

Practical Exploration of Talent Cultivation for Smart Healthy Aging Service and Management Professionals



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Abstracts: With the accelerated aging of China's population, the development of the profession of intelligent healthy aging service and management has received increasing attention. This paper discusses the background of this specialty, the list of competencies of professionals and the practical strategies of talent cultivation, aiming to improve the quality of professional talent cultivation. By analyzing the cultivation strategies of key competencies such as geriatric health assessment, smart elderly care technology application, elderly care service planning and management, psychological support as well as innovation and learning ability, the study emphasizes the importance of interdisciplinary curriculum integration, internship and practical training enhancement, industry-university-research cooperation and case study teaching.

Keywords: smart aging; smart healthy aging service and management; population aging; interdisciplinary courses

Introduction

With social development and demographic changes, ageing has become one of the major challenges facing the world. The increase in the elderly population has brought about a series of social problems, and at the same time, it has also brought opportunities for the development of the healthcare and senior care service industries. Against this background, the smart healthy elderly service and management program has emerged, which covers not only health care and life management for the elderly, but also the application of smart elderly care technology, aiming to cultivate high-quality professionals capable of adapting to the needs of an aging society. These professionals will be responsible for providing comprehensive, efficient and personalized services to the elderly, not only focusing on their physical health, but also on improving their quality of life, so as to effectively respond to the challenges and opportunities brought

about by the aging society.

1. Challenges of the Aging Society and the Development Trend of Smart Aging

By the end of 2023, China's elderly population aged 60 and above will approach 300 million, entering the stage of a moderately aging society. As the trend of population aging accelerates, the size of the elderly population continues to expand, and the demand for senior care services is growing, the traditional model of senior care has been difficult to meet the needs of modern society and is in urgent need of transformation and upgrading. In the face of the increasing challenges of an aging society, smart elderly care, as one of the solutions, is rapidly developing and is expected to become an important part of the elderly care service system. With the advancement of technology and the development of society, smart elderly care is not only limited to traditional medical care services but also extends to a variety of aspects such as life support, psychological care, emergency rescue, rehabilitation guidance, etc.,

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forming a service system that covers the full range of daily life of the elderly. Smart elderly care can also effectively integrate resources, promote the combination of medical care, strengthen community and home care services, and meet the diversified and personalized needs of the elderly in their old age. The development of smart elderly care also faces some challenges, such as the difference between technology applications and the acceptance of the elderly, the improvement of the quality and efficiency of elderly care services, the integration and sharing of elderly care information resources, and the improvement of the elderly care service system. To cope with these challenges, the joint efforts of the government, society, enterprises, and families are needed to continuously promote the improvement and development of the smart senior care service system through a variety of measures, such as policy guidance, technological innovation, talent cultivation, and exploration of service models. In this context, the construction and development of the specialty of smart healthy aging service and management are particularly important. Cultivating a group of professionals who understand both technology and management, and who can master the operation of intelligent senior care services, will provide solid talent support for promoting the development of China's intelligent senior care industry, and help solve the many problems faced by the aging society.

2. The Ability List of Intelligent Healthy Elderly Service and Management Professionals

2.1 Elderly health assessment and personalized care plan development

The competency of geriatric health assessment and personalized care plan development requires professionals to be able to accurately assess the health status of the elderly, including physical, psychological, social, and other needs, to provide them with comprehensive and detailed care services. Through systematic assessment of the health status of older adults, professionals can identify potential health problems, intervene promptly, and prevent the development of diseases, thereby improving the quality of life of older adults. The formulation of personalized care plans is done based on the

assessment results, taking into account the personal preferences and living habits of the elderly as well as their social and family environments. This not only enhances the relevance and effectiveness of care services but also improves the well-being and satisfaction of older persons. The goal of cultivating such competence is to enable professionals to make comprehensive use of the knowledge of medicine, nursing, psychology, and social work to provide scientific and humanized services for the elderly, thus enhancing the professionalization and wisdom of elderly care services and meeting the demand for high-quality elderly care services in an aging society. Such ability cultivation is not only conducive to the health and happiness of the elderly but also lays a solid foundation for the sustainable development of the senior care service industry.

2.2 Application of Smart Healthy Aging Technology and Information System

In the smart healthy aging service and management program, the goal of mastering smart aging technology and information systems is to enable professionals to skillfully use modern information technology, such as the Internet of Things, big data, cloud computing, etc., to improve the efficiency and quality of aging services. Professionals should be able to use these technologies to collect and analyze the health data of the elderly and realize functions such as remote monitoring, health management, and emergency assistance, to provide more personalized and intelligent senior care services. The cultivation of this ability has an important role significance. It can improve the response speed and accuracy of senior care services, meet the needs of the elderly promptly, and improve their quality of life. The application of intelligent senior care technology can effectively reduce the cost of senior care services, improve service coverage, and realize the sustainable development of senior care services. Through the study and application of smart senior care technology, professionals can continuously improve their information technology literacy, adapt to the technological development trend of the senior care service industry, and contribute to the modernization

and intelligence of the senior care service industry (Wang, 2024).

2.3 Senior care service planning and management

This competency enables professionals to design, plan, and execute efficient and innovative senior care service programs to meet the diverse needs of the elderly. The goal of cultivating this competency is to enable students to master the operation mechanism, market laws, and project management skills of the senior care service industry so that they can effectively manage resources, coordinate all parties, and solve problems in practical work to ensure the smooth implementation and continuous improvement of senior care service projects. The cultivation of this ability is of far-reaching significance in enhancing the quality and efficiency of elderly services. By planning and managing high-quality senior care service projects, professionals can provide more personalized and meticulous services to the elderly, greatly improving their quality of life and satisfaction. Effective planning and management of senior care services also helps to optimize resource allocation, improve the efficiency of service provision, and promote the healthy development of the senior care service industry (Huang, 2024). In the context of the aging society, cultivating professionals with this ability plays an important role in responding to the challenges of population aging and promoting social harmony and stability.

2.4 Psychological support and social adaptation counseling

The goal of cultivating psychological support and social adaptation counseling ability is to let professionals master the knowledge of gerontological psychology, be able to effectively identify and assess the psychological state of the elderly, provide corresponding psychological support and counseling services, help them deal with emotional problems, cope with changes in their lives, and promote their positive social participation. The development of this ability is of great significance to the healthy aging of older persons. Psychological health is an important part of the overall health of the elderly, and a good psychological state can significantly improve their quality of life, reduce loneliness and depression, and

promote their physical and mental health. Through psychological support and social adaptation counseling, professionals can help older adults establish positive interpersonal relationships and enhance their sense of social belonging and life satisfaction (Zhao et al., 2023). In addition, the cultivation of such competence also helps to form a supportive and inclusive social environment, promoting the construction of a more friendly aging society.

2.5 Cultivation of innovation ability and continuous learning ability

The goal of the cultivation of innovation ability and continuous learning ability is to enable professionals to continuously absorb new knowledge and master new technologies and to be able to utilize such knowledge and technologies to create new service models and management methods to improve the quality and efficiency of elderly services. The cultivation of innovation ability enables professionals to identify problems, explore solutions, and implement them effectively in practice to promote the continuous improvement and development of elderly services and management. The continuous learning ability, on the other hand, ensures that professionals can adapt to the needs of industry development, update their knowledge systems and skills, and maintain professional competitiveness (Li et al., 2023). The cultivation of these abilities not only contributes to the individual's professional growth but also is of great significance in improving the innovation ability and the ability to adapt to market changes of the entire elderly service industry. In the context of an aging society, professionals with these competencies will become a key force in promoting the innovation of senior care services and improving service quality.

3. Practical Strategies for Cultivating Professional Talents in Intelligent Healthy Aging Service and Management

3.1 Strengthen the cooperation between industry, academia, and research, and establish practice teaching bases

The core of strengthening industry-university-research cooperation and

establishing practice teaching bases lies in the close integration of educational resources, industrial demand, and scientific research achievements through school-enterprise cooperation and joint research institutes, to provide students with a real learning and practice environment. Schools can establish cooperative relationships with enterprises such as senior care service organizations and health management companies to co-design curriculum content and make teaching closer to the actual industry. At the same time, through these collaborations, schools can help students arrange internships and practical training so that students can participate in real projects in enterprises and enhance their real-world experience. Schools should also establish links with research institutions to introduce the latest research results on elderly service and management, update the teaching content, and stimulate students' innovative thinking and research interests (Luo et al., 2022). The establishment of practice teaching bases should not only set up training rooms and simulation laboratories on campus but also actively explore off-campus practice bases, such as senior care institutions and community service centers, to provide students with diversified practice platforms. Through this combination of industry-university-research model, students can learn and apply knowledge in practice and master the necessary vocational skills, which also helps students understand industry dynamics, enhances employment competitiveness, and lays a solid foundation for their future careers.

3.2 Implementation of case teaching and problem-oriented learning

To implement the practical strategy of case teaching and problem-oriented learning, it is first necessary to build a case library covering a wide range of senior care service and management situations, which should be derived from the real scenarios of actual senior care service, including but not limited to the operation and management of senior care institutions, elderly health assessment, intelligent senior care technology applications, and other fields. The construction of the case base can be accomplished by cooperating with senior care service organizations, collecting typical events or challenges,

and organizing and analyzing them. During the teaching process, teachers guide students to discuss and analyze each case in depth through teamwork, encourage students to examine the problems from different perspectives, propose solutions, and conduct role-playing or simulation implementation to deepen their understanding and application of knowledge in various aspects of elderly service and management. At the same time, problem-oriented learning requires students to take the initiative to collect information, analyze problems, propose solution strategies, and ultimately form comprehensive solutions when facing specific problems. For example, around the theme of "aging in place", the teaching task of using IoT technology to prevent and reduce safety accidents can be set. Educators could lead students in exploring and designing a smart aging system that can immediately notify paramedics and family members via floor safety sensors in the event of an elderly fall, as well as sensors that alert to potential fire risks in the kitchen and automatically turn off the gas when there is no response. The system also monitors the use of water taps in the home and sends alerts if they have not been used for 24 hours to check on the safety of the elderly. Through such case studies, students can learn how to incorporate technology to solve real-world problems and design living environments that are conducive to the safety and convenience of the elderly and improve their quality of life. This teaching strategy should also regularly invite experts from the elderly services industry into the classroom to share their experiences and critique students' solutions to provide additional practical perspectives and feedback (Zuo, 2022). Through such interaction and feedback, students can better combine theoretical knowledge with practical problems, develop the ability to solve practical problems, and be well prepared for entering the elderly service industry in the future.

3.3 Promoting interdisciplinary curriculum integration and collaborative teaching

To effectively promote interdisciplinary curriculum integration and collaborative teaching, in the cultivation of intelligent healthy senior care service and management professionals, schools

should establish an interdisciplinary curriculum system, combining knowledge from multiple fields such as medicine, nursing, information technology, sociology, and so on, and designing comprehensive courses (Xu, 2022). These courses should focus on practical applications and encourage students to analyze and solve problems in elderly care services from a multidisciplinary perspective. For example, a project course on the design of smart elderly care solutions can be set up, in which students are required to work together to complete the project under the guidance of healthcare, technology, management, and other professionals, practicing interdisciplinary cooperation. Schools should encourage and facilitate collaboration between faculty from different disciplines to develop and teach courses. The team of teachers can be composed of experts in different fields such as health management, information technology, social work, etc., who work together to come up with ideas to make the course content richer and more practical. Communication and cooperation among students can be promoted through case studies, seminars, and vocational skills competitions so that they can learn how to integrate and apply knowledge and skills from different disciplines in the process of solving practical problems. Take the "Healthy Elderly Care" competition of the 2023 Shaanxi Higher Vocational Colleges Skills Competition as an example, which is jointly supported by educational institutions and enterprises, and invites renowned experts in the elderly care industry to ensure that the teaching content is closely integrated with the industry's practice. In this competition, students are required to provide professional and standardized care services through assessment, planning, implementation, and reflection in three modules, namely, home-based, community-based, and healthcare-integrated institutions, by using new intelligent recreational and nursing equipment and care measures. This not only tests students' knowledge application and clinical thinking ability but also their operational execution ability, problem analysis and solution ability, and humanistic care ability. Through participation in this kind of practical tournament, students can apply interdisciplinary knowledge and skills in a real

simulation environment, which promotes the effective combination of theory and practice, enhances their comprehensive ability to solve practical problems, and lays a solid foundation for their future careers. In addition, the tournament stimulates students' innovative thinking and teamwork spirit, providing strong practical support for interdisciplinary teaching. This kind of interdisciplinary interaction and cooperation not only enhances the comprehensive quality of students but also stimulates innovative thinking and lays a solid foundation for their future careers in the field of elderly services.

3.4 Strengthen internship training and vocational skills certification

Educational institutions should establish solid cooperative relationships with elderly service organizations, medical institutions, community service centers, etc., to provide students with diversified internship and practical training opportunities. The actual working environment of these organizations allows students to experience their professional roles and apply what they have learned to solve practical problems, thus deepening their understanding and improving their skills. Educators should develop a detailed internship training program to ensure that students can systematically acquire the necessary vocational skills, such as the application of smart aging technology, health assessment of the elderly, and planning of elderly services. Monitor the internship practical training process through regular assessment and feedback to ensure the effectiveness of learning outcomes. Through the introduction of a vocational skills certification mechanism, students are encouraged and guided to participate in relevant vocational skills examinations and certifications. This not only motivates students to improve themselves but also adds competitiveness to their careers. By obtaining industry-recognized certificates, students' professional competence is objectively verified, which promotes their smooth entry into the workplace and improves the employment rate (Zhou, 2023).

Summary

With the acceleration of the aging of China's population, the development of the profession of intelligent healthy aging service and management is particularly important, and the cultivation of talents is the key to achieving this goal. By analyzing the cultivation of key competencies such as geriatric health assessment, application of smart elderly care technology, elderly care service planning and management, psychological support, innovation, and learning ability, the study emphasizes the importance of establishing a comprehensive and practical education system. Practical exploration, especially through industry-university-research cooperation, case study teaching, interdisciplinary curriculum integration, and internship training, is an effective way to improve the quality of education and cultivate high-quality professionals. Future education and research should be further deepened and innovative teaching methods and practice modes should be continuously explored to meet the development needs of the elderly service industry and contribute to the construction of a more harmonious aging society.

Conflict of Interest

The author declares that she has no conflicts of interest to this work.

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