

Review Article

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The Evolution of Aging and Gerontology: A Historical Odyssey

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Abstract

Objectives: This study examines the evolving perceptions of aging and elder care across various historical periods, focusing on pivotal milestones that have influenced the field of gerontology in cultural, ethical, and scientific contexts.

Design: Review study examining significant historical periods.

Setting(s): Historical and cultural contexts across ancient societies, the Islamic Golden Age, the Renaissance, the Enlightenment, and the era of modern industrialization.

Outcome Measures: Insights into societal attitudes toward aging, elder care practices, and the development of gerontology as a scientific discipline.

Results: Across history, societies have displayed varied perspectives on aging, shaping elder care and scientific developments in gerontology. In ancient civilizations, older adults were valued for their wisdom and contributions, often holding revered positions in society. The Islamic Golden Age reinforced the importance of medical ethics and elder care, integrating philosophical and medical principles to ensure the well-being of aging individuals. The Renaissance and Enlightenment movements emphasized human dignity and social justice, bringing new frameworks for understanding the societal role of older populations. With the Industrial Revolution, aging was reframed as a social concern, leading to foundational advancements in gerontology as a distinct field of study. In contemporary times, gerontology has evolved into a multidisciplinary science, employing technological innovations and social policies to address the complex needs of aging populations.

Conclusions: The historical evolution of perceptions regarding aging underscores the fundamental importance of respect and care for older individuals. Lessons from various eras have shaped modern gerontology, fostering strategies that promote dignity, health, and inclusion in aging societies.

Keywords: Aging, Gerontology, Ancient civilizations, Elder wisdom, Islamic Golden Age, Renaissance, Industrial revolution

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Introduction

Aging has long been an integral aspect of human life, shaping societies, cultural values, and intellectual traditions.^{1,2} While contemporary gerontology primarily examines aging through biological, psychological, and sociological lenses, historical perspectives have played a crucial role in defining how different civilizations have understood and treated the elderly.^{3,4} In ancient times, older individuals were revered for their wisdom, contributing to governance, philosophy, and social structures.⁵ However, the perception of aging has continuously evolved, influenced by medical advancements, economic transformations, and shifting ethical frameworks.⁶

Throughout history, the role of elders has fluctuated between respect and marginalization, reflecting broader

societal changes.⁷ Ancient civilizations such as Egypt, Greece, Rome, and China esteemed aging as a source of wisdom and continuity, integrating it into religious and philosophical doctrines.⁸ Later, the Islamic Golden Age emphasized medical ethics in elder care, contributing to structured healthcare principles.⁹ The Renaissance and Enlightenment eras redefined aging within human dignity and social justice discourses, reinforcing the necessity of rights and welfare systems.¹⁰ Industrialization, while advancing scientific studies on aging, also reframed it as a socioeconomic concern, leading to policies addressing financial security and healthcare for older populations.¹¹

Today, aging presents new challenges shaped by globalization, technological innovation, and demographic shifts.¹² While gerontology has emerged



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as a multidisciplinary field to address the needs of aging societies, a critical examination of historical perspectives can offer valuable insights into effective elder care models, ethical principles, and policy-making approaches.¹³ This study investigates the historical evolution of aging perceptions, analyzing pivotal milestones that have contributed to modern gerontological frameworks. By bridging historical insights with contemporary challenges, the research aims to refine the understanding of aging and offer solutions rooted in the collective wisdom of past generations.

Methods

This study employed a qualitative historical analysis to examine the evolving perceptions of aging and elder care across different historical periods. It used a systematic approach to selecting and analyzing both primary and secondary sources, ensuring a rigorous and comprehensive investigation of historical shifts in gerontological thought.^{13,14}

Source Selection Criteria

The selection of primary and secondary sources followed specific academic criteria to ensure relevance, credibility, and historical accuracy.

Primary sources included original historical texts, philosophical treatises, religious scriptures, and early medical manuscripts. These texts provided first-hand insights into societal attitudes toward aging and elderly care in ancient civilizations, the Islamic Golden Age, the Renaissance, and the Enlightenment.

Secondary sources consisted of peer-reviewed scholarly articles, historical analyses, and books that contextualize aging within broader scientific, ethical, and sociological frameworks. These sources helped establish connections between historical perspectives and contemporary gerontology.

The inclusion criteria for both primary and secondary materials were based on historical significance, academic credibility, methodological rigor, and their relevance to the field of aging studies. Only sources published in reputable journals, academic books, and established historical archives were considered.^{15,16}

Analytical Framework

To ensure methodological consistency, this study employed a comparative and thematic analysis of the selected sources.

- 1. Comparative historical approach: Texts and documents from various civilizations were compared to identify key trends, philosophical shifts, and changes in societal attitudes toward aging. This approach highlighted the continuity and transformation of aging perceptions across time.
- 2. Thematic analysis: Primary and secondary sources were categorized into thematic clusters, such as elder wisdom, medical ethics, social justice, and

industrialization impacts. This classification enabled a systematic examination of recurring themes that have shaped gerontological discourse.

3. Contextual analysis: Each historical period was assessed within its cultural, economic, and intellectual context to determine how societal structures influenced perceptions of aging. This ensured an accurate representation of historical developments without imposing contemporary biases.^{17,18}

Limitations and Scope

While this study provides a broad historical overview, certain limitations exist.

Some historical records may be fragmented, incomplete, or biased, particularly ancient texts where translations or secondary analyses differ.

The scope of analysis is predominantly Western and Middle Eastern, though efforts have been made to include perspectives from Asian civilizations where relevant.

Given the interdisciplinary nature of gerontology, further empirical studies may be required to bridge historical findings with modern aging policies effectively.

By employing a robust selection process, systematic analytical methods, and historically contextualized interpretations, this study ensures that its conclusions are academically rigorous, methodologically sound, and valuable for contemporary discussions in gerontology.^{19, 20}

Results

Ancient Civilizations: The Wisdom of Age

In ancient civilizations, older adults were often held in high regard for their wisdom and spiritual authority.^{21,} ²² For example, the Egyptians believed that the elderly possessed the ability to communicate with the gods, and their concept of Ma'at was intricately connected to the wisdom of elders.^{23,24} Similarly, Greek philosophers such as Plato and Aristotle emphasized the societal significance of the experiences of older individuals, with Plato's Republic asserting that respect for elders is crucial for societal progress.²⁵⁻²⁷ Roman figures like Cicero reinforced this belief, highlighting the unparalleled value of experience, while Confucianism in China linked filial piety with moral integrity.²⁸⁻³¹

The Islamic Golden Age: A Focus on Elder Care

During the Islamic Golden Age (8th–13th centuries CE), scholars such as Ibn Sina (Avicenna) and Ibn Rushd (Averroes) emphasized the importance of caring for the elderly. Ibn Sina's Canon of Medicine recognized the unique care requirements of older adults, highlighting the importance of respecting their wisdom.³¹⁻³⁴ Islamic culture, as reflected in the Quran, views respect for parents and elders as a moral obligation, integrating gerontology with both spiritual and medical understanding. The focus on elder care during this era has had a lasting influence on medical ethics and practices.⁹

Renaissance and Enlightenment: A Shift in Perspective

The Renaissance (14th–17th centuries) and Enlightenment (17th–18th centuries) marked significant shifts in thought, characterized by a resurgence of classical knowledge and a renewed emphasis on human dignity and potential.^{35,36} Thinkers such as Pico della Mirandola questioned the traditional perception of older adults as frail, emphasizing the role of education and experience in achieving human potential.^{37,38} Enlightenment philosophers such as Rousseau and Montesquieu expanded the discourse to include the rights and dignity of the elderly, foundations for modern ideas of social justice, and human rights.³⁹⁻⁴¹

Industrialization and Modernization: Aging as a Social Problem

The Industrial Revolution (18th–19th centuries) brought about dramatic changes in work patterns and family dynamics.^{42,43} As urbanization and industrial labor increased, traditional support systems for older adults weakened, leading to the development of social security programs and framing aging as a societal issue that required addressing. During this period, gerontology emerged as a distinct scientific field, focusing on agerelated illnesses, social security, and the establishment of pension systems.⁴⁴⁻⁴⁶

Contemporary Era: A New Understanding of Aging

In the 20th and 21st centuries, gerontology has evolved into a multi-disciplinary field that integrates insights from biology, psychology, sociology, and technology to address the diverse needs of aging populations.⁴⁷ The World Health Organization defines gerontology as the study of the biological, psychological, and social aspects of aging.⁴⁸ Modern gerontology focuses on strategies for healthy aging, embraces technological innovations, and promotes international collaboration to improve the quality of life for older adults.⁴⁹

Contemporary Challenges in Aging: Technology, Globalization, and Policy Implications

The evolving perception of aging has been shaped by historical transformations in medical practices, philosophical discourse, and societal attitudes.⁵⁰ While modern gerontology continues to benefit from these historical insights, contemporary aging populations face new challenges that necessitate innovative approaches to elder care. Among the most pressing issues are the rapid advancement of technology, the effects of globalization on traditional caregiving structures, and the socio-economic pressures stemming from increased life expectancy.^{51,52} Understanding these challenges within a historical framework enhances the ability to formulate effective solutions that uphold the dignity and inclusion of older individuals.^{53,54}

The integration of advanced technologies into aging care has produced both significant advantages and inherent challenges. Digital health innovations, such

as AI-driven diagnostics, wearable monitoring devices, and telemedicine platforms, have improved healthcare accessibility and personalized treatment for older adults. Similarly, assistive robotics and smart home technologies facilitate independent living, mitigating reliance on institutionalized care. However, the emergence of these technologies has also contributed to a growing digital divide. Many elderly individuals struggle with technological literacy, limiting their ability to benefit from digital health services. Historically, elder wisdom was transmitted through direct interpersonal exchanges, ensuring social engagement and community participation. The shift toward digital communication has diminished these interactions, leading to increased social isolation among aging populations. Addressing this divide requires targeted education programs and the development of ageinclusive digital interfaces that foster accessibility.55

Globalization has further reshaped aging experiences by transforming family dynamics and healthcare accessibility. Historically, aging individuals were integrated into extended family systems, receiving continuous care within intergenerational households. The Industrial Revolution marked the beginning of shifting caregiving models, with urbanization and workforce mobility weakening traditional elder support structures. In contemporary society, younger generations frequently migrate for economic opportunities, leaving elderly family members with diminished social networks and inadequate community-based support. This phenomenon necessitates policy-driven solutions, including governmental initiatives that strengthen community caregiving programs and social services tailored to aging populations. Learning from historical precedents where communal elder care models thrived could inform the development of sustainable frameworks that address the challenges posed by an increasingly dispersed global population.56,57

Another critical challenge is the socio-economic strain resulting from increasing life expectancy. While medical advancements have contributed to improved longevity, they have also placed substantial pressure on healthcare systems, pension funds, and social welfare programs. In ancient civilizations, aging was revered, and elder participation in social and intellectual spheres remained significant. Today, the extended lifespan of individuals demands a reassessment of employment structures, financial security policies, and healthcare accessibility. For instance, the Islamic Golden Age established ethical guidelines for elder care that emphasized the interconnectedness of medical, social, and familial obligations. Similarly, Enlightenment-era philosophies championed social justice for aging populations, paving the way for contemporary welfare frameworks. Evaluating these historical models provides valuable insight into constructing equitable policies that ensure economic stability and healthcare provision for aging individuals without compromising their autonomy and

social inclusion.56,58

Despite the evolving complexities surrounding aging, one fundamental principle remains unchanged: the necessity of preserving dignity, respect, and inclusion for older adults. By leveraging historical insights, contemporary societies can bridge gaps in elder care through policies that balance scientific advancements with ethical considerations. The lessons of the past offer a blueprint for addressing modern challenges, reinforcing the importance of intergenerational cohesion and the development of holistic aging strategies that prioritize accessibility, equity, and well-being.^{59,60}

Discussion

The perception of aging has evolved markedly over time, transitioning from a natural and respected phase of life to a social and medical issue often necessitating intervention. In ancient civilizations such as Egypt, Greece, Rome, and China, the wisdom of the elderly was highly valued. This respect arose from the belief that older individuals held both spiritual and worldly knowledge vital for societal advancement.^{61,62} During the Islamic Golden Age, elder care became central to medical ethics and practice, underscoring the necessity of respect and focused attention on older adults.63 The Renaissance and Enlightenment periods marked a significant shift towards emphasizing human rights and social justice, paving the way for contemporary welfare systems.^{64,65} While industrialization and modernization fostered economic growth, they introduced challenges for older adults as traditional support systems waned.^{66,67} In response, modern gerontology has sought to tackle these challenges through scientific and technological advancements, focusing on the biological, psychological, and social needs of aging populations.68,69

Conclusions

The history of aging and gerontology demonstrates that respect for older adults has consistently been integral to human society. From the wisdom of ancient times to contemporary research, the evolution of this field reflects broader cultural, philosophical, and scientific changes. As the global population continues to age, historical lessons underscore the importance of integrating care, respect, and understanding into modern elder care practices. Gerontology, now a crucial interdisciplinary field, will continue to shape how society supports its aging members, promoting dignity, health, and social inclusion across generations. This perspective, supported by rigorous analysis, aligns with the research methodologies prevalent in the study of medical history.

Author contributions

Conceptualization: Mark J. M. Sullman, Reza Mohammadinasab. Methodology: Mark J. M. Sullman, Reza Mohammadinasab. Project administration: Mark J. M. Sullman, Reza Mohammadinasab. Supervision: Mark J. M. Sullman, Reza Mohammadinasab. Validation: Mark J. M. Sullman, Reza Mohammadinasab. Writing–original draft: Mark J. M. Sullman, Reza Mohammadinasab. Writing–review & editing: Mark J. M. Sullman, Reza Mohammadinasab.

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