

Review Article

Exploration and Prospect of the Construction of “Integration of Medical Care and Early Education” Childcare Model in China

Haoran Zhang^{1#}, Shuqing He^{2#}, Yugang Li^{1*}¹College of Preschool Education, Beijing Youth Politics College, Beijing 100102, P.R. China²Xicheng District Maternal and Child Health Hospital, Beijing 100054, P.R. China***Corresponding author: Yugang Li**

College of Preschool Education, Beijing Youth Politics College, Beijing 100102, P.R. China.

Email: ranzihuai425@163.com

#These authors have equally contributed to this article.

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Abstract

With the implementation of the comprehensive “Two-Child Policy” and the opening of the “Three-Child Policy” in China, infant care has become an important livelihood project and included in the overall economic and social development plan. In the new era, the development of childcare services is important to achieve long-term balanced population development. Currently, there are existing studies on the demand for childcare services, the supply situation, the contradiction between supply and demand and so on. But there is still limitation in terms of research methods, perspectives and content. It is recommended to strengthen cross-disciplinary research and empirical research, as well as deepen exploration on the operation mechanism and guarantee the basis of childcare services.

Keywords: Childcare; Nursing; Medical care; Childhood development; Model**Introduction**

With the implementation of comprehensive “Two-Child Policy” and the opening of the “Three-Child Policy” in China, infant aged 0-3 years care has become an important livelihood project and included in the overall economic and social development plan [4,5]. Under the new form of childbirth, childcare services are not only concerned with the infant care, but also related to their healthy growth. Infants and young children's health are one of the important factors affecting the quality of China's population. How to improve the quality of the childcare service system, and then promote childcare to escort children's health and development, has become a key issue that needs to be solved since the first 1000 days of life [25]. In recent years, China has attached great importance to infant care work, and successively promulgated the “Guiding Opinions on Promoting the Development of Infant Care Services for Infants Under 3 Years Old (2019)” and the “Guidelines for Health Care of Infants Under 3 Years Old (2022) [7], emphasizing the importance of early development to the growth of infants and young children, and also taking childcare services as a major deployment for the implementation of “good education for young children” at the national policy level. These documents clarified that childcare services should adhere to the principles of government guidance, multi-party participation, and categorical guidance, and

innovate and develop diversified service patterns and models such as family care, community coordination, social establishment, self-construction by units, and nursery classes running by kindergartens. Among them, the “medical-nurture” service model combining with “family care + institutional care + medical and health institution health services” is an innovative exploration to meet the growing demand for infant care services. The “integration of medical care and early education” model is committed to realizing a full range of one-stop services for infant education and health care. However, in order to effectively use childcare services to better cope with the contradiction between infant care needs and insufficient service supply, a series of key issues should be addressed at first, such as how to promote the implementation of policies and how to realize the integration of health care development and education promotion, which has been an important proposition in front of the high-quality growth of childcare services [4,13,18]. In this context, based on the scientific principle of physical and mental development of infants aged 0-3 years old and around the key issue of how to protect and lead the health of infants and young children in childcare services, we discussed the management mechanism, innovative and optimal implement pathway, the difficulties and challenges faced during the construction of

"integration of medical care and early education" model. We expect to provide a reference for building a new model of childcare services that integrating "medicine, education and nursing".

The Feasibility of The Construction of the "Integration of Medical Care and Early Education" Childcare Model

Infant and early childhood are a critical period for children's growth and development. Providing good nurturing care and health management will help infants achieve comprehensive development in physical, psychological and social abilities, further lay the foundation for children's healthy growth in the future and help prevent the occurrence of cardiovascular and cerebrovascular diseases, diabetes, depression and other diseases in the adulthood [11,21,21,29,31]. Additionally, early childhood is the period with the highest ratio of human capital input-output in the whole life cycle [12,27]. Good parenting, child health care, health education and health management for infants and young children are of great significance to achieve early childhood development, and could profoundly affect national human resources and social and economic development [6,11,28].

Exploring the model of "integrated medical care and nurture" is a useful and feasible measure to deepen the connotation of childcare services. In November 2019, the National Health Commission of China confirmed the indispensable role of health services in promoting early childhood development at the International Symposium on Early Childhood Development [7]. Secondly, integrating the concepts and methods of medical care into childcare services, it may alleviate the shortage of medical resources and the pressure of pediatric outpatient visits. In this aspect, we could conduct the early monitoring of the growth and development, health care, common diseases, infectious diseases, and then provide real-time health management services. In addition, childcare service providers and parents also have a demand for "integration of medical care and early education" [17]. At the institutional level, the integration of "medicine-care-nurture" will be in line with the development trend of the industry and will also increase its competitiveness and sustainable development under the guidance of marketization. For parents, the purpose of sending infants to childcare institutions is no longer only to meet the simple infants' care. Except safety factors, especially for parents with higher education level, they pay more attention to the healthy development and early education. This puts forward high requirements for childcare institutions to take the content of medical care and appropriate technology as an important component of childcare service training [19,24,34]. Finally, many local areas have carried out the exploration of this model. The accumulation of experience in these early implementations has also laid a practical foundation for the in-depth exploration of the model.

The Existing Foundation and Practice of the Construction of "Integration Of Medical Care And Early Education" Model In China

On April 25, 2023, the National Health Commission and the National Development and Reform Commission of China pointed out that China will newly build 48 comprehensive childcare service centers at the prefecture and city level, and the first batch of 33 demonstration cities (districts) will be awarded licenses to further promote the construction of national infant care service demonstration cities [10]. As mentioned above, several areas have actively explored and promoted the con-

struction of childcare demonstration areas, inclusive childcare systems, and smart childcare models. The resource integration model of "medical + childcare" has gradually become a new model for deepening the connotation of medical services and leading scientific childcare.

Qufu City of Shandong Province [32], Chengdu City of Sichuan Province [30] and Liuzhou City of Guangxi Province [23] were typical of implementation of "integration of medical care and early education" model. The specific measures included establishment and improvement of the organizational leadership system and work coordination and promotion mechanism, issued the related supportive laws and regulations, set up infant and childcare service guidance centers relying on maternal and child health care institutions, and established linkage mechanisms and deepened the cooperation between childcare guidance experts, and build an efficient and smooth scientific parenting service exchange platform. As regard for the content of the new model, health care, disease prevention, infectious disease monitoring and other aspects of common children's diseases. These early pilot work has provided work experience for strengthening the construction of the "integration of medical care and early education" model, and the next step should summarize the experience of the practical problems encountered in the implementation process, and strengthen the demonstration and guidance.

The Key Links and Main Contents for the Construction of "Integration of Medical Care and Early Education" Model in China

There are certain current technical specifications for reference in the theory and practice of this model construction [2,8], and this paper mainly focused on the aspect of "medicine" of "medical-nurture".

First, focusing on the top-level layout and enhancing the driving force. According to the requirements of existing national and local policies, technical specifications and guidelines, formulating a work plan based on actually local conditions [15]. Currently, some public hospitals, such as children's hospitals and maternal and child health hospitals, have set up hospital nurseries according to their own resources driven by relevant policies.

Second, focusing on standard guidance and enhancing normativity. Establishing standards for high-quality infant care services, standardizing the practice behavior of childcare institutions in accordance with infant care service specifications and service guidelines, which could provide technical support for the early development of infants and young children [14].

Third, focusing on one-stop services and enhancing development. In all aspects of childcare services, the physical development takes a priority. One-stop services aimed to carry out targeted individualized intervention guidance or referral services for infants in nutrition and feeding, growth and development monitoring, psychological and behavioral assessment, and developmental screening at key age groups of 8, 18 and 30 months [20].

Fourth, focusing on professionalism and enhancing internal motivation. Childcare institutions are staffed with relevant medical practitioner, and a strict system of medical staff holding certificates shall be implemented [16]. Unfortunately, there are still few full-time health care staff in childcare institutions [35]. Another important measure to strengthen the construction of

the team of childcare institutions is to improve the knowledge and skills of non-medical professional childcare personnel, which is consistent with the requirements of the Standards for the Establishment of Childcare Institutions issued by the NHC of China in 2019.

Fifth, focusing on the sinking of high-quality resources and enhancing linkage. The actual approach could include expanding the scope of services provided by child health care institutions, such as carrying out contract services for the integration between primary health institutions and infant and childcare service institutions, setting up responsible physicians and health instructors, and carrying out professionally itinerant demonstration guidance, personnel training, health education, consulting services, special lectures, and academic research. At the same time, it is recommended to actively explore the integration of the traditional Chinese medicine into childcare services, in order to build a long chain system that covering "medical-prevention-nursing-treatment-rehabilitation".

Difficulties and Challenges Faced by the Construction of the "Integration of Medical Care and Early Education" Model

Actively exploring the construction of integrated medical care and nurture" model has positive practical significance, which can further clarify the relationship between medical care and nurturing care development, health education and healthy parenting, theory and practice [3,26,33], which is a useful to promote the implementation of a childbirth-friendly society and promote long-term balanced and high-quality development of the population in China. However, this innovative childcare model is currently still in the exploratory stage, the operable work system has not yet been established with a series of problems that need to be solved urgently.

Insufficient Experience and Capacity

As the increasing demand for infant and childcare services, the shortage of staff in the industry is becoming more and more prominent. In 2016, the Ministry of Education of China added a new major of "Early Childhood Development and Health Management" to a higher vocational college, which was renamed "Infant Care Services and Management" in 2021, and the classification was changed from public management and services to health management and promotion under the medical and health category. It is a comprehensive discipline integrating the medicine and health, public service and preschool education, and its most prominent feature is to infiltrate the concept of health management into infant care and early education, changing passive "disease diagnosis and treatment, behavior correction" to active health promotion. However, due to the restrictions of teaching and training in medicine and health, there is a certain deviation between the core competence and the market demand. Therefore, for one thing, we should steadily promote the construction of a well-structured "medical and educational" teaching team. For another, it should strengthen the integration and intersection of core disciplines such as nursing, pediatric clinical medicine, child health care and psychology [22]. This weakness also existed in community childcare, kindergarten nursery classes and other institutions, and the important crux is still the lack of medical professionals and clinical nursing personnel. The fact suggested a necessity of strengthening the allocation of medical staff, effective training and practical learning. Undoubtedly, it is necessary to expand the cooperation with medical institutions. From the perspective of talent training positioning, strictly controlling the threshold of the

childcare staff team and combining market demand to cultivate professionals requires long-term planning, but it is an urgent problem to be addressed at the current stage.

Lack of Support for Integrated Data Management and Quality Monitoring Systems

The establishment of data management and quality monitoring system for various childcare service institutions is urgent need to promote the development of "extensive" quantity expansion to "connotation" quality improvement. However, a unified quality inspection framework and system has not yet been formed at the national level in China. In the era of informatization and big data, while systematically carrying out the construction of "integration of medical care and early education", China needs to promote data collection, strengthen informatization and digital management, further clarify the connotation of quality, and improve the quality monitoring system. Firstly, developing a data management system and applying it to infant growth and development monitoring. To achieve a full range of information collection and management, it should further interconnect with the healthcare system in a timely and appropriate manner. Secondly, in the field of monitoring practice, we could package the three aspects of service quality, staff/teacher quality, and infant and child development results. After that, we should evaluate the structural quality (such as whether the childcare service provider complies with relevant laws and regulations) and process quality (such as the quality of teacher-child interaction). External supervision and internal evaluation can be combined to disclosure the advantages and weaknesses of childcare services through dynamic data analysis and quality monitoring feedback.

The Working Mechanism and Working System of This Model are not yet Perfect

Currently, the specific work path, working mechanism, and system norms of the "integration of medical care and early education" childcare model construction are not clear. A sound and efficient childcare work system should actively integrate into existing medical services, especially children's medical and health care systems, including children's hospitals, maternal and child health care institutions, maternal and child health guidance centers, community health service centers. From the perspective of sustainable development, we should further strengthen and give full play to the advantages of "medical-education-care" integrated childcare services, actively adjust the stock, make good use of increments, improve quality in accordance with policy guidelines, widely participate in the supply of childcare and resources in various forms [1], and gradually form a universal childcare service work model based on "integrated medical care and nurture".

Summary and Prospects

In conclusion, this paper mainly expounded the path and main content of the "integration of medical care and early education" childcare model from the perspective of theoretical research. To further guide the institutional improvement and technology integration and promotion in the construction of the system, we also summarized the promotion effect and shortcomings of policy implementation during the process of the model building. However, the "integration of medical care and early education" childcare model and system construction is still be explored, facing difficulties in policy, technology, talent and many other aspects. To better grasp the Healthy China

Strategy development opportunity, building such a childcare service system will be a breakthrough move and will better serve the development of infants and young children.

1. Highlight the “integration of medical care and early education” service model is an innovative exploration to meet the growing demand for infant and childcare services in China.

2. There are still problems such as insufficient experience and capacity, lack of support for integrated data management and quality monitoring systems, and the working mechanism of this model are not yet perfect.

This study draws policy attention to the issues of financing, technology, talent service contents, targets, service level and the degree of social recognition.

Author Statements

Author Contributions

YG.L conceived and planned the study. HR.Z and SQ.H drafted the manuscript. All authors read and approved the final manuscript.

Conflict of Interest Disclosure

All the authors have no competing interests to declare.

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Data Availability Statement

No related research data are shared.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors declared that we did not use generative AI and AI-assisted technologies.

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