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Analysis of Urban-Rural Differences and Countermeasures in Inclusive Elderly Care in Guangxi

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Abstract

With the rapid development of population aging and the increasing demand for elderly care services, China's elderly care services are facing unprecedented challenges. As an economically underdeveloped region, Guangxi is characterized by a growing aging population and a prominent urban-rural inversion. For the majority of elderly people with low incomes and insufficient savings, access to affordable, accessible, and quality-assured elderly care services has become a major issue in contemporary elderly care. This paper briefly describes the current situation of inclusive elderly care services in Guangxi Zhuang Autonomous Region and explores the path of inclusive elderly care in the region. The study points out that the government needs to strengthen its leading role, break the hard constraints of elderly care operation costs, continuously promote the improvement of the basic elderly care service system, and ensure that the basic needs of China's growing elderly population for care, support, and protection are met.

Keywords

inclusive elderly care, urban-rural differences, elderly care services, accessibility, Guangxi

1. Introduction

1.1 Policy Background

China is currently experiencing an unprecedented and fastest aging process in history [1]. As an underdeveloped western region with a large ethnic minority population, Guangxi's aging issue presents three distinct characteristics: first, the aging rate is faster than the national average; second, the proportion of the rural elderly population far exceeds that of urban areas, forming a contrast of "faster aging in rural areas and slower aging in cities"; third, the increase in the number of very elderly, empty-nest, and disabled elderly has made the demand for elderly care more diverse and urgent [2].

Against such a social backdrop, China is shifting its elderly care focus from targeted support for disadvantaged seniors to universal services open to all older adults, a core priority for central and local elderly care initiatives. Outlined in the 14th Five-Year Plan for the Development of Aging Programs and the Elderly Care Service System, national policies seek to advance coordinated growth of aging-related public services and industries, build a three-tier care framework spanning home, community and institutional care, and

advance the integration of medical and nursing services. Scaling up inclusive elderly care access stands high on the national work agenda.

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Documents such as the Opinions on Promoting the Development of Elderly Care Services issued by the General Office of the State Council have repeatedly emphasized the development of affordable, accessible, and quality-assured inclusive elderly care services. Guangxi has actively implemented national policies and successively issued a series of policy documents including the Regulations on Elderly Care Services of Guangxi Zhuang Autonomous Region and the 14th Five-Year Plan for the Elderly Care Service System of Guangxi. These policies focus on three goals: first, establishing a basic elderly care service system covering urban and rural areas with clear responsibilities, reasonable guarantees, and long-term stability; second, solving the problems of insufficient supply, uneven quality, and unbalanced development between regions and urban and rural areas in elderly care services; third, focusing on strengthening elderly care service capacity in rural areas, old revolutionary base areas, ethnic areas, and border areas to ensure that urban and rural elderly people can enjoy equal-quality elderly care services [3].

Inclusive elderly care, with its emphasis on affordability, accessibility, long-term stability, and reliable quality, is regarded as the key to achieving these goals. However, due to Guangxi's relatively backward economic development, limited financial investment in elderly care, large regional gaps, obvious urban-rural differences, and diverse ethnic cultures, promoting inclusive elderly care services across the region, especially in rural areas, faces many complex difficulties. Clarifying the current situation, problems, and differentiated needs of urban-rural inclusive elderly care services in Guangxi is of great significance for formulating rational policies, allocating resources appropriately, and achieving the goal of "care for the elderly" for all [4].

1.2 Research Motivation

Although Guangxi attaches great importance to the development of inclusive elderly care services at the policy level, there are still many problems to be explored in practice.

Statistics and field-based empirical findings reveal an obvious imbalance in the layout of high-end senior care resources across Guangxi. Most full-service nursing homes, skilled care workers and smart senior care devices cluster in Nanning, Liuzhou and Guilin. By contrast, counties and countryside suffer from acute shortages of available care resources. Most rural senior care sites are poorly equipped with outdated infrastructure, offer only limited types of services, and struggle to recruit qualified caregivers. Such uneven resource gaps between cities and the countryside prevent older residents in rural regions from accessing the same inclusive care benefits available to urban seniors, conflicting with the core goal of realizing equal elderly care for all.

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A range of conditions restrict local seniors' access to inclusive care, covering geographic layout, individual payment capacity, information transparency and local customs [5]. In rural Guangxi, poor transport links, low household income levels, inadequate policy outreach and deep-rooted traditions of home-based elder care

mean many older villagers cannot make practical use of newly built community care centers and senior dining services, even when such facilities exist locally [6].

Improving service quality sits at the heart of inclusive elderly care development, yet Guangxi's urban and rural care systems fall short on standardized management, with rural facilities bearing the brunt of these shortcomings. Insufficient professional caregivers, narrow service catalogs and flawed operational approaches alongside hidden health hazards all worsen seniors' daily service experience. It is therefore critical to build a targeted quality assessment and oversight framework tailored to Guangxi's local conditions and rural senior care demands [8].

The effective supply of inclusive elderly care services relies on multi-agent collaboration. At present, the collaboration mechanism in Guangxi's elderly care service sector is imperfect. The scientificity and implementation efficiency of government policy-making need to be improved. Social capital is reluctant to participate in rural areas due to long investment return cycles and high risks. The supporting roles of communities and families in service provision have not been fully utilized. Establishing a collaborative governance model suitable for local conditions and mobilizing the enthusiasm of all parties is a key path to promoting the sustainable development of inclusive elderly care [9].

Guangxi is home to a diverse mix of ethnic groups. Older adults from different ethnic communities hold distinct views on elderly care, maintain varied lifestyles and have unique care-related needs. The top-down design and resource distribution of current inclusive elderly care policies have failed to fully account for these differences. In ethnic minority villages in particular, it is critical to incorporate local ethnic features into the layout of elderly care facilities, the design of service programs and language arrangements for service staff. So far, relevant research and practical experience in this field remain limited.

Against the above background, this study intends to use systematic field investigation and quantitative analysis to explore the main contradictions in the development of urban-rural inclusive elderly care services in Guangxi, focus on analyzing the manifestations, causes, and transmission paths of urban-rural service supply gaps, and provide theoretical support and practical references for solving practical problems and building a characteristic inclusive elderly care service system.

1.3 Research Purpose

The core purpose of this study is to systematically explore the current situation, differences, influencing factors, and optimization paths of urban-rural inclusive elderly care services in Guangxi. Specific objectives are as follows:

Drawing on Guangxi's regional attributes—including its economic conditions, financial capacity, public sentiment and geographical features—this study develops a forward-looking, targeted and actionable optimization framework for inclusive elderly care services across urban, county and rural settings. By exploring strategies to narrow the urban-rural divide, expand service coverage, enhance service quality, promote multi-stakeholder participation, secure diversified funding support and highlight ethnic characteristics, the research offers scientific backing and practical guidance for government decision-making and industry practice.

Focusing on the key restrictive factors in the development of urban-rural inclusive elderly care services in Guangxi, this study systematically examines policy design and implementation, especially facility planning and targeted financial subsidies; explores financial investment volume, allocation optimization, and efficiency improvement; investigates the participation and collaboration effects of enterprises and social organizations; evaluates community service functions and elderly care network construction based on grassroots governance frameworks; and conducts detailed surveys on the economic income, health, education, values, and consumption behavior of the elderly.

This study focuses on analyzing the key factors affecting urban-rural inclusive elderly care services and their relationships, explores the deep-seated reasons for urban-rural development differences, constructs their internal connection structure, and provides empirical and theoretical support for improving public policies.

This study evaluates the implementation effects of national and regional inclusive elderly care policies in Guangxi, explores the main obstacles and mechanisms in practice, assesses their role in promoting urban-rural integrated development, and identifies potential problems.

Based on Guangxi's regional characteristics (economy, finance, public opinion, geography), this study constructs a forward-looking, targeted, and implementable optimization framework for inclusive elderly care services in urban, county, and rural areas. By analyzing urban-rural gap narrowing, service coverage expansion, quality improvement, multi-agent participation encouragement, diversified funding support, and ethnic characteristics highlighting, it provides scientific support and practical guidance for government decision-making and industry practice.

1.4 Problem Statement

The core questions this study aims to answer are: Under the background of accelerating population aging and unbalanced urban-rural development, what are the main challenges facing the development of urban-rural inclusive elderly care services in Guangxi? What significant differences exist between urban and rural areas? What key factors drive or restrict their development, especially the root causes of urban-rural differentiation? How to build an optimization path of inclusive elderly care services suitable for Guangxi's reality and effectively promoting urban-rural coordinated development? Specific research questions include:

1) What specific differences exist between urban, county, and rural areas in Guangxi in terms of supply scale, structure, quality, accessibility (geographical, economic, informational, cultural), and utilization efficiency of inclusive elderly care services? What is the degree of difference?

2) How do policy support (national, autonomous regional, local), financial investment, social capital participation, community support networks, and elderly demand characteristics (payment ability, willingness, health, concepts) affect the development of urban and rural inclusive elderly care services respectively? Are there significant differences in these impacts?

3) How does the urban-rural dual structure (economic, social, infrastructure, public service foundation) indirectly affect the balanced development of inclusive elderly care services through the above factors? To what extent do ethnic regional characteristics (culture, customs) shape the demand and supply model of elderly care services in specific regions?

4) What major hurdles and shortcomings exist in current inclusive elderly care policies and operational models when it comes to catering to the needs of urban and rural seniors and bridging service disparities?

5) Given the local realities of Guangxi, what differentiated, systematic strategies and measures can be adopted to elevate the quality and efficiency of urban inclusive elderly care services, extend such services down to county-level areas, and expand coverage in rural regions? How can we ultimately realize coordinated, high-quality development of elderly care services across urban and rural areas?

1.5 Research Significance

Inclusive elderly care services are key strategic measures to address population aging in China. Its theoretical framework, evaluation system, and implementation path need to be improved. Taking Guangxi as an example, this study selects regions with low economic development, diverse ethnic groups, and obvious urban-rural differences as research objects, constructs a comprehensive evaluation model including service supply, accessibility, quality assurance, and resource utilization efficiency, and uses hierarchical data analysis to comprehensively explore the development motivation and differentiation of urban-rural inclusive elderly care services. This study is conducive to deepening the understanding of the theoretical connotation of the inclusive elderly care service system with Chinese characteristics, and provides practical references for formulating targeted elderly care service policies in underdeveloped regions, with high academic value and innovative significance.

Taking urban-rural spatial pattern as the analytical framework, this study examines its impact mechanism on all aspects of inclusive elderly care services. It not only observes the manifestations of urban-rural differences in service supply, accessibility, quality, and utilization efficiency, but also explores the root causes

of urban-rural elderly care service gaps from the perspectives of policy guidance, economic foundation, and social and cultural environment. According to Guangxi's multi-ethnic characteristics, this study focuses on how traditional ethnic cultures and elderly care concepts affect the demand and supply of inclusive elderly care services, strives to include cultural compatibility into the inclusive elderly care theoretical system, constructs a practical elderly care model scheme suitable for local conditions, provides empirical support for interdisciplinary research, and shapes a theoretical framework of inclusive elderly care with local and ethnic characteristics.

Addressing the practical challenges facing inclusive elderly care in both urban and rural Guangxi, this study explores the manifestations and underlying causes of urban-rural development disparities. Through empirical research, it identifies the core drivers of these gaps and proposes targeted countermeasures—including refining inclusive elderly care policies, optimizing financial resource allocation, scientifically designing the spatial layout of elderly care facilities, innovating service delivery models, and establishing a quality supervision system. These insights aim to provide actionable references for the regional and local governments of Guangxi Zhuang Autonomous Region, supporting the achievement of basic elderly care service equalization across the region. Additionally, the study conducts a comprehensive analysis of the functional roles of multiple stakeholders involved in inclusive elderly care: government, market entities, social organizations, communities, and families. It assesses the strengths and challenges of cooperation among these actors, and puts forward specific recommendations and operational steps to promote social capital participation, enhance community service capacity, and strengthen family care effectiveness—ultimately contributing to the development of a sustainable inclusive elderly care service system.

This study hopes to build an urban-rural integrated, high-quality, balanced, and sustainable inclusive elderly care service system in Guangxi, achieve coordinated development between regions, economic levels, and ethnic groups, ensure that all elderly residents can live a dignified and high-quality life, and greatly improve the life satisfaction of the elderly in the region. As a typical representative of underdeveloped central and western regions and ethnic minority areas, Guangxi's practice in promoting inclusive elderly care provides key theoretical support and practical guidance for the field[10].

2. Literature Review

2.1 Definition of Core Variables

The core concepts involved in this study need to be clearly defined to guide the subsequent operationalization and measurement of variables.

2.1.1 Inclusive Elderly Care Services

Drawing on the national policy document 14th Five-Year Plan for the Development of the Aging Cause and the Elderly Care Service System, this study defines inclusive elderly care services as: basic elderly care services led by the government, participated by social forces, for all elderly people (focusing on groups such as economically disadvantaged, disabled, very elderly, and special family planning families), providing affordable, accessible, and quality-assured services. Its core characteristics include:

- **Affordability**: Service prices match the economic affordability of most elderly people. The government ensures that basic service items are within payment capacity through subsidies and price guidance [11].
- **Accessibility**: Including multiple dimensions: geographical accessibility (reasonable spatial layout of service facilities, convenient transportation); economic accessibility (i.e., affordability); informational accessibility (transparent and easy-to-obtain service information); cultural accessibility (service content and methods respect local customs, languages, and non-discrimination) [12].
- **Quality Reliability**: Services meet basic safety, health, and professional standards. Service personnel have corresponding qualifications and abilities, and the service process is standardized, effectively meeting the elderly's basic living care, medical care, and spiritual comfort needs [13].
- **Sustainability**: Service supply has long-term stable operation capacity in finance, manpower, and management [14].

The core dependent variable of this study is the development level of inclusive elderly care services, which is decomposed into the following dimensions for measurement at the operational level:

- **Service Supply**: Quantity/density of available facilities, types (community/home-based/institutional), number of beds, types of service items, number/proportion of professional personnel.
- **Service Accessibility**: Geographical distance/time cost, ratio of service price to elderly income, smoothness of information access channels, evaluation of service cultural compatibility.
- **Service Quality**: Safety and comfort of facilities, professionalism and attitude of service personnel, standardization of service processes, satisfaction of the elderly and their families.
- **Service Utilization**: Utilization rate of community elderly care facilities, occupancy rate of institutional elderly care, frequency of use of specific service items (e.g., meal assistance, bathing assistance).

2.1.2 Urban-Rural Differences

In this study, urban-rural differences refer to the systematic gaps in the development level of inclusive elderly care services (supply, accessibility, quality, utilization) due to different regional attributes (urban, county, rural). Rooted in the long-standing urban-rural dual structure, these differences are reflected in economic development, financial investment capacity, infrastructure construction, public service resource allocation, population structure and mobility, cultural concepts, etc. [18]. This study takes “urban-rural region” as a key independent variable or grouping variable for comparative analysis.

2.1.3 Service Accessibility

As mentioned above, this is a multi-dimensional concept. In this study, the focus will be on measuring:

- **Geographical Accessibility**: The shortest transportation time or distance for the elderly to reach the nearest inclusive elderly care institution/facility.
- **Economic Accessibility**: The price perception (affordability) of the elderly or their families for local inclusive elderly care services (especially institutional care and major home-based services).
- **Informational Accessibility**: The ease with which the elderly understand local inclusive elderly care services, application methods, and fee standards.
- **Cultural Accessibility**: Whether services consider and respect local ethnic customs (e.g., eating habits, religious activities), smooth language communication, and whether the service environment makes the elderly feel familiar and comfortable (no sense of discrimination).

2.1.4 Perceived Service Quality

Perceived service quality refers to the subjective evaluation and feelings of the elderly or their families on the hardware facilities, personnel services, management processes, and service effects of the inclusive elderly care services received [16]. It is an important subjective indicator to measure the “quality reliability” characteristic of inclusive elderly care.

2.1.5 Willingness to Pay

Willingness to pay refers to the maximum price or fee level that the elderly are willing to bear for obtaining specific inclusive elderly care services (e.g., institutional admission, home-based services, community rehabilitation) [15]. It reflects the elderly’s recognition of service value and the boundary of economic affordability, and is a key factor affecting service utilization.

2.2 Variable Measurement

This study will use a combination of quantitative and qualitative methods to measure core variables.

2.2.1 Development Level of Inclusive Elderly Care Services

- **Supply**: Quantitative – collect official statistical data (civil affairs departments, statistical yearbooks) to obtain the number of elderly care institutions/community facilities, number of beds, type

distribution, number of certified nurses in each region. Qualitative – interview managers to understand supply structure, gaps, and challenges.

- **Accessibility**:
    - Geographical Accessibility: Quantitative – questionnaire asks "time required to reach the nearest community elderly care service center/township nursing home (minutes)" (options: <15min, 15–30min, 31–60min, >60min). Use GIS to analyze facility service radius coverage (facility point data required).
    - Economic Accessibility: Quantitative – questionnaire asks "How do you feel about the price of local elderly care homes/main home-based services?" (options: completely unaffordable, relatively difficult, basically affordable, very easy). Calculate the ratio of service price to the local elderly's monthly average income/median pension.
    - Informational Accessibility: Quantitative – Likert 5-point scale items such as "I can easily learn about local elderly care services", "The application process is clear", "Fees and subsidies are transparent". Qualitative – interview to understand main channels and obstacles of information acquisition.
    - Cultural Accessibility: Qualitative (mainly) – interview ethnic minority elderly about their feelings on cultural and custom compatibility of services (e.g., catering, activities, language communication). Quantitative – set item "Services respect my living habits and ethnic customs" for evaluation (Likert 5-point).
- **Quality**: Quantitative – adopt adapted perceived service quality scale (based on SERVQUAL model, Parasuraman et al., 1988), including reliability, responsiveness, assurance, empathy, tangibility, evaluated by the elderly or their families who have received services (Likert 5-point) [25]. For example: "Staff always provide services on time", "Facilities are clean and safe", "Staff have professional knowledge and skills", "Staff understand my special needs". Also ask about overall satisfaction. Qualitative – in-depth interviews to explore specific evaluations, satisfactions, and dissatisfactions with service quality.
- **Utilization**: Quantitative – questionnaire asks about the frequency of community facility use (e.g., how many times a week to go to the senior canteen/activity center), whether home-based services have been used (items, frequency), institutional care willingness and actual occupancy rate (collected from institution managers).

2.2.2 Urban-Rural Differences

Directly divided according to the respondent's permanent residence type: urban (municipal district), county (county seat and established towns), rural (administrative villages and natural villages).

2.2.3 Other Key Independent Variables

- **Policy Support**: Qualitative – analyze the completeness and innovation of local supporting policy documents; interview managers to evaluate policy implementation effects (e.g., land guarantee, subsidy distribution efficiency). Quantitative – try to use proxy indicators such as the proportion of local financial elderly care expenditure in total financial expenditure and the in-place rate of special subsidy funds (limited by data availability).
- **Social Capital Participation**: Quantitative – count the proportion of private elderly care institutions and beds, number/investment of PPP projects. Qualitative – interview enterprise/social organization leaders to understand participation motivation, obstacles, and policy demands.
- **Community Support Network**: Quantitative – questionnaire measures the activity of community elderly associations/volunteer organizations (activity frequency), neighborhood mutual assistance (Likert evaluation). Qualitative – interview community workers.
- **Elderly Characteristics**: Quantitative – questionnaire collects age, gender, ethnicity, education, marital status, health status (ADL/IADL), economic source and income level, children's situation, elderly care concept (preference for home/institution/community), willingness to pay (see below).

- **Willingness to Pay**: Quantitative – use Contingent Valuation Method (CVM) or Choice Experiment (CE). For example, CVM: "If there is a home bathing service, 1 hour each time, operated by professional nurses, how much are you willing to pay at most per time? (provide price options or open-ended)". Or ask the acceptable monthly fee range for institutional care.

2.3 Review of Variable-Related Research

Many studies have explored the factors affecting the development of elderly care services, especially urban-rural differences.

2.3.1 Urban-Rural Region and Inclusive Elderly Care Services

Domestic and foreign studies generally confirm the significant urban-rural inequality in elderly care resources. Lin Mingang (2025) pointed out that rural elderly care services lag behind urban areas in terms of facility quantity, quality, professional talents, and financial investment [17]. Lu Jiehua (2024) emphasized that the urban-rural dual structure is the deep institutional root of this gap [18]. The Guangxi Economic and Social Development Report 2025 also reveals the problem of elderly care resources concentrating in cities and serious shortage in rural areas.

2.3.2 Policy Support and Inclusive Elderly Care

Strong policy guidance and supporting measures are key driving forces for the development of inclusive elderly care. Yang Yansui et al. (2022) emphasized the importance of top-level design, standard setting, and supervision system [19]. The Measures for the Administration of Elderly Care Service Subsidies in Guangxi points out the impact of subsidy policy accuracy (supply-side vs. demand-side) on service affordability and market vitality. Studies also found that policies often have deviations, discounts, or "last mile" problems in grassroots implementation, especially in rural areas with long administrative chains and weak resources.

2.3.3 Financial Investment and Inclusive Elderly Care

Public finance is the main support for inclusive elderly care, especially basic and bottom-line services. Studies show that the total amount and structure of financial investment (e.g., institutions vs. community/home-based, construction vs. operation) directly affect the scale and quality of service supply [13]. As an underdeveloped region, Guangxi has limited financial capacity. How to optimize investment efficiency and leverage social capital is the core issue of sustainable inclusive elderly care [20]. Rural areas often rely more on financial investment, but investment is insufficient and sustainability is challenged.

2.3.4 Social Capital Participation and Inclusive Elderly Care

Introducing market mechanisms and social forces is an important way to expand supply and improve efficiency. Studies found that social capital faces obstacles such as difficulty in making profits (especially in rural areas), policy risks, and talent shortages when participating in inclusive elderly care [21]. How the government creates a good business environment through PPP, private operation of public facilities, tax incentives, and service procurement, especially reducing the risk and cost of social capital entering the rural market, is a research hotspot. The effect of Guangxi's practical exploration (e.g., Nanning's private operation of public facilities) needs in-depth evaluation.

2.3.5 Community Support Network and Inclusive Elderly Care

Communities are important carriers and platforms for elderly care services. Strong community organizations (neighborhood committees/village committees, elderly associations, volunteer organizations) can effectively link resources, organize activities, and provide informal care support [14]. Studies show that rural community "hollowing out" and weakened organizational capacity seriously restrict the function of community elderly care [22]. How to activate and empower rural communities and build a mutual assistance elderly care network is crucial for rural inclusive elderly care in Guangxi.

2.3.6 Elderly Characteristics and Inclusive Elderly Care

- **Payment Ability and Willingness**: The economic status of the elderly (pension, savings, children's support) is a key factor determining whether they can use paid services (Hurd & McGarry, 1997). Rural elderly generally have low income, weak payment ability, and high price sensitivity [23].

Willingness to pay is jointly affected by economic ability, service value cognition, and traditional concepts (e.g., "raising children for old age", unwilling to pay for services) [15]. Rural elderly in Guangxi may have lower willingness to pay due to income and cultural concepts.

- **Health Status and Demand**: Disabled, semi-disabled, and very elderly have urgent needs for professional nursing and medical rehabilitation. Rural areas have weak health management foundations and greater pressure for disabled elderly care [13].
- **Elderly Care Concepts**: Traditional family elderly care concepts still dominate in Guangxi, especially in rural and ethnic minority areas [18]. Acceptance of institutional care and cognition of community services affect service utilization. Research needs to focus on concept differences and changes.
- **Ethnic Regional Particularity**: There are relatively few studies on Guangxi's multi-ethnic characteristics. Zhu Junlin (2020) explored the elderly care culture and mutual assistance practice in Zhuang villages [24]. Research suggests that developing inclusive elderly care in ethnic minority areas needs to respect their unique filial piety culture, living preferences, eating habits, festival activities, and language communication needs. Ignoring these cultural factors may lead to service "inadaptation" and low utilization.

Existing studies on elderly care in Guangxi mostly focus on macro policy description or single region/institution case analysis, lacking empirical research covering the whole region, penetrating urban-rural grassroots, and using standardized variable measurement and comparative analysis. The systematic measurement of urban-rural differences in multiple dimensions (supply, accessibility, quality, utilization) and its deep-seated impact mechanism (especially the interaction of policy, finance, social capital, community, and cultural factors) are insufficient. Research on how ethnic characteristics specifically affect the demand and supply of inclusive elderly care is even scarcer.

3. Research Methods

To comprehensively and deeply explore the development status and differences of urban-rural inclusive elderly care services in Guangxi, this study adopts Mixed Methods Research, combining the breadth advantage of quantitative investigation and the depth insight of qualitative interviews.

3.1 Research Scale Design

This study will design two core research tools: a structured questionnaire for the elderly and a semi-structured interview outline for key informants.

3.1.1 Structured Questionnaire for the Elderly

The questionnaire includes the following main modules. Core variable measurements adopt or adapt mature scales as much as possible, and are localized revised combined with Guangxi's reality.

Table 1: Basic Information

Module	Dimensions and Specific Questions	Measurement Method
Demographic Characteristics	Age, gender, ethnicity, household registration type (urban/rural), permanent residence (urban/county/rural), education, marital status	Fill-in-the-blank, multiple choice
Family Status	Co-residents, number of children and living distance, main caregiver	Fill-in-the-blank, multiple choice
Economic Status	Main economic sources (pension, children's support, labor income, subsistence allowance, etc.), monthly income range, self-assessment of family economy (affluent/general/difficult)	Multiple choice, fill-in-the-blank, choice
Health Status	Self-assessed health (very good/good/general/poor/very poor), chronic diseases, ADL, IADL	Multiple choice, scale

Table 2: Elderly Care Service Demand and Cognition

Module	Dimensions and Specific Questions	Measurement Method
Current Elderly Care Method	Living alone, with spouse, with children, institutional care, etc.	Multiple choice

Module	Dimensions and Specific Questions	Measurement Method
Future Elderly Care Preference and Reasons	Open question, record specific reasons	Fill-in-the-blank
Most Needed Elderly Care Services (Multiple Choice & Ranking)	Living care (bathing, cleaning, walking), catering (delivery, meal sites), medical care (health monitoring, home visits, rehabilitation), emergency call, spiritual comfort (chat, entertainment), legal aid, etc.	Multiple choice, ranking
Understanding of "Inclusive Elderly Care" and Channels	Open question, record specific reasons	—

Table 3: Inclusive Service Accessibility Evaluation

Module	Dimensions and Specific Questions	Measurement Method
Geographical Accessibility	"There is a community elderly care center/day care center/township nursing home near my home within XX minutes" (record XX minutes)	Likert 5-point scale (1 = strongly disagree, 5 = strongly agree)
Economic Accessibility	"I think the fees of local elderly care homes are reasonable/affordable"; "I think the fees of community XX services (e.g., meal assistance) are reasonable/affordable"	Likert 5-point scale
Informational Accessibility	"I can easily learn about local elderly care services"; "I know how to apply for these services"; "Fees and government subsidies are transparent"	Likert 5-point scale
Cultural Accessibility (Ethnic Minority Respondents)	"Services respect my ethnic habits (e.g., catering, activities)"; "Staff can communicate in my language"; "I feel comfortable and not discriminated in institutions/centers"	Likert 5-point scale

Table 4: Perceived Service Quality (Adapted from SERVQUAL, Likert 5-point)

Module	Dimensions and Specific Questions	Measurement Method
Tangibility	"Facilities are clean, tidy, and safe"; "Equipment is complete and well-maintained"	Likert 5-point (1 = completely inconsistent, 5 = completely consistent)
Reliability	"Staff provide services as promised"; "Services are stable and reliable"	Likert 5-point
Responsiveness	"Staff are willing to help and respond promptly"; "Service is not delayed"	Likert 5-point
Assurance	"Staff are trustworthy"; "Staff have professional skills"; "Services make me feel safe"	Likert 5-point
Empathy	"Staff understand my special needs"; "Services are humanized and personalized"; "Staff are friendly and patient"	Likert 5-point
Overall Satisfaction	"Overall, I am satisfied with this service"; "I am willing to continue using/recommend to others"	Likert 5-point

Table 5: Service Utilization

Module	Dimensions and Specific Questions	Measurement Method
Community Facility Usage Frequency	Never/occasionally/often/daily	Multiple choice
Home-based Service Usage	Yes/no; if yes, items, frequency, payment	Multiple choice, fill-in-the-blank
Institutional Care Experience or Willingness	Consider in X years; expected type and affordable fee	Multiple choice, fill-in-the-blank

Table 6: Willingness to Pay (WTP)

Module	Dimensions and Specific Questions	Measurement Method
Willingness to Pay	Describe a standardized inclusive service scenario; ask maximum monthly willingness to pay (options: ¥0, ¥50, ¥100, ¥150, ¥200, ¥250, ≥¥300)	Contingent Valuation Method (CVM)

Table 7: Open-Ended Questions

Module	Dimensions and Specific Questions	Measurement Method
Suggestions	Suggestions on local inclusive elderly care	Fill-in-the-blank

3.1.2 Semi-Structured Interview Outline for Key Informants

Table 8: Semi-Structured Interview Outline for Key Informants

Module	Interview Themes	Interview Objects
Current Situation	Overall evaluation of local inclusive elderly care (achievements, highlights, problems)	Civil affairs officials (2–3 per level); elderly care institution directors (3–5 per type); community/village cadres (4–6); elderly association leaders (3–4); elderly representatives (8–10)
Urban-Rural Differences	Specific gaps in supply, resources, facilities, talents, demand; main causes (policy, finance, geography, population, concepts)	—
Policy Implementation	Implementation effects; main difficulties (funding, land, approval, supervision, talents)	—
Social Capital Participation	Experience, challenges, and policy demands for rural participation	—
Community Role	Role, capacity, and difficulties in supporting elderly care	—
Operation Challenges	Main challenges (cost, fees, talents, occupancy/utilization); key quality improvement measures	—
Ethnic Service Needs	How to address ethnic elderly's special needs (language, diet, customs, beliefs)	—
Non-Usage Reasons	Reasons for not using services (price, unawareness, inconvenience, no need, distrust, cultural incompatibility); improvement expectations	—
Development Suggestions	Suggestions for future development (narrowing urban-rural gaps, improving rural services)	—

3.2 Survey Time and Location

- **Survey Time**: Questionnaire distribution and collection in July 2025; in-depth interviews in July–August 2025 (adjust according to actual situation).
- **Survey Locations**: Stratified typical sampling selects 1 central city, 1 county (including county seat and towns), and 1 typical village in Guangxi, representing different development levels, regional characteristics, and ethnic distributions.
- **Urban Level**: Nanning (capital, high resource concentration, representing urban high level). Select 1–2 districts (e.g., Qingxiu + old urban/urban-rural fringe).
- **County Level**: Liujiang District (Liuzhou) or Quanzhou County (Guilin) (representative in economic development, population structure, aging degree). Cover county seat and 2–3 towns.
- **Rural Level**: Ping'an Village, Jiazhuan Town, Bama Yao Autonomous County (typical ethnic minority village, longevity area) or a Zhuang village in Tianyang District (Baise). Select 1–2 administrative villages.
- **Selection Basis**: Regional distribution (southern, central, northwestern Guangxi), economic development gradient, ethnic composition (Han-dominated/Zhuang-concentrated/other ethnic minorities), aging degree, and representativeness of inclusive elderly care development foundation.

3.3 Respondents and Sampling Methods

3.3.1 Questionnaire Respondents

Elderly residents aged 60 and above (registered or residing for ≥6 months).

Sampling Methods:

- **Urban/County**: Multi-stage stratified random sampling

Randomly select 2–4 subdistricts/towns from selected districts/counties.

Randomly select 2–3 communities from each sampled subdistrict/town.

Systematically or simply randomly sample target elderly from community elderly roster or via neighborhood committee. For communities without complete rosters, use intercept interviews at activity centers, parks, health stations (note sample bias).

- **Rural**: Cluster sampling + random sampling

Randomly select 1–2 administrative villages in selected towns.

Randomly select 2–3 natural villages if scales differ greatly.

Randomly sample from village elderly list; if no list, conduct door-to-door interviews guided by cadres.

Sample Size: Total 800 questionnaires. Preliminary allocation: Nanning (urban) 320; Liujiang/Quanzhou (county 160 + towns 120 = 280); Bama/Tianyang (rural) 200. This allocation ensures sufficient samples for statistical analysis at each level.

3.3.2 Interview Respondents

Purposive and snowball sampling. Select informative informants (as listed in outline) via civil affairs, community/village cadres, or respondent referrals until data saturation.

Sample Size: 30–40 interviews (number per category see outline).

Ethical Considerations: All participants sign informed consent. Questionnaires are anonymized; interview recordings and transcripts are strictly confidential. Participants may withdraw at any time.

4. Conclusion

4.1 Theoretical Contributions

Using empirical analysis, this study is the first to include “informational accessibility” and “cultural accessibility” into the inclusive elderly care service evaluation system, tested with samples from multi-ethnic and underdeveloped regions, breaking the limitation of traditional research focusing only on physical space and economic resource accessibility. The developed or validated scale provides operational guidance for subsequent research and effectively expands the measurement dimensions of inclusive elderly care theory. When exploring urban-rural differences, this study goes beyond the simple urban-rural dual opposition, systematically explaining the mechanism and path of the “urban-rural region” variable through quantitative regression analysis and qualitative in-depth interviews.

Based on Guangxi’s multi-ethnic coexistence characteristics, this study takes key cultural elements such as language communication, dietary preferences, living arrangements, and filial piety concepts as analysis nodes, comprehensively analyzes their triggering mechanism for service demand of specific elderly groups, and deeply explores the troubles and improvement directions of inclusive elderly care service system in cultural adaptation. It also locally improves classic service quality testing tools, applies and tests them in rural and ethnic minority areas, focusing on the reliability and effectiveness of indicators such as empathy and cultural compatibility, providing empirical data and theoretical support for building a service quality evaluation system suitable for multi-cultural backgrounds.

4.2 Practical Contributions

This study provides an operable strategic framework for the development of inclusive elderly care services in the urban-rural integration process of Guangxi and even the whole country. For urban elderly care services, promote refined quality improvement, diversified function expansion, and in-depth application of smart elderly care technology, guiding resources to meet diverse needs. As a key node of urban-rural integration, counties

and towns should accelerate the construction of comprehensive elderly care service centers, enhance their service radiation to surrounding areas, especially rural areas, and form a core support system for rural elderly care services within the county.

4.3 Research Deficiencies and Limitations

This study uses stratified sampling for data collection. Limited by time and cost, sample acquisition is cumbersome, making it difficult to fully reflect the overall situation of each hierarchical district. Analyzing data at a specific time point can find correlation rules but cannot establish causal relationships. Many important factors such as local policy details and regional cultural characteristics are not included, and unconsidered factors may cause errors. Key independent variables such as perceived service quality, accessibility, and willingness to pay basically rely on respondents' subjective judgments, easily affected by social desirability, memory bias, and comprehension ability. Even with standardized questionnaires, errors and interference cannot be completely eliminated. The Contingent Valuation Method (CVM) is based on hypothetical scenarios; respondents' stated willingness to pay (WTP) may differ from real market behavior (hypothetical bias). Research results mostly reflect potential demand and price sensitivity.

4.4 Future Research Directions

Future research can conduct wider-coverage and typical sample longitudinal tracking studies to explore the dynamic characteristics and underlying reasons of inclusive elderly care development. For the cultural adaptability of inclusive elderly care in ethnic regions, formulate suitable service models and evaluation index systems, form an innovative mechanism to promote social capital injection into rural inclusive elderly care, and improve supporting policy toolkits. Rely on big data and artificial intelligence to improve the accuracy of inclusive elderly care services, strengthen quality supervision effects, and improve operation efficiency. Strengthen comprehensive evaluation research on the implementation of inclusive elderly care policies, focusing on the actual role of policies in narrowing urban-rural development gaps.

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Conflicts of Interest

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