

Comparative Study on Architectural Design Standards of Elderly Care Facilities between China and Spain

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Abstract: This paper aims to compare the architectural design standards of elderly care facilities in China and Spain, and explore their similarities and differences. By collecting a large amount of literature and using comparative analysis method, the development process, content characteristics, staffing, functional configuration, and area indicators of elderly care facilities in China and Spain are compared. Significant differences in the architectural design standards of elderly care facilities between China and Spain were found. Therefore, this study summarizes the conclusions and experiences of comparative research, in order to provide reference for the future development, improvement, updating, and direction of Chinese architectural design standards and related specifications for elderly care facilities.

Keywords: Elderly care facilities, Design standards, Comparative study, China, Spain

1. Introduction

1.1 Research Background and Significance

With the increasing aging population in China, the demand for elderly care services is growing rapidly. As an important carrier of providing elderly care services, the formulation and implementation of design standards and regulations for elderly care facility buildings are particularly crucial. Spain, as a typical aging country, has unique experience and characteristics in the formulation and practice of design standards for elderly care facility buildings. Therefore, comparing and studying the similarities and differences in the design standards and regulations for elderly care facility buildings in the two countries can provide experience and reference for the formulation, improvement, updating, and improvement of design standards and regulations for elderly care facility buildings in China in the future, and promote the development and progress of China's elderly care industry.

1.2 Research Objectives and Content

The purpose of this paper is to compare the design standards for elderly care facility buildings in China and the Spain, analyze their similarities and differences, and summarize the conclusions and experience of comparative studies. The specific research content includes: the formulation and development process, content characteristics, staffing configuration, functional configuration, and area indicators of elderly care facility building design standards in China and Spain.

1.3 Research Methods

This paper uses the literature review method and comparative analysis research method. Specifically, this paper collects, screens, and analyzes relevant literature materials to gain a deeper understanding of the formulation and development process and content characteristics of design standards for elderly care facility buildings in China and Spain.

The research framework of this paper is as follows: Firstly, an overview is given of the design standards for elderly care facilities in China and Spain, including the development and content characteristics of these standards. Secondly, a comparison is made between the staff allocation,

functional configuration, and area indicators of elderly care facilities in China and Spain. Finally, through comparative analysis, the similarities and differences between the design standards for elderly care facilities in the two countries are summarized.

2. Overview of Building Design Standards for Elderly Care Facilities in China and Spain

2.1 Development Process of Building Design Standards for Elderly Care Facilities

In The development process of building design standards for elderly care facilities is an important component of these standards, reflecting their development ideas, concepts, and trends. The building design standards for elderly care facilities in China and Spain have their own characteristics in terms of development.

Both China and Spain have gone through a long process of developing and improving their building design standards for elderly care facilities. China's building design standards for elderly care facilities can be traced back to the 1990s. With the development of elderly care services, these standards have been continuously revised and improved (Table 1).

Table 1: Development of architectural design standards for elderly facilities in China.

Standard Name	Year of release	Content Introduction
Building Design Code for the Elderly	1999	This code sets out the design requirements for residential and public buildings intended for use by older people. Repealed in 2017.
Building Design Standards for Residential Accommodation for the Elderly	2003	This standard specifies the design requirements for building facilities such as residential homes for the elderly, flats for the elderly and nursing homes and care homes. Repealed in 2017.
Building Design Code for Aged Care Facilities	2013	This code sets out the architectural design requirements for elderly care facilities such as nursing homes, elderly care homes and day care facilities. Repealed in 2018.
Residential Building Design Code for the Elderly	2016	This code specifies the design requirements for residential buildings for the elderly, such as houses and flats for the elderly. Repealed in 2018.
Building Design Standards for Elderly Care Facilities	2018	This standard sets out the architectural design requirements for all types of facilities providing intensive care services for elderly.

Similarly, Spain's building design standards for elderly care facilities have also undergone a similar development process. In the 1980s, the Spanish government began to pay attention to the welfare of the elderly and gradually established building design standards for elderly care facilities. Its elderly care system is jointly managed and implemented by the national government and autonomous regions, and each autonomous region can formulate different elderly care policies and services based on its own situation. The building design standards for elderly care facilities are mainly formulated by the government and relevant associations (Table 2). With the increase in diversified and personalized elderly care needs, these standards are also constantly being updated and improved.

Overall, the elderly care regulations in the 17 regions of Spain have similarities in content and all value the care and welfare of the elderly, providing various forms of services, such as long-term care, home care, temporary care, rehabilitation care, home-based care, as well as medical insurance and welfare programs.

Table 2: Spanish sectors, regional norms for elderly facilities.

Sector / Region	Name of Sector /region	Standard Name	Year of release	Content Introduction
Sectors	Ministry SAAD	Resolution of 11 December 2017	2017	Partial revision of the common accreditation criteria of 27 November 2008 on the assurance of the quality of centre and service in the autonomy and care system.
	CATALONIA SOCIO SANITARY	92/2002, 5 March	2002	Defines the types and functional conditions of social and health centre and services, and sets out the rules for social and health centre.
Regions	ARAGON	Decree 111/1992, of 26 May 1992	1992	Establishes the minimum conditions to be met by specialist social services and agencies.
	ASTURIAS	Decree 43/2011 of 17 May	2011	Approval of the Regulations on the authorization, accreditation, registration and inspection of social centre and services.
	BALEARIC	Decree 123/2001 of 19 October 2001	2001	Establishes and regulates the minimum conditions for the opening and operation of public and private centre and services for the elderly in the Balearic Islands
	CANARY ISLANDS	3117 Decree 154/2015, of 18 June	2015	Revision of the regulations for centre and services in the Canary Islands in the area of promoting personal autonomy and care for dependant, approved by Decree 67/2012, of 20 July.
	CANTABRIA	Order UMA/11/2019 of 14 March	2019	Revision of the physical and functional requirements of the specialist social services centre in the Autonomous Community of CANTABRIA.
	CASTILLA LA MANCHA	Order of the Regional Ministry of Health and Social Affairs of 4 June 2013	2013	Amends the Order of the Regional Social Welfare Department of 21 May 2001, which establishes the minimum conditions for centre for the elderly in the CASTILLA LA MANCHA region.
	CASTILLA Y LEON	Decree 14/2017 of 27 July	2017	On the authorization and operation of social centre for the care of the elderly in CASTILLA Y LEON.
	CATALONIA	Decree No. BSF/35/2014, 20 February	2014	In accordance with the decree, other criteria for the service function of the resident centre of the Office of the Commissioner for Social Services were adjusted.
	ANDALUSIA	Decree of 5 November 2007	2007	Order setting out the procedure and requirements for the accreditation of dependent elderly centre in Andalusia
	EXTREMADURA	Decree No. 4/1996 of 23 January	1996	Regulation of social care institutions for the elderly.
	GALICIA	Order of 13 April 2007	2007	Amends the Order of 18 April 1996, which implements Decree No. 243/1995 of 28 July, concerning the provisions of specific conditions and requirements to be met by care centre for the elderly.
	LA RIOJA	Decree No. 27/1998 of 6 March 1998	1998	Establishes the categories and specific requirements for residential centre for the elderly in LA RIOJA.
	MADRID	Law No. 11/2002 of 18 December 2002	2002	On the management of the Foundation's activities, social action and quality improvement centre and services in the provision of social services in the Community of Madrid
	MURCIA	Decree-Law 69/2005, 3 June	2005	Sets out the minimum conditions to be met by a publicly or privately owned residential centre for the elderly.
	NAVARRA	Decree No. 69/2008	2008	On 17 June 2008, the portfolio of the General Directorate of Social Services was approved
BASQUE COUNTRY	Decree No. 126/2019 of 30 July	2019	Provisions concerning residential centre for the elderly in the Basque Autonomous Community: the duration of these centre is 2 years from the date of opening. At the above-mentioned date, compliance with the provisions of this standard, with the exception of significant requirements is regulated in Chapter 2.	
VALENCIANA COM	Directive of the Regional Social Welfare Department of 4 February 2005	2005	Establishes a system for the authorization and operation of specialist social services centre for the care of older people.	

2.2 Contents and characteristics of architectural design standards for elderly care facilities

2.2.1 Characteristics of architectural design standards for elderly care facilities in China

The architectural design standards for elderly care facilities in China mainly include the following

aspects (Table 3):

Firstly, for the architectural design standards, the national standard "Architectural design standards for elderly care facilities" (JGJ 450-2018) is the main specification for the architectural design of elderly care facilities in China. This standard mainly stipulates the content of elderly care facilities, including the site and overall plan, architectural design, special requirements, building equipment, etc^[1].

Secondly, for the management standards of elderly care facilities, the "Specification for the establishment of positions and personnel allocation in elderly care institutions" (MZ/T 187-2021) issued by the Ministry of Civil Affairs is the main management standard for elderly care facilities in China. This standard applies to elderly care institutions that provide full-day centralized accommodation and care services for the elderly, with more than 10 beds. It stipulates the basic requirements for the establishment of positions and personnel allocation in elderly care institutions.

In addition, for the use standards of elderly care facilities, the national standard "Basic safety specifications for services in elderly care institutions" (GB 38600-2019) is the main use standard for elderly care facilities in China. This standard applies to the safety management of services in elderly care institutions, and stipulates the basic requirements for service safety, risk assessment, service protection, and management requirements^[2].

Table 3: Regulations for elderly facilities in China.

Standard Name	Year of release	Content Introduction
Specification for the creation of posts and staffing in elderly care institutions	2021	Establishes the basic requirements for the establishment and staffing of posts, the requirements for the establishment of posts and the requirements for the staffing of elderly institutions.
Basic Code of Practice for the Safety of Services in Aged Care Facilities	2019	Sets out the basic requirements for service safety, safety risk assessment, service protection and management requirements for elderly care institutions.
Building Design Standards for Elderly Care Facilities	2018	This standard sets out the architectural design requirements for all types of facilities providing services.

2.2.2 Characteristics of architectural design standards for elderly care facilities in Spain

The architectural design standards for elderly care facilities in Spain mainly include the following aspects (Table 4):

Table 4: Spanish regulations on elderly facilities.

Standard Name	Year of release	Content Introduction
EN15221-4:2011	2011	Establishes requirements for the design, construction and operation of public buildings, with the aim of ensuring the quality and safety of public buildings.
EN 17019:2018	2019	The standard requires that buildings should be accessible and easy to use for people with disabilities.
CEN/TS16118:2011	2011	The standard requires that buildings should meet the special needs of older people, such as accessibility, easy access and easy-to-grasp equipment
RDENSAS/2296/2005	2005	Regulates the management requirements for administration, health care, nutritional meals, mental health, residential environment, hygiene and health care in elderly service institutions.
RDENSAS/3470/2009	2009	The standard emphasizes that elderly service providers should ensure the safety of life and physical well-being of the elderly, including but not limited to requirements for building safety, electrical safety, fire safety and medical safety.

Firstly, for the architectural design specifications, the architectural design standards for elderly care facilities in Spain mainly refer to European standards, including "Design standards for public buildings" (EN 15221-4:2011), "Design standards for facilities for disabled people" (EN 17019:2018), "Design standards for housing for the elderly" (CEN/TS 16118:2011), and other standards. These standards mainly stipulate the basic requirements, functional layout, architectural space design, environmental design, and other aspects of elderly care facilities^[3]. The architectural design standards for elderly care facilities in Spain are mainly composed of regulations from the central government and the governments of various autonomous regions. These standards aim to ensure that the architectural design of elderly care facilities can provide high-quality services in physical, functional, and

environmental aspects to meet the needs and expectations of the elderly.

Secondly, for the management standards of elderly care facilities, the management standards of elderly care facilities in Spain mainly include the "Regulations for the management of elderly care service institutions" (ORDEN SAS/2296/2005) and the "Security assurance standards for elderly care service institutions" (ORDEN SAS/3470/2009)^[4]. The "Regulations for the management of elderly care service institutions" (ORDEN SAS/2296/2005) stipulate the administrative management, medical care, nutrition and diet, psychological health, living environment, hygiene, and health management requirements of elderly care service institutions. The "Security assurance standards for elderly care service institutions" (ORDEN SAS/3470/2009) emphasize that elderly care service institutions should ensure the safety and health of the elderly, including but not limited to building safety, fire safety, emergency response, and the prevention of infectious diseases.

3. Comparison of staffing ratios in elderly care facilities

3.1 Overview of staffing ratios in elderly care facilities

The quality and level of service in elderly care facilities directly affect the quality of life and physical health of the elderly residents^[5]. Therefore, rational staffing is the key to improving the quality of service in elderly care facilities. Both China and Spain have regulations regarding the staffing ratios in their elderly care facilities. However, due to the different service models and cultural backgrounds of the two countries, there are differences in staffing ratios (Figure 1).

CLASSIFICATION	COUNTRIES																		
	CHINA	SPAIN																	
		SECTORS		REGIONS															
	Ministry SAAD	CATALON IA SOCIO-SANITARY	ARAGON	ASTURIAS	BALEARIC ISLANDS	CANARY ISLANDS	CANTABRIA	CASTILLA LA MANCHA	CASTILLA Y LEON	CATALON IA	ANDALUSIA	EXTREMADURA	GALICIA	LA RIOJA	MADRID	MURCIA	NAVARRA	BASQUE COUNTRY	VALENCIAN COM
Address	■	■	×	×	■	■	■	■	■	■	■	×	■	■	■	■	■	■	■
Overall staffing ratio number of dependent dependents	■	■	×	■	■	×	■	■	×	■	■	×	×	×	■	×	×	■	■
Direct care ratio direct	×	×	×	×	■	■	■	×	×	■	■	×	■	×	×	■	■	■	×
Indirect care ratio Ratio of assistant-worker/cultivator	×	×	×	×	×	×	×	×	×	×	■	×	×	×	×	×	×	×	×
Auxiliary Qualification - Geriatric Caregiver Professionals with university degree	×	■	×	×	■	×	■	■	×	×	■	×	×	×	×	×	×	■	■
Ratio Psychology	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Physician ratio	■	×	×	×	■	×	×	×	×	×	×	×	■	■	×	■	■	■	■
Nursing ratio	■	×	×	×	■	×	×	×	×	×	×	×	■	■	×	■	■	■	■
Social worker ratio	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Physiotherapy ratio	×	×	×	×	×	×	×	×	×	■	■	×	×	×	×	×	×	×	×
Occupational therapist	×	×	×	■	■	×	×	×	×	■	■	×	×	×	×	×	×	×	×
TASOC Education social	×	×	×	×	×	×	×	×	×	■	×	×	×	×	×	×	×	×	×

■ This sector/region has regional norms/standards for this area. × There are no norms/standards in this sector/region for this area.

Figure 1: Comparison of staffing norms related to staffing in elderly facilities.

3.2 Comparison of staffing ratios in elderly care facilities

There are differences in the staffing ratios for elderly care facilities between China and Spain. Specifically (Table 5):

In China's regulations on staffing ratios in elderly care facilities, although there are clear ratio requirements for some positions, such as the requirement that each nursing caregiver should take care of 15 to 20 self-care elderly, 8 to 12 semi-self-care elderly, or 3 to 5 completely non-self-care elderly according to the "Staffing and Personnel Allocation Standards for Elderly Care Institutions" (MZ/T 187-2021) issued by the Ministry of Civil Affairs, there are no clear ratio requirements for most other positions, such as professional and technical positions, and technical and service positions.

In Spain's regulations on staffing ratios in elderly care facilities, there are clear ratio requirements for all positions, and the ratios are flexible, usually based on the type of elderly care facility and service model. For example, in smaller community-based elderly care facilities, only one staff member may be assigned to manage, care for, and serve the elderly. In larger institutional elderly care facilities, more staff members are required, including medical staff, nursing staff, food hygiene staff, rehabilitation staff, etc.

Table 5: Comparison table of norms related to staffing of elderly facilities.

Staff classification	Staffing requirements and range of staffing ratios to the elderly	
	Spain	China
Address	A university degree with additional training in dependency, disability, geriatrics, residential centre management or other fields, except for positions already held, with at least three years' experience in the sector and additional training as described above.	Have professional knowledge, relevant qualifications and professional knowledge and skills in elderly care services. Among them, the dean and deputy dean's literacy should meet the relevant requirements in Chapter 5 of GB/T37276-2018.
Overall staffing ratio number of dependent dependents	0.32—0.54	0.059—0.33
Direct care ratio direct	0.29—0.39	—
Indirect care ratio	0.1	—
Ratio of assistant-worker/cultivator	0.15—0.28	—
Auxiliary Qualification - Geriatric Caregiver	Have a professional certificate in social and health care for dependents in social institutions.	—
Professionals with university degree	0.003—0.005	—
Ratio Psychology	0.003—0.009	No less than one doctor should be available in a five-star nursing home.
Physician ratio	0.025—0.075	No less than 2 nurses and at least 1 additional nurse for each additional 100 beds when the number of beds reaches 100 or more.
Nursing ratio	0.003—0.01	1 social worker for every 200 elderly people (less than 200).
Social worker ratio	0.003—0.04	—
Physiotherapy ratio	0.01—0.06	—
Occupational therapist	0.004—0.006	—

It can be seen that the Chinese regulations mainly focus on the staffing ratios based on the number of beds and services provided in elderly care facilities, with a main focus on the allocation of medical and service staff. The Spanish regulations, on the other hand, are based on the different characteristics of care centers and medical elderly care facilities for the elderly.

4. Comparison of functional layout and area indicators in elderly care facilities

4.1 Overview of functional layout and area indicators in elderly care facilities

CLASSIFICATION	CHINA	COUNTRIES																		
		SPAIN																		
		REGIONS																		
	Ministr y SAAD	CATALUN YA SOCIO-SANITARI	ARAGON	ASTURIA S	BALEAR I C	CANARY ISLANDS	CANTAB RIA	CASTILL A LA MANCHA	CASTILL A & Y LEON	CATALUN YA	ANDALUS IA	EXTREMA DURA	GALICIA	LA RIOJA	MADRID	MURCIA	NAVARRA	BASQUE COUNTRY	VALENC IANA COM	
Size of centres by places	■	×	■	■	×	×	×	×	■	×	×	■	×	■	×	×	×	×	■	■
Modularity, Units of cohabitation (per person)	■	×	×	×	×	×	×	×	■	×	×	×	×	×	×	×	×	×	■	■
specialized units	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Social and health care	×	×	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	×
Location	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	×
Room types	■	×	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Room sizes	■	×	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Toilet rooms	■	×	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Geriatric bathroom	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Rooms aspects	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Boora	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Height	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Corridors	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Common toilets	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Living or common rooms	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Multi-purpose or activity room	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Dining room	■	×	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Kitchen	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Rehabilitation, Physiotherapy, Occupational Therapy	■	×	■	■	■	■	■	■	×	■	■	■	■	■	×	■	×	■	■	■
Medicines	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Nursing	■	×	■	■	■	■	■	■	×	■	■	■	■	■	■	■	■	■	■	■
Visiting room	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Lift	■	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■
Mortuary	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	■	■

■ This sector/region has regional norms/standards for this area. × There are no norms/standards in this sector/region for this area.

Figure 2: Comparison of the functional configuration of building standards for elderly care facilities.

Functional layout and area indicators are important considerations in the architectural design of elderly care facilities. Reasonable functional layout and area indicators can improve the efficiency and comfort of elderly care facilities and also enhance the quality of elderly care services. Both China and Spain have clear regulations on functional layout and area indicators in the architectural design of elderly care facilities (Figure 2).

4.2 Comparison of Function Configuration and Area Index of Elderly Care Facilities

It can be seen that although there are some differences in function configuration and area index between the elderly care facility design standards in China and Spain, both countries have corresponding provisions to ensure the living, health, leisure, and cultural needs of the elderly, indicating that both countries attach great importance to the quality of elderly care services and the well-being of the elderly (Table 6).

Table 6: Comparison of service function configuration of building standards for elderly care facilities.

Service function configuration		Range of area indicators	
		Spain	China
Room aspects	Door	Clear width 72-80cm	Clear width $\geq 0.80\text{m}$ or, where available, clear width $\geq 0.90\text{m}$. Clear width of doors to nursing-type bedrooms $\geq 1.10\text{m}$.
	Height	Indoor clear height 2.4 - 2.7m	—
Room type		Single rooms from 10% to 75%, (maximum 2 to 6 persons per room)	Room types are mainly single and double rooms, other types of rooms are available on request
Room size		Single room 8-12m ² , double room 11-19m ²	Single room living area $\geq 10\text{m}^2$, double room living area $\geq 16\text{m}^2$
Toilet room		3.5-5m ² (1 toilet per 1-5 people, 1 shower per 1-10 people)	Toilet room use area: 3-5m ²
Geriatric bathroom		Over 4 to 50 beds in a facility centre, (one elderly bathroom for every 30-100 beds. Minimum 10-14m ² in size).	The number of bathing spaces should be measured by the number of beds for the elderly served, with 1 space for every 8-12 beds. The number of special bathing spaces for elderly people in wheelchairs is $\geq 30\%$ and ≥ 1 .
Common toilet		One for every 15-50 people	(Beds in living rooms with a living room bathroom may be excluded), 1 toilet for every 6-8 beds
Living or common rooms		1.8-4.5m ² per person (minimum 12-80m ²)	Unit living area of the care unit $\geq 2\text{m}^2/\text{bed}$
Dining room		Unit dining room minimum 15-30m ² , 2-4.5m ² /person	The number of seats in the dining room of the nursing bed care unit is $\geq 40\%$ of the number of beds served, and the area used per seat is $\geq 4.00\text{m}^2$; the number of seats in the dining room of non-nursing beds should be $\geq 70\%$ of the configuration of the number of beds served, and the area used per seat is $\geq 2.50\text{m}^2$
Corridor		Clear width between 90-150cm	Clear width $\geq 1.80\text{m}$, or $\geq 1.40\text{m}$ if there are genuine difficulties; when $1.40\text{m} \leq \text{clear width} < 1.80\text{m}$, a wheelchair staggered space with a clear width $\geq 1.80\text{m}$ should be provided in the corridor with a spacing $\leq 15.00\text{m}$.
Multi-purpose/activity room		0.5-4.5m ² per person (minimum 20-50m ² use area)	Multi-purpose hall: 200-400m ² , single seat use area of 1.2-1.8m ² . Medium-sized activity room: 60-90m ² , small activity room: 20-40m ²
Dining room		Communal dining room minimum 15-30m ² , 2-4.5m ² /person	Public dining area 1.5-2.0m ² /seat, total seating capacity of the public dining room is measured at 60% of the total number of beds, and 3m ² /seat in the dining room of high-end elderly facilities
Kitchen		Minimum use area of 15-50m ² (0.3-0.5m ² /person)	0.8-1.0m ² /bed
Rehabilitation, physiotherapy, occupational therapy room		Set up for not less than 40 elderly people. 0.8-4.5m ² /person (minimum 15-50m ²)	Rehabilitation room: single room $\geq 40\text{m}^2$ ($\geq 200\text{m}^2$ for elderly facilities with professional staff), physiotherapy room: $\geq 6\text{m}^2/\text{person}$, assessment room: 15-20m ²
Nursing room		25-60 bed facility with infirmary as 1 double room or 2 single rooms or 5% of the total bed capacity	Infirmary area $\geq 10\text{m}^2$
Medicines room		Storage of medicines	Arrangement as required, can be randomly combined with treatment room configuration. Standard design drawings for elderly care homes 400 beds: 24m ² , 500 beds: 25m ²
Visiting room		Minimum usable area of 12-15m ² (one room for every 60 elderly people)	—
Lift		Per 50-60 people/section	Design bed capacity ≤ 120 beds per lift service.
Mortuary		In facilities with more than 50-100 beds, with a minimum size of 12-15m ²	—

In terms of function configuration, the standards for elderly care facilities in both countries have

consistent provisions. However, there are also some differences. Compared with China, the function configuration of elderly care facilities in Spain is more precise and comprehensive. For example, there are more detailed provisions for facilities such as mortuary rooms, visitation rooms, and indoor net height of elderly living rooms in Spain's elderly care facilities.

There are some differences between the two countries in the area index of elderly care facility functions. Taking the elderly care facility as an example, according to China's "Architectural Design Standard for Elderly Care Facilities" (JGJ 450-2018), the use area of the medical room should not be less than 10m², while in Spain's elderly care facilities with 25-60 beds, the medical room is required to be a double room or two single rooms or a room for 5% of the total number of beds. In addition, Spain requires that mortuary rooms be provided in elderly care facilities with more than 50-100 beds, with a minimum use area of 12-15m²; one visitation room should be provided for every 60 elderly residents, with a minimum use area of 12-15m²; and the indoor net height of elderly living rooms should be between 2.4-2.7m, and so on. In comparison, there are fewer such facilities in China's elderly care facilities.

5. Conclusions

Through comparative analysis of the design standards and specifications for elderly care facilities in China and Spain, this article has reached the following conclusions:

Firstly, in terms of commonalities, there are similarities in the design standards for elderly care facilities in both countries, such as the configuration of staff, functional allocation, and area indicators. For example, the functional configuration of elderly care units in both countries is basically the same, and the area indicators are similar.

Secondly, there are obvious differences between China and Spain.

1) In terms of staffing configuration for elderly care facilities, China's relevant specifications only have relatively clear ratio requirements for the configuration of positions such as elderly care nurses and social workers, while for most positions such as professional and technical positions and labor skills positions, there are no specific requirements. In Spain, there are clear ratio requirements for staff configuration in the relevant specifications, and the configuration is flexible, generally based on different types of elderly care facilities and service modes.

2) There are certain differences in the functional configuration and area indicators of elderly care facilities between China and Spain. Although China's elderly care facilities are relatively complete, there are still some deficiencies, while Spain has reached the level of European elderly care facility development, and has extremely advanced and comprehensive specifications and elderly care systems.

In summary, there are certain differences in the design standards for elderly care facilities between China and Spain, which reflect the differences in attitudes and concepts towards the elderly in the two societies. China still needs to continuously improve and perfect the standards and relevant specifications for elderly care facility design. While learning from the experience of elderly care facility construction in Spain, we should focus on the elderly, combine with the current social and economic development situation in China, and design high-quality care facilities and spatial environments for the elderly, creating a dignified and quality life for them in their old age.

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