

Research on Public Welfare Models for Assisted Bathing Services for the Elderly in Healthy Aging: A Case Study of Policy Practices in Shanghai

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Abstract: As China's population continues to age, bathing assistance services for the elderly have become a critical issue affecting their quality of life and health well-being. Based on the concept of healthy aging, this paper conducts an in-depth analysis of the characteristics and patterns of current bathing assistance needs among the elderly through a questionnaire survey of 200 seniors. It further explores innovative service models from a public welfare perspective. Research indicates that bathing assistance needs among the elderly exhibit characteristics of universality, multi-level complexity, and diversity. Establishing a public welfare service system guided by the government, supported by social participation, and anchored in community infrastructure can effectively enhance the accessibility, professionalism, and sustainability of bathing assistance services. This approach represents a vital pathway toward achieving healthy aging objectives.

Keywords: Healthy aging; Bathing assistance services; Public welfare model; Needs analysis; Shanghai

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1. Introduction

As China's population aging enters a deepening phase, safeguarding the quality of life and health well-being of the elderly has become a core issue in advancing national strategies. Data from the Seventh National Population Census reveals that in rural areas, individuals aged 60 and above constitute a significant 23.81% of the population—8.1 percentage points higher than in urban areas. Among this demographic, the proportion of “empty-nest” and “left-behind” elderly exceeds 54.2%. Concurrently, the national rate of elderly individuals with full or partial loss of self-care abilities stands at approximately 19%, totaling over 7.8 million people. Behind these figures lies an often-overlooked yet fundamental challenge affecting the dignity of the elderly: the difficulty of bathing. For rural seniors lacking care and mobility-impaired individuals, bathing is not merely a daily hygiene requirement but a critical factor influencing physical health, psychological well-being, and social engagement. Addressing this issue has become an essential practical demand in advancing healthy aging.

2. Background of the issue

2.1. Weakening of family care functions amidst deep aging

Data from the Seventh National Population Census reveals profound shifts in China’s rural demographic structure, with individuals aged 60 and above constituting 23.81% of the population—a rate 8.1 percentage points higher than in urban areas. Within this substantial elderly cohort, the proportion of “empty-nest” and “left-behind” seniors reaches 54.2%, indicating widespread absence of children’s companionship and care in daily life ^[1]. Concurrently, approximately 19% of the elderly population—about 7.8 million individuals—are either fully or partially dependent ^[2]. These individuals face significant challenges in self-care, rendering even basic personal hygiene tasks like bathing exceptionally difficult. Traditional family care models once partially met the daily needs of the elderly. However, with socioeconomic development and increased population mobility, the traditional family care function has rapidly weakened. Consequently, family members often cannot provide sufficient assistance. “Who will help me take a bath?” has become a widespread and urgent demand among rural elderly populations. This goes beyond mere convenience; it is deeply connected to the dual needs of physical cleanliness and mental well-being for the elderly.

2.2. The dual dilemma of safety and psychology in rural bathing difficulties

Data from the Ministry of Housing and Urban-Rural Development’s Rural Housing Safety Survey reveals significant safety hazards in rural sanitation facilities. Over 63% of rural bathrooms lack non-slip flooring, and 56% lack grab bars or shower chairs. These seemingly minor deficiencies pose substantial risks during bathing for the elderly. Bathroom falls account for a staggering 58.3% of all falls among rural seniors. Such falls often lead to severe consequences like fractures or head injuries, causing immense physical suffering and deepening their fear of bathing—a fear that gradually evolves into a fear of death.

Beyond physical dangers, psychological barriers further exacerbate the “bathing dilemma.” Many seniors equate “being bathed” with “being declared incapacitated.” To them, needing assistance signifies a loss of self-sufficiency, triggering intense shame. Meanwhile, influenced by traditional notions, children fear being labeled “unfilial” for helping their parents bathe, often avoiding the task. This psychological resistance not only amplifies the difficulty of providing bathing assistance but also leads to a systemic underestimation of elderly demand for such services. Consequently, this issue has long been overlooked and inadequately addressed.

2.3. Structural shortcomings in existing bathing assistance supply

Statistics from the Ministry of Civil Affairs in 2023 indicate that bathing assistance coverage in rural elderly care facilities stands at a mere 17.3% ^[3]. Moreover, these limited services are heavily concentrated in suburban areas near county seats, resulting in extremely poor accessibility at the town and village levels. This creates a triple disconnect: “facilities unwilling to go, seniors unable to come out, and family members lacking the skills to assist” ^[4]. Care facilities are reluctant to extend bathing assistance to remote rural areas due to cost and operational considerations. Elderly individuals themselves cannot travel to facilities near county seats due to physical limitations and financial constraints. Family members, including children, lack the professional knowledge and skills required to provide safe and effective bathing assistance. This triple disconnect makes it difficult to meet the bathing needs of rural seniors, further exacerbating the severity of the “bathing difficulty” problem. This not only significantly impacts the quality of life for the elderly but also poses a severe challenge to the development of rural elderly care service systems.

2.4. The introduction and conceptual framework of healthy aging

Healthy aging, a key concept introduced by the World Health Organization in 1990, is defined as “the process of developing and maintaining the functional capacity necessary for active and dignified aging.” In 2015, the WHO further refined this concept, defining healthy aging as “the process of developing and maintaining the functional capacity needed for later life, where functional capacity enables individuals to meet basic needs, learn and grow, make decisions and participate, build and maintain relationships, and contribute to their communities according to their own values, preferences, and capabilities”^[5]. This concept emphasizes not only physical health but also the maintenance and development of functional capacity across multiple dimensions—physical, psychological, and social—in older adults.

In China, healthy aging has become a national strategy. The “Healthy China 2030” Planning Outline explicitly calls for “promoting healthy aging”^[6], while the “14th Five-Year Plan for Healthy Aging” further stresses the need to “enhance the quality of health services for older adults.”

2.5. The vital significance of bathing assistance services in healthy aging

Within the framework of healthy aging, bathing assistance services are not merely a basic daily care provision but also a crucial measure for preserving the dignity of older adults, safeguarding their physical and mental health, and promoting social participation. This significance manifests in the following ways.

First, bathing assistance services directly impact the physiological health of older adults. Regular bathing helps maintain skin cleanliness and prevent conditions such as pressure ulcers and urinary tract infections, serving as a fundamental condition for sustaining physiological functions.

Second, bathing assistance profoundly impacts mental well-being. By enabling personal hygiene, it preserves dignity and self-confidence, preventing social avoidance and psychological stress stemming from body odor.

Third, bathing assistance services enhance social participation among the elderly. Good personal hygiene is a prerequisite for seniors to engage in social activities and maintain relationships.

Guided by the concept of healthy aging, this study analyzes bathing assistance needs through a questionnaire survey of 200 seniors. It explores a sustainable, scalable, and free public bathing assistance model tailored to China’s national context.

3. Literature review

In recent years, guided by the concept of healthy aging, bathing assistance services for the elderly have gradually become a hot topic in academic circles and policy research. Existing studies have explored this field from multiple dimensions, including policy implementation, service standardization, and product design.

Regarding policy implementation, Shanghai recently issued the *Several Opinions on Supporting the Development of Bathing Assistance Services for the Elderly (Trial Implementation)*, integrating bathing assistance into the healthy aging service system. It explicitly calls for expanding service supply by developing home-visit bathing assistance, community bathing stations, and exploring mobile bathing vehicle models, while emphasizing the full utilization of policy tools such as elderly care service subsidies and long-term care insurance systems^[7]. Chongqing’s Jiulongpo District innovatively introduced a hybrid model combining “Bathing Express” mobile units with fixed bathing stations, effectively bridging the “last mile” for bathing services for elderly individuals with partial or full loss of self-care abilities^[8]. Taizhou City, as the first region in Jiangsu Province to issue the *Assessment Guidelines for Elderly Bathing Station Construction (Trial)*, addressed bathing difficulties for the

elderly through standardized development ^[9].

Regarding service standardization, Jilin Province's *Elderly Bathing Service Standards*, developed from a healthy aging perspective, fills a gap in local regulations. This standard not only regulates service practices but also systematically evaluates the comprehensive value of bathing assistance services across three dimensions: economic, social, and ecological benefits ^[10]. Implementing this standard has transformed assisted bathing from a niche industry into a sought-after service, expanding employment opportunities. Simultaneously, it enhances water resource utilization through scientifically designed procedures, embodying sustainable development principles.

In product design and technological R&D, Hu developed home-visit bathing aids for seniors with varying degrees of disability based on universal design theory and healthy aging requirements. Through user needs research and Kano model analysis, he constructed a product design framework encompassing basic, expected, and delight needs ^[11]. Ren innovatively integrated Quality Function Deployment with the Function-Behavior-Structure approach to establish a design methodology framework for elderly bathing aids. Product performance was optimized through ergonomic simulation and finite element analysis ^[12].

While these studies enrich the theory and practice of bathing assistance services for the elderly from diverse perspectives, mechanisms for constructing public welfare models, resource mobilization approaches, and sustainable operational strategies under the guidance of healthy aging concepts warrant further exploration. Building upon existing research and guided by healthy aging principles, this paper focuses on Shanghai's policy practices to analyze pathways for public welfare-oriented bathing assistance services. It attempts to construct a public service model integrating policy support, social participation, resource mobilization, and sustainable operations.

4. Bathing assistance needs among the elderly

4.1. Basic characteristics of survey samples

To ensure representativeness, we employed a stratified sampling method across three dimensions: geographic location (urban vs. rural), age group (60–69, 70–79, 80+), and disability level (independent, mild, moderate, severe). Participants were recruited from five districts in Shanghai through community centers and elderly care facilities between March and June 2024. The survey was administered via face-to-face interviews by trained research assistants to accommodate potential literacy limitations among elderly participants (Table 1).

Table 1. Distribution of basic characteristics among survey samples ($n = 200$)

Variable	Category	Frequency	Percentage (%)
Gender	Male	92	46
	Female	108	54
Age group	60–69 years	85	42.5
	70–79 years	72	36
	80 years and above	43	21.5
Level of disability	Independent	68	34
	mildly disabled	65	32.5
	moderately disabled	45	22.5
	severely disabled	22	11
Residence	Urban	94	47
	Rural	106	53

The survey sample covered elderly individuals across different age groups, levels of disability, and residential areas, ensuring a certain degree of representativeness. Among them, rural seniors accounted for 53%, those aged 80 and above constituted 21.5%, and seniors with moderate to severe disabilities collectively represented 33.5%. These groups are the primary target beneficiaries of bathing assistance services.

4.2. Analysis of assisted bathing service demand characteristics

Data from **Table 2** indicates that 90% of surveyed seniors require bathing assistance, with 42% needing services at least once a week and 48% requiring assistance at least once a month. Chi-square analysis revealed that the frequency of service demand correlates positively with the degree of disability ($\chi^2 = 34.67, P < 0.001$), with severely disabled seniors requiring significantly more frequent assistance than other groups. Additionally, rural residents showed higher demand for weekly services compared to urban counterparts (47.2% vs. 36.2%, $P < 0.05$).

Table 2. Frequency distribution of assisted bathing service demand

Frequency of need	Frequency	Percentage (%)
More than twice weekly	26	13
1–2 times weekly	58	29
Once every two weeks	52	26
Once monthly	44	22
No need	20	10

Regarding service format preferences (**Table 3**), 62% of seniors opt for in-home bathing assistance, reflecting their strong emphasis on convenience and privacy protection. Notably, acceptance of community bathing centers was significantly higher among urban seniors (35.1% vs. 21.7%, $P < 0.05$), while rural seniors showed greater interest in mobile units (14.2% vs. 5.3%, $P < 0.05$), highlighting the importance of context-specific service delivery models.

Table 3. Preferences for bathing assistance service formats

Service format	Number of recipients	Percentage (%)
Home-based bathing assistance	124	62.0
Community bathing centers	56	28.0
Mobile bathing units	20	10.0

4.3. Analysis of acceptance of bathing assistance services

Logistic regression analysis controlling for age, residence, and disability level revealed that disability level was the strongest predictor of service acceptance (OR = 4.32, 95% CI: 2.81–6.64), followed by age (OR = 0.68 per decade, 95% CI: 0.51–0.91). Rural residence was associated with lower acceptance (OR = 0.49, 95% CI: 0.28–0.86), suggesting cultural and accessibility barriers that require targeted interventions. See **Table 4**.

Table 4. Acceptance of bathing assistance services among elderly individuals with different characteristics

Group characteristics	Number accepted	Acceptance rate (%)
Overall	128	64
By age group		
60–69 years old	65/85	76.5
70–79 years old	44/72	61.1
80 years old and above	19/43	44.2
By residence		
Urban	68/94	72.3
Rural	60/106	56.6
By disability level		
Independent seniors	25/68	36.8
Mild disability	42/65	64.6
Moderate disability	38/45	84.4
Severe disability	22/23	95.5

5. Building models for public bathing assistance services: A perspective on healthy aging

5.1. Establishing a public service system to promote functional capacity

Guided by the healthy aging principle of “maintaining and developing functional capacity”^[5], Shanghai has established a public bathing assistance service system designed to enhance functional capacity among older adults. Specific measures include.

First, providing differentiated services tailored to varying functional levels. For seniors with intact functional abilities, auxiliary bathing assistance is provided to encourage maintenance of self-care capacity. For those with impaired functional abilities, supportive bathing services are offered to help preserve existing capabilities. For seniors with severely compromised functional abilities, substitute bathing services ensure basic daily needs are met.

Second, establishing a functional assessment mechanism. Pre-service evaluations of physical and cognitive function enable personalized bathing plans, ensuring services meet needs without fostering dependency.

Third, integrating functional training elements. During bathing, seniors are guided through appropriate functional maintenance exercises—such as encouraging self-completion of achievable movements—to achieve “rehabilitation through service and exercise through bathing.”

5.2. Innovating holistic health service models

Guided by the holistic health philosophy of healthy aging, Shanghai integrates multiple health promotion elements into its bathing assistance services. Service providers concurrently monitor health indicators like blood pressure, skin condition, and mental state during sessions, establishing health profiles to promptly identify abnormalities and facilitate referrals to healthcare institutions. Simultaneously, psychological counseling is normalized, alleviating loneliness and anxiety through warm interactions to enhance mental well-being. Furthermore, health education

is embedded in service delivery, covering topics like fall prevention and chronic disease management to improve health literacy and self-care capabilities.

5.3. Establishing mechanisms to promote social participation

Recognizing the importance of social engagement for healthy aging, Shanghai has pioneered an innovative approach integrating bathing assistance services with social participation. On one hand, younger, healthy seniors are encouraged to volunteer in bathing assistance through initiatives like “time banks,” addressing service shortages while boosting their social involvement.

On the other hand, bathing assistance services are integrated with community activities for the elderly, such as regularly organizing “Bathing Assistance Health Days,” which provide services while fostering social interaction among seniors. Additionally, family members receive bathing assistance skill training and psychological support to enhance home care capabilities, promote intergenerational interaction, and strengthen family harmony.

5.4. Improving the environmental support system

Recognizing the importance of environmental factors in healthy aging, Shanghai focuses on creating elderly-friendly bathing environments.

Physically, bathing facilities are retrofitted according to the Architectural Design Standards for Elderly Care Facilities, incorporating age-friendly features like non-slip flooring, safety handrails, and temperature-controlled equipment to mitigate environmental risks.

Service environments prioritize privacy protection, dignity preservation, and emotional support, fostering a secure, comfortable, and respectful atmosphere.

Additionally, bathing stations are strategically located within familiar community settings to reduce travel barriers for seniors and enhance community integration.

6. Development recommendations for public bathing assistance models

Based on the concept of healthy aging and lessons learned from Shanghai’s practices^[7], future efforts to advance the public welfare development of bathing assistance services for the elderly should focus on the following dimensions:

First, conceptual level. Fully integrate the concept of healthy aging into the construction of bathing assistance service systems, establishing a four-pronged development goal encompassing “functional maintenance, holistic health, social participation, and environmental support”^[5]. Develop bathing service standards and protocols aligned with healthy aging requirements, establishing a service quality evaluation system oriented toward functional outcomes.

Second, service system level. Construct an integrated bathing service system covering physiological, psychological, and social dimensions. Promote effective integration of bathing services with healthcare, rehabilitation nursing, psychological counseling, and other services to form a “Bathing+” service model. Establish a tiered and categorized service mechanism based on functional assessments to provide precise, personalized bathing assistance.

Third, capacity building level. Strengthen training for bathing assistance personnel on healthy aging concepts, enhancing their professional capabilities in health monitoring, psychological support, and rehabilitation guidance.

Establish a training system for multi-skilled professionals in bathing assistance and health management, cultivating experts proficient in both care and health.

Fourth, environmental development level. Intensify aging-friendly environmental modifications to create safe, comfortable, and convenient bathing environments. Promote comprehensive aging-friendly renovations in community environments to eliminate barriers to service participation for the elderly. Foster a social atmosphere that respects and cherishes the elderly, eliminating discrimination and prejudice against seniors, particularly those with disabilities.

7. Conclusion and outlook

7.1. Conclusion

Based on the concept of healthy aging, a needs survey of 200 seniors, and analysis of Shanghai's practices, we draw the following conclusions regarding the development of public welfare bathing assistance services.

First, bathing assistance services are a crucial lever for advancing healthy aging. Professional bathing assistance not only improves personal hygiene but also supports physiological function maintenance, mental health preservation, and social participation—effectively advancing healthy aging objectives.

Second, the public welfare model is essential for achieving universal access to bathing services. Through government guidance, social participation, and community support, this model expands coverage and enhances accessibility, particularly providing safety-net protection for economically disadvantaged and severely disabled seniors.

Third, the concept of healthy aging offers a new perspective for developing bathing assistance services. Expanding these services beyond basic daily care to encompass functional maintenance, health promotion, and social participation deepens their scope and enhances their value.

Moving forward, guided by the concept of healthy aging, the public welfare model for bathing assistance services should be further refined: strengthen conceptual leadership by integrating core healthy aging requirements throughout the service process; deepen service substance by promoting deeper integration between bathing assistance and health management; innovate service mechanisms by exploring public welfare models better aligned with elderly needs; and improve policy support to provide institutional safeguards for the public welfare development of bathing assistance services^[6,13].

Through effective collaboration among government, market, and social sectors, a multi-tiered and diversified bathing assistance service system should be established. This system will provide robust support for achieving healthy aging goals and enhancing the quality of life for the elderly, offering a Chinese solution for basic elderly care service provision in the context of global population aging.

7.2. Outlook

For policymakers, we offer the following specific recommendations:

First, service system expansion. Establish a tiered subsidy system prioritizing rural and severely disabled seniors. Allocate dedicated funding for mobile bathing units to serve remote areas, with a target of achieving 80% coverage in townships by 2028.

Second, policy development. Integrate bathing assistance into the national long-term care insurance framework, standardizing reimbursement rates across regions. Develop national “Healthy Aging Bathing

Standards” by 2026 that incorporate functional assessment protocols.

Third, community integration. Mandate that all new community elderly care facilities include bathing assistance infrastructure. Establish intergenerational “time bank” programs with tax incentives for volunteers, aiming to mobilize 10% of healthy seniors as volunteers by 2027.

Finally, quality assurance. Implement a certification system for bathing assistance personnel requiring minimum training hours in geriatric care and healthy aging principles. Establish digital monitoring platforms to track service quality and health outcomes.

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Disclosure statement

The authors declare no conflict of interest.

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