Vesalius views anatomy as the most important aspect of natural philosophy, as it encompasses the natural history of humans and is the essential basis of medicine. The illustrations play a significant role in the field of medicine during the Renaissance era. Although Leonardo da Vinci led the way, he did not make his drawings public. During the Renaissance, Andreas Vesalius, the most important anatomist of the time, hired artisans to create illustrations and woodcuts for his famous work "De humanis corporis fabrica". Hieronymus Brunschwig, a man of noble standing, identified himself as the "Surgeon of the Free Imperial City of Strasburg." In 1497, he released "Das Buch der Cirurgia" (The Book of Surgery). Published by Hans Gruninger, it was the initial German language printed medical manual and the first medical text to include elaborate woodcut illustrations (1). During the Renaissance period, Mondino de Liuzzi (1276-1326) and Guido da Vigevano (1280-1349) were instrumental in promoting cadaver-focused studies in cities like Bologna, Florence, and Padua, leading to a surge in research in this field. Famous scientists of this time, such as Leonardo Da Vinci, Andreas Vesalius, Bartolomeo Eustachio, and Costanzo Varolio, advanced research on neuroanatomy. The different texts created at this time not only improved knowledge of neuroanatomy and neurophysiology, but also contributed to the establishment of medical education. New strategies to treat different neurosurgical issues emerged as knowledge grew, ranging from skull fractures to injured peripheral nerves (2). Berengario made a major impact on the study of human brain anatomy by providing a detailed

explanation of the meninges, cranial nerves, and the ventricular system, which included choroid plexuses, interventricular foramen, infundibulum, pituitary stalk, and gland. Berengario, who passed away circa 1530 in Ferrara, should be celebrated for his pivotal role in transforming medieval understanding of morphology into a contemporary anatomical science grounded in firsthand observation and experimental proof (3). While illustrating, da Vinci was skilled at interpreting the intricacy of structures like the brachial plexus, showing the upper, middle, and lower trunk divisions. His depiction of the compassionate tree trunk was among the first (4). From Hippocrates' era until the early 19th century, there was progress in knowledge, but it was not consistent. Anatomy was primarily established by Galen and stayed unchanged until the early 16th century. Although Galen described neuroanatomy, it had limited usefulness since brain surgery was not feasible. Knowledge of the structure of the skull was established and mainly accurate. Precautions were made to steer clear of the frontal air sinuses, venous sinuses, and the temporal region. The understanding of the brain's role in consciousness was lacking. It was believed to be where the soul resided, but there was a limited awareness that harm to it could lead to symptoms like stupor or paralysis. These injuries were said to be caused by damage to either the meninges or the bone (5). Chorea has been used since the Middle Ages to categorize both physical and mental disorders involving motor control. Paracelsus first identified chorea as a physical medical ailment in the 16th century. Gilles de la Tourette and Charcot originally believed tic disorders and startle syndromes were closely related, but they were eventually distinguished as separate conditions. Tuberculosis (TB) mirrors the evolution of human civilization from the Stone Age to the present day. TB remains one of the top 10 causes of worldwide human mortality during that time frame (6,7,8). In the 1500s, as Latin translations of ancient Greek medical texts became more available and criticisms of Avicenna emerged, Western Europe's dependence on his work decreased, yet the Canon of Medicine was still respected. The reduced reliance on the Canon resulted in the overlooking of numerous of its groundbreaking ideas, such as contagion, in Western Europe. For contemporary readers, it's difficult to understand not acknowledging the idea of contagion when considering the existence of two prevalent diseases during that time: the plague and syphilis. The Black Death continued to reappear at intervals during the Renaissance (9).

Methods and materials: Article was taken from the existing literature on the development of medicine in Western Europe during the Renaissance. The method of qualitative analysis was used to determine the authenticity of the information provided in the article. Journals from PubMed and Google were used.

Conclusion: The study of medieval medicine is growing in popularity among mainstream historians and cultural history scholars. Nevertheless, it possesses distinct features, and having knowledge of its origins, techniques, and restrictions could assist non-experts in better navigating, investigating, and potentially enhancing its ability to shed light on how medicine and health intersect with other elements of medieval culture. Even though this article is centered mainly on western Europe.

LITERATURE

1. Toledo-Pereyra, L. H. (2015). Medical Renaissance. *Journal of Investigative Surgery*, 28(3), 127–130. <https://doi.org/10.3109/08941939.2015.1054747>
2. Nanda, Anil et al. "Renaissance Neurosurgery: Italy's Iconic Contributions." *World neurosurgery* vol. 87 (2016): 647-55. doi:10.1016/j.wneu.2015.11.016
3. Parent, André. "Berengario da Carpi and the Renaissance of Brain Anatomy." *Frontiers in neuroanatomy* vol. 13 11. 13 Feb. 2019, doi:10.3389/fnana.2019.00011
4. Rai, Rabjot et al. "Leonardo da Vinci and his contribution to our understanding of the lumbosacral plexus." *Child's nervous system: ChNS : official journal of the International Society for Pediatric Neurosurgery* vol. 35,11 (2019): 2021-2022. doi:10.1007/s00381-018-3918-3
5. Ganz, Jeremy C. "Evolution of understanding." *Progress in brain research* vol. 285 (2024): 95-113. doi:10.1016/bs.pbr.2024.02.017
6. Lanska, Douglas J. "Chapter 33: the history of movement disorders." *Handbook of clinical neurology* vol. 95 (2010): 501-46. doi:10.1016/S0072-9752(08)02133-7
7. Munts, Alexander G, and Peter J Koehler. "How psychogenic is dystonia? Views from past to present." *Brain: a journal of neurology* vol. 133 ,Pt 5 (2010): 1552-64. doi:10.1093/brain/awq050
8. Pezzella, A Thomas. "History of Pulmonary Tuberculosis." *Thoracic surgery clinics* vol. 29,1 (2019): 1-17. doi:10.1016/j.thorsurg.2018.09.002

9. Fracastoro, G. 1930. *Hieronymi Fracastorii—De Contagione et Contagiosis Morbis et Eorum Curatione, Libri III.* Translation and notes by C. Wilmer G. P. Wright Putnam's Sons, New York, NY.