

Survey on the Current Status of Elderly Health Services in 1,305 Medical Institutions in Guangxi

Dongmei Huang¹, Caizhong Zhou², Caili Li³, Huiqiao Huang⁴, Xiao Pan³, Yanfei Pan³, Qini Pan³, Lichong Lai³

¹Department of Rehabilitation Medicine, The Second Affiliated Hospital of Guangxi Medical University, Nanning, Guangxi, People's Republic of China; ²Department of Internal Medicine, Second People's Hospital of Teng County, Wuzhou, Guangxi, People's Republic of China; ³Nursing Department, The Second Affiliated Hospital of Guangxi Medical University, Nanning, Guangxi, People's Republic of China; ⁴Party Committee Office, The Second Affiliated Hospital of Guangxi Medical University, Nanning, Guangxi, People's Republic of China

Correspondence: Huiqiao Huang, Email hhq@sr.gxmu.edu.cn

Objective: To investigate the current status of elderly health services in medical institutions at all levels within Guangxi Province, China.

Methods: Using a purposeful sampling method, a questionnaire survey was conducted from July 24, 2023 to October 24, 2023 on the general situation, human resources, rehabilitation medicine, nursing services, and the development of hospice care at 1305 medical institutions in Guangxi.

Results: Among the surveyed 1305 medical institutions in Guangxi, 172 (13.18%) had established departments of geriatrics, while 293 (22.45%) boasted departments of rehabilitation medicine. Furthermore, 909 (69.66%) of these institutions offered annual free physical examination services to individuals aged 65 and above. Notably, a total of 362 medical institutions, encompassing both comprehensive hospitals and grassroots hospitals, were recognized as elderly-friendly institutions, accounting for 31.4% of the surveyed sample. The highest demand for talents in medical institutions at all levels included specialized physicians/general practitioners (74.6%), traditional Chinese medicine practitioners (63.1%), rehabilitation therapists (56.1%), and specialized nurses for the elderly (41.7%). A total of 1038 medical institutions conducted popular science activities on elderly health, accounting for 79.5% of the total, focusing mainly on disease prevention (89.21%), nutritional diets (84.68%), rational medication use (79.77%), physical exercise (68.21%), and mental health (60.79%). Only 88 medical institutions provided hospice care services, accounting for 6.7% of the total.

Conclusion: Guangxi medical institutions' elderly services are inadequate. Geriatrics and rehab departments are scarce, talent is lacking, and hospice care is underdeveloped. As aging accelerates, the country and society must support elderly care. Governments should introduce talent incentives, and medical institutions should enhance services, foster a positive work environment, and advance Guangxi's elderly health agenda.

Keywords: medical institutions, elderly health services, elderly care, hospice care, current status

Background

According to United Nations statistics, by 2025, the global elderly population will exceed 1.1 billion.¹ A report from the World Health Organization (WHO) indicates that the proportion of the global population aged 60 and above will increase from 12% in 2015 to 22% in 2020.² Population aging is one of the most critical demographic issues in modern times, with far-reaching consequences across various aspects including social structure, economic development, individual psychological well-being, healthcare systems, and legal frameworks, presenting a comprehensive challenge that cannot be overlooked.³ Population aging is a longstanding social issue of significance. China is one of the countries with the fastest aging population in the world.⁴ According to the seventh national census conducted by the National Bureau of Statistics, as of 2020, China's elderly population aged 60 and above reached 264 million, accounting for 18.7% of the total population. It is projected that by 2050, China's elderly population aged 60 and above will reach 480 million,

accounting for approximately 35% of the total population.⁵ With rapid social development and the exacerbation of population aging trends, elderly health services have become a focal point of societal concern. Accelerating the development of healthy aging is bound to become an important strategy for China to cope with population aging.⁶ Efficient and rational allocation of limited healthcare resources to meet the growing demand for medical insurance and achieve the goal of healthy aging is one of the important challenges and tasks facing society today.

Guangxi, as a multi-ethnic region in China, has seen a steady increase in its elderly population, leading to a growing demand for elderly health services. With the rapid increase in the elderly population, the demand for medical and health care and health management is also increasing. Medical institutions, as the main providers of elderly health services, directly impact the quality of life and health well-being of the elderly. As more and more elderly people inevitably approach the end stage of life, their need for end-of-life care becomes increasingly prominent.^{7,8} Recently, with the approval of the National Health Commission, the National Cancer Center has published the burden of malignant tumors in China for 2022, based on the latest data from tumor registration and follow-up monitoring conducted by JNCC.⁹ According to the report, the incidence of all cancer types is relatively low in the 0–34 age group. However, it significantly increases from the 35–39 age group onwards, peaking in the 80–84 age group. Similarly, the mortality rate of all cancer types remains relatively stable until the 40–44 age group, after which it significantly increases, peaking in individuals aged 85 and above. Improving quality of life has become an important concept and goal in the research and practice of healthy aging and medical fields.¹⁰ However, the exacerbation of demographic changes has led to a shortage of medical resources for the aging population in China, as the planning of talent in geriatrics and rehabilitation medicine lags behind the growth of the elderly population.¹¹ Compared to developed countries, the quality of death among Chinese residents is not high.¹² Hospice care, as a person-centered form of care focusing on quality of life, is gradually gaining attention and recognition in society. Over the past few decades, China has made significant progress in promoting end-of-life care and palliative treatment.¹³ However, palliative care in China still faces numerous challenges, including inadequate educational and training resources, lack of a legal framework that supports patient autonomy, insufficient funding and resources for establishing palliative care teams, shortages in drug supply, and a lack of support.¹⁴

In recent years, both national and local governments have implemented a series of policy measures to promote elderly health services, aiming to strengthen the service capacity of medical institutions for the elderly population. However, due to various historical, geographical, and economic factors, medical institutions at all levels in Guangxi still face some deficiencies and shortcomings in elderly health services. In order to comprehensively understand the current status of elderly health services in medical institutions in Guangxi, this study conducted a questionnaire survey on 1305 medical institutions in Guangxi using convenience sampling.

The main question of this study is to explore what progress has been made in the construction of geriatric medicine and rehabilitation medicine departments in medical institutions, and what major challenges they still face. Through this survey, we aim to gain insight into the establishment and operation of departments of geriatrics and rehabilitation medicine, the provision of free physical examination services, the selection of elderly-friendly institutions, talent demand, and the status of popular science education for the general public on elderly health in Guangxi's medical institutions. Additionally, we pay special attention to the crucial field of hospice care services, aiming to comprehensively assess the service capabilities of Guangxi medical institutions in providing end-of-life care for the elderly. We hope that through this in-depth research, we can provide valuable references and insights for the elderly health service work in Guangxi and even nationwide, further promoting the healthy development of the aging cause.

Methods

Research Subjects

This study primarily employed purposive sampling methods to select the heads of medical institutions at various levels (provincial, municipal, district, and community levels) in Guangxi as the research subjects. It is important to clarify that the term “heads of medical institutions” specifically refers to the presidents or relevant administrative leaders who oversee the overall operations and affairs of these institutions, with only one questionnaire being completed per institution. Inclusion Criteria: ① The institutions surveyed must be healthcare facilities at all levels within Guangxi,

including but not limited to general hospitals, specialized hospitals, community health service centers, township health centers, etc.②The respondents surveyed must be direct managers or decision-makers of the healthcare facilities.③Informed consent must be obtained from the respondents.Exclusion Criteria:Specialized medical institutions for women, children, and other related specialties, as the focus of this survey is on elderly health services.Based on the principle that the sample size should be approximately 5–10 times the number of items, with 53 items in this study, at least 265 study subjects would be required. However, the study ultimately collected 1316 questionnaires, with 9 invalid questionnaires being excluded, resulting in a final inclusion of 1305 valid questionnaires, achieving a high efficiency rate of 99.16%.

Research Method

This study aimed to conduct a cross-sectional survey, tailored to the primary achievement indicators stipulated in the “14th Five-Year Plan for the Advancement of the Aging Industry in Guangxi”. The survey instrument was meticulously crafted to encompass four pivotal domains: (1) the foundational profiles of healthcare institutions spanning multiple tiers, including institutional designations, grading, and their status as elderly-oriented facilities; (2) human capital and talent cultivation, delving into staff demographics (quantity, professional titles, and educational attainment) as well as strategies for professional development and training; (3) the operational landscape of rehabilitation and nursing services, focusing on the establishment and functioning of geriatric and rehabilitation departments, alongside their bed capacities and service portfolios; (4) the state of hospice care services, comprehensively assessing hospice bed availability, pilot status, and the current status quo of home-based hospice care delivery.

Data Collection

A questionnaire survey was conducted from July 24, 2023 to October 24, 2023, by the Health Commission of Guangxi Zhuang Autonomous Region, which issued relevant notices to distribute the questionnaire survey forms progressively from top to bottom to medical institutions at all levels. Respondents completed the questionnaire by scanning the QR code of Wenjuanxing (a popular online survey platform in China) on the questionnaire form or by sending the completed questionnaire survey forms to designated Email addresses, with each medical institution serving as a unit for this purpose.Prior to questionnaire completion, informed consent was electronically obtained from the research participants, thoroughly explaining the study’s objectives, potential risks, anticipated benefits, and the rights of the participants.

Statistical Methods

Microsoft Excel 20 and Statistical Product and Service Solutions 23.0 were employed for statistical analysis. Frequency and composition ratios were used for statistical description of count data. The significance level was set at $\alpha=0.05$.

Ethical Approval

This study has been reviewed and approved by the Ethics Committee of the Second Affiliated Hospital of Guangxi Medical University, with the approval number of 2023-KY(0921).

Results

Basic Information of Medical Institutions at All Levels

This study surveyed 1305 medical institutions, including 236 ungraded, 756 primary, 230 secondary, and 83 tertiary institutions. It also covered 25 district-level, 77 municipal-level, 283 county-level, 841 township-level, and 79 other institutions.Refer to [Table 1](#) for details.

Human Resources

Staffing

In the surveyed medical institutions, the average total number of staff in ungraded medical institutions was 46.62 ± 27.72 , with a nurse-to-physician ratio of 0.88 ± 0.46 . For primary medical institutions, the average total number of staff was

Table 1 General Information of Medical Institutions at Different Levels in Guangxi

Category		Quantity (N)	Composition (%)
Institution Level	Ungraded	236	18.08
	Primary	756	57.93
	Secondary	230	17.62
	Tertiary	83	6.36
Affiliation	District-level	25	1.92
	Municipal-level	77	5.90
	County-level	283	21.69
	Township-level	841	64.44
Institution Type	Other	79	6.05
	Traditional Chinese Medicine Hospital	43	3.30
	Integrated Chinese and Western Medicine Hospital	22	1.69
	Comprehensive Hospital	757	58.01
	Specialized Hospital	70	5.36
	Other	413	31.65

Table 2 Staff Quantity and Nurse-to-Physician Ratio in Medical Institutions at Different Levels ($\bar{x} \pm s$)

Medical Institution Level	Staff Quantity	Nurse-to-Physician Ratio
Ungraded	46.62±27.72	0.88±0.46
Primary	70.79±46.88	0.91±0.47
Secondary	379.55±250.40	0.61±0.19
Tertiary	1152.25±1213.80	0.73±0.72
Total	189.62±426.97	0.84±0.47

70.79±46.88, with a nurse-to-physician ratio of 0.91±0.47. For secondary medical institutions, the average total number of staff was 379.55±250.40, with a nurse-to-physician ratio of 0.61±0.19. For tertiary medical institutions, the average total number of staff was 1152.25±1213.80, with a nurse-to-physician ratio of 0.73±0.72. Refer to [Table 2](#) for details.

Position Setting

In this survey, higher-level medical institutions have better staff allocation. In tertiary medical institutions, the average number of physicians is 329.84, and nurses is 507.88. Across all levels of medical institutions, there is a general lack of rehabilitation therapists, psychological counselors, and dietitians, especially in primary and lower-level institutions. Refer to [Table 3](#) for details.

Table 3 Staffing Configuration in Medical Institutions at Different Levels (N) ($\bar{x} \pm s$)

Position	Ungraded	Primary	Secondary	Tertiary
Physician	12.02±8.64	19.54±15.12	97.40±69.05	329.84±368.54
Nurse	14.18±9.48	23.25±17.78	165.01±120.01	507.88±544.59
Traditional Chinese Medicine Practitioner	2.60±2.55	4.23±4.81	15.84±21.03	52.47±97.08
Pharmacist	2.86±2.54	4.43±3.69	15.98±11.49	49.3±69.33
Rehabilitation Therapist	0.47±1.15	0.87±1.96	9.5±8.70	17.06±22.01
Psychologist	0.07±0.50	0.16±0.76	0.78±2.07	3.3±10.39
Nutritionist	0.13±0.52	0.18±0.74	0.29±0.91	1.46±2.13
Social Worker	1.78±4.93	1.6±5.47	4.57±15.35	3.41±18.29

Table 4 Current Talent Demand Status in Medical Institutions at Different Levels [n(%)]

Position	Ungraded Institutions	Primary Medical Institutions	Secondary Medical Institutions	Tertiary Medical Institutions	Total
Specialized/General Practitioners	170(72.0)	582(77.0)	160(69.6)	62(74.7)	974(74.6)
Specialized Elderly Nurses	89(37.7)	303(40.1)	107(46.5)	45(54.2)	544(41.7)
Elderly Caregivers	62(26.3)	189(25.0)	65(28.3)	26(26.3)	342(26.2)
Traditional Chinese Medicine Practitioners	151(64.0)	492(65.1)	132(57.4)	49(59.0)	824(63.1)
Pharmacists	39(16.5)	169(22.4)	52(22.6)	26(31.3)	286(21.9)
Rehabilitation Therapists	111(47.0)	460(60.8)	117(50.9)	44(53.0)	732(56.1)
Psychological Counselors	78(33.1)	284(37.6)	113(49.1)	38(45.8)	513(39.3)
Nutritionists	59(25.0)	210(27.8)	83(36.1)	27(32.5)	379(29.0)
Social Workers	39(16.5)	109(14.4)	33(14.3)	22(26.5)	203(15.6)
Medical Information Talents	40(16.9)	191(25.3)	66(28.7)	31(37.3)	328(25.1)
Long-term Volunteers	58(24.6)	180(23.8)	56(24.3)	32(38.6)	326(25.0)

Current Talent Demand Status

In this survey, medical institutions at all levels showed a high demand for specialized/general practitioners (74.6%), traditional Chinese medicine practitioners (63.1%), rehabilitation therapists (56.1%), and specialized elderly nurses (41.7%). Specifically, the demand for traditional Chinese medicine practitioners and rehabilitation therapists in primary and lower-level medical institutions was higher than that in secondary and higher-level medical institutions. Refer to [Table 4](#) for details.

Rehabilitation Medical and Nursing Services Current Status of Elderly Health Education

In this survey, a total of 1038 medical institutions conducted health education on elderly health, accounting for 79.5% of the total. The educational content mainly focuses on disease prevention (89.21%), nutritional diets (84.68%), rational medication use (79.77%), physical exercise (68.21%), and mental health (60.79%). Refer to [Table 5](#) for details.

Table 5 Current Status of Elderly Health Education in Medical Institutions at Different Levels [n(%)]

Position	Ungraded Institutions	Primary Medical Institutions	Secondary Medical Institutions	Tertiary Medical Institutions	Total
Conducting Health Education for the Elderly	196(83.1)	637(84.3)	136(59.1)	69(83.1)	1038(79.5)
Nutrition	166(84.69)	552(86.66)	101(74.26)	60(86.96)	879(84.68)
Exercise	134(68.37)	439(68.92)	80(58.82)	55(79.71)	708(68.21)
Mental Health	125(63.78)	399(62.64)	58(42.65)	49(71.01)	631(60.79)
Injury Prevention	118(60.20)	361(56.67)	54(39.71)	43(62.32)	576(55.49)
Disease Prevention	173(88.27)	572(89.80)	119(87.50)	62(89.86)	926(89.21)
Rational Drug Use	151(77.04)	520(81.63)	102(75.00)	55(79.71)	828(79.77)
Rehabilitation Nursing	88(44.90)	287(45.05)	91(66.91)	48(69.57)	514(49.52)
Life Education	67(34.18)	213(33.44)	38(27.94)	31(44.93)	349(33.62)
Traditional Chinese Medicine Health Preservation	153(78.01)	493(77.39)	78(57.35)	45(65.22)	769(74.08)

Current Status of Elderly Care Work

Out of 1305 medical institutions, 172 (13.18%) have geriatrics departments, and 293 (22.45%) offer rehabilitation medicine services. 909 institutions (69.66%) provide free annual health check-ups for individuals aged 65 and above. A total of 362 institutions (31.4%), comprising comprehensive hospitals and primary healthcare centers, have been recognized as elderly-friendly facilities. Refer to [Table 6](#) for details.

Provision of Palliative Care Services

In this survey, only 88 medical institutions (6.7%) offer palliative care services. Among them, 58 (65.9%) are primary and lower-level institutions. Out of the 88 institutions, 31 (35.23%) provide palliative care outpatient services, 59 (67.05%) have palliative care wards, and 26 (29.55%) offer home-based palliative care. Refer to [Table 7](#) for details.

Table 6 Basic Situation of Elderly Care Work in Medical Institutions at Different Levels [n(%)]

Position		Ungraded Institutions	Primary Medical Institutions	Secondary Medical Institutions	Tertiary Medical Institutions	Total
Elderly-Friendly Medical Institutions		55 (23.3)	246 (32.5)	101 (43.9)	36 (43.4)	438 (33.6)
Establishment of Geriatrics Department		7 (3.0)	37 (4.9)	81 (35.2)	47 (56.6)	172 (13.2)
Establishment of Rehabilitation Medicine Department		18 (7.6)	118 (15.6)	105 (45.7)	52 (62.7)	293 (22.5)
Providing Home Rehabilitation and Nursing for the Elderly		34 (14.4)	75 (9.9)	18 (7.8)	20 (24.1)	147 (11.3)
Establishment of Comprehensive Outpatient Services for the Elderly		38 (16.1)	135 (17.9)	40 (17.4)	35 (42.2)	248 (19.0)
Providing Free Annual Physical Examinations for Individuals Aged 65 and Above		193 (81.8)	644 (85.2)	38 (16.5)	34 (41.0)	909 (69.7)
Bed Utilization Rate in Geriatrics Department	<50%	4(57.14)	17(45.95)	26(32.10)	10(21.28)	57 (33.14)
	50–70%	3(42.86)	16(43.24)	29(35.80)	6(12.77)	54 (31.40)
	71–90%	0	4(10.81)	16(19.75)	16(34.04)	36 (20.93)
	≥90%	0	0	10(12.35)	15 (31.91)	25 (14.53)
Average Hospitalization Cost in Geriatrics Department	<3000	5(71.43)	29(78.38)	11(13.58)	1 (2.13)	46 (26.74)
	3000–5000	1(14.29)	7(18.92)	43(53.09)	6 (12.77)	57 (33.14)
	5001–8000	1(14.29)	1(2.70)	22(27.16)	19 (40.43)	43 (25.00)
	>8000	0	0	5(6.17)	21 (44.68)	26 (15.12)
Bed Utilization Rate in Rehabilitation Medicine Department for Elderly Patients	<30%	12(66.67)	83(70.34)	33(31.42)	8 (15.38)	136 (46.42)
	31–50%	4(22.22)	26(22.03)	28(26.67)	5 (9.62)	63 (21.50)
	51–70%	1(5.56)	6(5.08)	29(27.62)	10 (19.23)	46 (15.70)
	71–90%	1(5.56)	3(2.54)	15(14.29)	29 (55.77)	48 (16.38)
Average Hospitalization Cost per Elderly Patient in Rehabilitation Medicine Department	<3000	13(72.22)	81(68.64)	28(26.67)	5 (9.62)	127 (43.34)
	3000–5000	4(22.22)	25(21.19)	40(38.10)	5 (9.62)	74 (25.26)
	5001–8000	1(5.56)	6(5.08)	23(21.90)	12 (23.08)	42 (14.33)
	>8000	0	6(5.08)	14(13.33)	30 (57.69)	50 (17.06)

Table 7 Basic Situation of Hospice Care Work in Medical Institutions at Various Levels [n (%)]

Position	Ungraded Institutions	Primary Medical Institutions	Secondary Medical Institutions	Tertiary Medical Institutions	Total
Provision of Palliative Care	20(8.5)	38(5.0)	18(7.8)	12(14.5)	88(6.7)
Palliative Care Outpatient	11(55.00)	16(42.11)	2(11.11)	2(16.67)	31(35.23)
Palliative Care Wards	15(75.00)	21(55.26)	14(77.78)	9(75.00)	59(67.05)
Home-Based Palliative Care	7(35.00)	14(36.84)	1(5.56)	4(33.33)	26(29.55)

Discussion

Based on the data from this survey conducted across 1305 medical institutions, we can observe a diverse landscape in the configuration and implementation of elderly health services.

As the global population continues to age, issues such as advanced age, disabilities, and living alone are increasingly prominent, leading to a sharp rise in the demand for healthcare services, particularly in geriatrics, among the elderly.¹⁵ The establishment of departments specializing in Geriatric Medicine and Rehabilitation Medicine within healthcare institutions is crucial for the advancement of geriatric care. Studies have shown that the establishment of dedicated Geriatric Medicine and Rehabilitation Medicine departments not only enhances the quality of care for elderly patients but also yields significant cost-effectiveness.¹⁶ The rehabilitation of elderly patients has a positive impact on functional outcomes, relative risks of institutionalization, and relative risks of mortality.¹⁷ However, this study found that the respective proportions of Geriatric Medicine and Rehabilitation Medicine departments within healthcare institutions were 13.18% and 22.45%. While this indicates a certain level of focus on specialized services for the elderly population, these proportions remain relatively low in comparison to the total number of healthcare institutions, potentially insufficient to meet the escalating demand for geriatric healthcare services. Therefore, there is a need to further increase the prevalence of Geriatric Medicine and Rehabilitation Medicine departments within healthcare institutions to better address the diverse healthcare needs of the elderly.

Furthermore, the development of Geriatric Medicine and Rehabilitation Medicine departments heavily relies on the support of specialized healthcare teams. Research indicates a significant disparity between the current number of geriatric physicians in Russia and Turkey and the required number to meet the demands of elderly care. By the end of 2018, Russia had only 322 full-time geriatricians, whereas an estimated 9400 full-time geriatricians were needed. Similarly, Turkey had only 57 licensed geriatricians, while an estimated 3100 were required.¹⁸ Given the significant role that geriatrics and rehabilitation medicine play in the diagnosis, treatment, and rehabilitation of elderly patients, this necessitates that healthcare professionals in these fields possess not only the general diagnostic, rehabilitative, and caregiving competencies but also ensure that they have sufficient geriatric core capabilities to effectively meet the needs of patients and expedite their recovery. In terms of healthcare staffing requirements, the demand for specialist/general practitioners, traditional Chinese medicine practitioners, rehabilitation therapists, and geriatric specialist nurses is high, underscoring the importance of skilled professionals in geriatric healthcare services. With the continuous exacerbation of population aging, the demand for geriatric medicine is on the rise, yet the pace of training geriatric specialists has not kept up with this trend.¹⁹ To bridge this gap, it is essential to enhance the training of professionals such as geriatric physicians and geriatric nurses, and provide continuing education to boost their core competencies in delivering comprehensive services to the elderly.^{20–22} Therefore, there is a need to intensify efforts in training and recruiting relevant professionals to equip geriatric physicians with the knowledge and skills necessary to provide high-quality care to elderly patients and meet the healthcare institutions' demands in geriatric healthcare services. China provides free basic public health services (NEPHS) to all citizens to ensure access to essential health services.²³ In this study, 69.66% of medical institutions offer free physical examination services to people aged 65 and older, demonstrating a proactive attitude of medical institutions towards managing the health of the elderly. Regular physical examinations enable early detection of health issues among the elderly, providing opportunities for early intervention and treatment, thereby enhancing their quality of life.

In 1999, Canada introduced a hospital care approach called “senior-friendly hospitals”.²⁴ Years later, in 2004, the World Health Organization initiated the “Age-Friendly Primary Health Care”²⁵ project to improve care, engagement, independence, and dignity for the elderly. In 2019, the National Health Commission of China issued the “Guiding Opinions on Establishing and Improving the Elderly Healthcare Service System”. The opinions stated that “By 2022, more than 80% of comprehensive hospitals, rehabilitation hospitals, nursing homes, and primary healthcare institutions will become senior-friendly medical institutions”. Despite the long-standing concept of senior-friendly medical care, the implementation methods, extent, and achievements remain unclear.²⁶ Various regions in mainland China are implementing “age-friendly” policies, but there is limited research on the construction of senior-friendly medical institutions. Although the construction of senior-friendly medical institutions has received positive responses and implementation, it still faces many challenges and issues.²⁷ In this study, 31.4% of medical institutions were rated as senior-friendly,

indicating that some medical institutions in Guangxi have made efforts to improve the quality of services for the elderly and the friendliness of the environment. However, there is still considerable room for improvement, and the concept and standards of senior-friendly institutions should be further promoted and popularized to optimize the healthcare experience for the elderly in medical institutions.

With the aging population, the construction of a health education system is increasingly being emphasized. The acceleration of population aging has led to a series of medical, health, and disease burdens, and the construction of a health education system is one of the important pathways to address these issues.^{28,29} Research has shown that health literacy level has a positive impact on both the level of health empowerment and the level of quality of life.³⁰ With an increase in health literacy level, the levels of health empowerment and quality of life also improve. In terms of elderly health education, this study found that 79.5% of medical institutions conduct related activities, which helps to improve the elderly's understanding of health knowledge and self-care abilities. The content mainly covers disease prevention, nutritional diets, rational drug use, physical exercise, and mental health, all of which are significant for maintaining elderly health and preventing diseases. However, the outreach and depth of health education activities still need to be further strengthened to cover more elderly populations and enhance the effectiveness of health education.

Finally, it is worth noting that only 6.7% of medical institutions offer palliative care, indicating that the service capacity of medical institutions in end-of-life care for the elderly is still inadequate. Palliative care is crucial for improving the quality of life and dignity of elderly individuals in their final stage of life, so efforts should be made to promote and invest in palliative care services to meet the needs of the elderly and their families.

This study employed purposive sampling and provided a comprehensive overview of the current status of elderly health services in 1,305 medical institutions in Guangxi. The research benefited from a large sample size and diverse data on various aspects of elderly care, including geriatrics departments, rehabilitation services, and palliative care. However, the study also has limitations. The use of purposive sampling may affect the representativeness and generalizability of the sample, potentially leading to selection bias and reducing the objectivity of the research results. Moreover, focusing on specific types of participants or contexts may constrain the generalizability of the findings. Despite these limitations, the study results offer valuable insights for decision-makers and healthcare providers, which can be utilized to enhance elderly health services in Guangxi and serve as a reference for elderly care in different settings. Future research could consider expanding the sample size, employing more diverse sampling methods, and delving deeper into the long-term impact of the COVID-19 pandemic on elderly health services.

Conclusion

This study investigated the current status of elderly health services in 1305 medical institutions in Guangxi. The results indicate that a minority of institutions have established geriatrics and rehabilitation medicine departments, with the majority offering free annual physical examinations. Additionally, approximately one-third of the institutions were recognized as elderly-friendly. There is a significant demand for specialized professionals in institutions, focusing on specialized physicians/general practitioners, traditional Chinese medicine practitioners, rehabilitation therapists, and specialized nurses for the elderly. Despite these findings, the provision of hospice care services remains limited, with only a few institutions offering such services. This highlights a gap in comprehensive elderly health services and underscores the importance of further developments in this area to ensure holistic care for the aging population.

While medical institutions have made some progress in elderly health services, they still face numerous challenges. The establishment of geriatric medicine and rehabilitation medicine departments is crucial, but their prevalence within medical institutions remains relatively low and requires further improvement. Regarding talent demand, there is a significant need for professionals such as specialized doctors and rehabilitation therapists, indicating a reliance on specialized personnel for elderly health services. Additionally, despite some medical institutions being recognized as elder-friendly, there are still opportunities and challenges in the development of elder-friendly healthcare facilities. Lastly, the provision of palliative care services remains insufficient, necessitating enhanced promotion and investment to meet the needs of the elderly. Therefore, future efforts should continue to increase investment, optimize service structures, and enhance service quality to better meet the health needs of the elderly.

Author Details

1 The Second Affiliated Hospital of Guangxi Medical University, No. 166, East University Road, Xixiang Tang District, Nanning, Guangxi, China

2 The Second People's Hospital of Teng County, Guangxi, No. 283, Zhengdong Street, Taiping Town, Teng County, Wuzhou, Guangxi, China.

Data Sharing Statement

All data and materials used in this study have been properly preserved and anonymized. Due to ethical constraints, they cannot be publicly shared but can be provided to academic peers and research institutions upon reasonable request. The anonymized data for this study are held by Dr. DH. Those interested in obtaining the data and study materials should contact Dr. DH to request appropriate approval for access.

Ethics Approval and Consent to Participate

This study has obtained ethical approval from the Ethics Committee of the Second Affiliated Hospital of Guangxi Medical University. Participants, specifically the heads of medical institutions at various levels (provincial, municipal, district, and community levels) in Guangxi, provided informed consent before participating. It is important to clarify that no form of remuneration or reward was offered to these participants for their involvement in this research. We confirm that all methods were performed in accordance with relevant guidelines and regulations.

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Author Contributions

Dongmei Huang and Caizhong Zhou are shared first authors. All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare no competing interests.

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