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Research Article

Perceived Geriatric Care Gaps and Treatment Inefficiency in a Tertiary Hospital in Albania: A Mixed-Methods Study

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Abstract

Background: Population ageing is accelerating in Albania, yet hospital care remains largely oriented toward acute, disease-specific models. Evidence on hospital-based geriatric care capacity and workforce experience in Albania is limited. Methods: We conducted a mixed-methods descriptive cross-sectional study at the University Hospital Center "Mother Teresa" in Tirana. Healthcare professionals involved in the care of older adults completed a structured questionnaire assessing geriatric infrastructure, training, workload, stress, family involvement, and perceived treatment inefficiency. Ordinal logistic regression was used to identify factors associated with perceived inefficiency. Semi-structured interviews explored institutional and experiential barriers. Results: A total of 103 healthcare professionals participated (response rate 85.1%). All respondents reported the absence of a dedicated geriatric ward and geriatrics specialist coverage. Infrastructure and equipment for geriatric care were predominantly rated as low to moderate, while perceived need for specialized geriatric services and staff training was high. Family members were frequently relied upon for medical history collection, and this reliance varied significantly by how problematic family presence was perceived ($p = 0.03$). In multivariable analysis, higher stress related to geriatric care was independently associated with higher perceived treatment inefficiency (OR ≈ 2.0 per unit increase, $p < 0.001$), while specialty-related variation remained significant. Conclusions: Hospital geriatric care in Albania is characterized by structural gaps, limited training, and high reliance on informal adaptations, with staff stress strongly associated with perceived inefficiency. These findings highlight the need for structured, age-friendly inpatient models and workforce support to improve care delivery for older adults.

Keywords

Geriatrics, Hospital Services, Health Personnel, Occupational Stress, Efficiency, Organizational

1. Introduction

Population ageing is accelerating globally and across Europe, reshaping healthcare needs and challenging systems historically designed for acute, single-disease care: [1, 2]. As longevity increases and fertility declines, a growing proportion of hospital admissions involve older adults with multimorbidity, frailty, cognitive impairment, and functional dependence. These clinical profiles demand coordinated, interdisciplinary approaches that extend beyond traditional organ-specific or

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episodic models of care [3, 4]. Older adults are not simply older by chronological age; they represent a clinically distinct inpatient population with higher rates of frailty, delirium risk, falls, polypharmacy, malnutrition, immobility, and functional decline. These factors make hospitalization itself a potential source of adverse outcomes, especially when care is organized around single-disease management rather than multidimensional assessment and coordinated discharge planning. International geriatric care literature has consistently shown that hospital models not adapted to these complexities are associated with prolonged length of stay, increased complications, higher dependency at discharge, and greater strain on staff and caregivers [4].

Within Europe, Albania represents a distinctive and underexamined case. Although it continues to project the image of a demographically young society, Albania is experiencing one of the fastest ageing transitions in Southeast Europe [5, 6]. This demographic transition has particular relevance for Albania because population ageing has been rapid relative to the pace of adaptation of health and social care structures. Census and population data indicate a marked increase in the proportion of older adults in recent years, reflecting the combined effects of low fertility, improved survival, and emigration of younger age groups. As a result, the hospital sector is increasingly confronted with patients whose needs are simultaneously medical, functional, cognitive, and social, yet institutional responses remain only partially developed [2, 5].

This shift is driven by three converging forces: sustained declines in fertility, steady improvements in life expectancy, and prolonged out-migration of younger working-age populations [7]. As a result, the proportion of adults aged ≥65 years is increasing rapidly, while the social and institutional systems required to support older populations have not evolved at a comparable pace.

The implications for hospital care are profound. Albanian hospitals increasingly manage older patients with complex chronic conditions, polypharmacy, functional decline, and social vulnerability. Yet care delivery remains largely structured around acute adult medicine, with limited adaptation for geriatric syndromes such as delirium, falls, incontinence, malnutrition, or cognitive impairment [8]. Older inpatients are frequently treated within fragmented clinical pathways that prioritize disease-specific interventions over holistic assessment and coordinated discharge planning. This mismatch contributes to prolonged hospital stays, repeated admissions, higher risk of complications, and increased strain on healthcare personnel [9].

International evidence strongly supports structured geriatric care models as effective responses to these challenges. Comprehensive Geriatric Assessment (CGA), delivered by interdisciplinary teams, has consistently been associated with improved functional outcomes, higher likelihood of patients being discharged alive and at home, reduced institutionalization, and better alignment of care with patient needs [3]. CGA emphasizes multidimensional assessment—medical, functional, cognitive, psychological, and social—and coordinated care planning across disciplines. Despite this robust evidence base, many health systems, particularly in low- and middle-income or transitional contexts, struggle to implement geriatric services due to workforce shortages, limited infrastructure, and insufficient training [4, 8]. In addition to Comprehensive Geriatric Assessment, more recent age-friendly hospital frameworks have emphasized the operational integration of core geriatric principles into routine inpatient care. Approaches such as the "4Ms" framework—What Matters, Medication, Mentation, and Mobility—have been promoted as practical ways to improve safety and quality for older adults even in hospitals without dedicated geriatric units. These models are especially relevant in resource-constrained settings because they offer incremental and feasible adaptations rather than requiring immediate large-scale structural reform [10, 11].

In Albania, these barriers are particularly pronounced. Geriatrics is not formally embedded within hospital organizational structures, and specialized geriatric departments or wards are largely absent [5]. Medical and nursing education includes limited exposure to geriatric principles, resulting in a workforce often required to manage highly complex elderly patients without adequate preparation or institutional support. The reliance on family members to compensate for gaps in formal care—while culturally ingrained—has become increasingly unsustainable in the context of migration, changing family structures, and economic pressures [7, 9]. Family involvement in the care of older hospitalized patients has a dual significance in the literature. On the one hand, relatives may contribute essential collateral history, communication support, and continuity of care, particularly for patients with cognitive impairment or functional dependence. On the other hand, when family participation becomes an informal substitute for structured clinical processes, it may indicate deficiencies in staffing, assessment pathways, and discharge coordination. For this reason, reliance on family members should be interpreted not only as a social or cultural feature, but also as a possible marker of limited formal geriatric capacity within the hospital system [11].

Beyond clinical challenges, ageing in Albania unfolds within a broader socio-political context characterized by institutional fragmentation and competing priorities. Public discourse and policy agendas remain predominantly youth-oriented, focusing on employment, education, and emigration, while ageing is often perceived as a marginal or future issue [2]. This disconnect has delayed the development of coherent national strategies for geriatric care, long-term care, and elder protection. As a result, hospitals are left to absorb the growing geriatric burden without clear policy direction, dedicated resources, or standardized care pathways.

The consequences are not limited to patient outcomes. Healthcare professionals working in hospital settings report increasing workload, emotional strain, and stress when managing older patients with complex needs in under-resourced environments. Occupational stress and burnout are recognized

threats to care quality, workforce retention, and system efficiency, particularly in high-pressure hospital environments [12]. In geriatric care, where clinical decision-making is often uncertain and time-intensive, the absence of structured support amplifies these pressures. This issue is important for interpreting the usefulness of the present study. If stress, workload, and perceived inefficiency are repeatedly reported by healthcare professionals caring for older adults, these findings should not be viewed merely as subjective dissatisfaction, but as indicators of a mismatch between patient complexity and institutional preparedness. In that sense, workforce perceptions provide relevant evidence about where hospital geriatric care is failing operationally and where targeted interventions—training, consult support, standardized assessment, and caregiver pathways—may have the greatest impact [11].

Ethical dimensions further complicate geriatric care delivery. Older adults are at heightened risk of neglect, abuse, and loss of autonomy, particularly in systems where formal safeguards and reporting mechanisms are weak. Globally, elder abuse is both prevalent and under-reported, especially in institutional settings where awareness and training are limited [13]. Hospitals occupy a critical position in identifying vulnerability and initiating protective interventions, yet healthcare workers often lack training, guidance, or institutional backing to address these issues effectively.

Despite the growing relevance of these challenges, empirical evidence on hospital-based geriatric care in Albania remains scarce. Taken together, the literature suggests that the challenge is not simply the growing number of older patients, but the growing mismatch between their multidimensional care needs and hospital systems that remain insufficiently adapted to geriatric complexity. This gap is likely to be most visible in tertiary hospitals, where case complexity, dependency, and family negotiations are concentrated. Examining healthcare professionals' perceptions in such settings is therefore useful not only for describing current deficiencies, but also for identifying realistic priorities for age-friendly service development and workforce support. Existing research has largely focused on demographic trends or community-level issues, leaving a gap in understanding how hospitals and healthcare professionals experience and manage ageing in practice. There is limited documentation of infrastructure availability, workforce preparedness, perceived impacts on treatment efficiency, and the psychosocial burden placed on staff within hospital environments.

The present study addresses this gap by examining geriatric care at the University Hospital Centre "Mother Teresa" in Tirana, the country's largest tertiary healthcare institution. Using a mixed-methods approach, this study aims to (1) quantify healthcare workers' perceptions of gaps in geriatric services, training, and working conditions; (2) assess perceived impacts of these gaps on treatment efficiency, workload, and stress; and (3) identify key predictors of perceived inefficiency associated with the absence of specialized geriatric care, complemented by qualitative insights into institutional and systemic barriers.

2. Methods

2.1. Study Design and Reporting Standards

This study employed a mixed-methods descriptive cross-sectional design, integrating quantitative survey data with qualitative interview findings to comprehensively assess hospital-based geriatric care. The quantitative component follows the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines for cross-sectional studies [13], while the qualitative component adheres to SRQR (Standards for Reporting Qualitative Research) recommendations [14]. The mixed-methods approach was selected to capture both measurable structural and workforce characteristics and the experiential dimensions of geriatric care delivery that cannot be fully quantified.

2.2. Study Setting

The study was conducted at the University Hospital Centre "Mother Teresa" (UHMT) in Tirana, Albania, the largest tertiary referral hospital in the country. UHMT provides specialized inpatient and emergency care for patients from across Albania and manages a high volume of older adults with complex, chronic, and multi-morbid conditions. At the time of the study, the hospital did not have a dedicated geriatric ward or formal geriatric specialty service, making it a critical setting for assessing system-level preparedness for population ageing.

2.3. Study Population and Participants

The study population comprised healthcare professionals directly involved in the care of older adult patients, including physicians and nurses from multiple clinical specialties (e.g., internal medicine, emergency medicine, cardiology, neurology, nephrology, and related disciplines).

A total of 121 healthcare professionals were approached using purposive sampling, based on their routine exposure to geriatric patients. Of these, 103 participants completed the questionnaire, yielding a response rate of 85.1%, which exceeds typical response thresholds for hospital-based surveys and reduces the likelihood of non-response bias.

Inclusion Criteria

1) Physicians or nurses employed at UHMT
2) Direct clinical involvement in the care of patients aged ≥65 years
3) Willingness to provide informed consent

Exclusion Criteria

1) Administrative staff without clinical duties
2) Healthcare workers not involved in inpatient or emergency care
3) Incomplete questionnaires

2.4. Quantitative Data Collection

Questionnaire Development

Data were collected using a structured, self-administered questionnaire developed based on:

1) WHO frameworks on ageing and integrated care [1, 8]
2) Existing instruments assessing geriatric care environments and workforce preparedness
3) Findings from preliminary qualitative observations and prior literature on hospital geriatric services

The questionnaire was reviewed by senior clinicians and public health experts to ensure content validity, clarity, and contextual relevance to the Albanian healthcare system.

Questionnaire Domains

The instrument included the following domains:

1) Sociodemographic and professional characteristics (age, sex, profession, specialty, years of experience, work setting)
2) Hospital infrastructure and geriatric resources (availability of geriatric wards, specialists, protocols, diagnostic and supportive services)
3) Geriatric patient workload and clinical complexity (estimated proportion of elderly patients, multimorbidity, functional dependency)
4) Training and familiarity with geriatric care (formal education, in-service training, perceived adequacy of skills)
5) Perceived stress and emotional burden, Measured using Likert-scale items assessing workload stress, cognitive burden, and emotional strain related to geriatric care
6) Empathy, communication, and comfort provision, Self-reported capacity to deliver patient-centered and compassionate care
7) Role of family members in care delivery (supportive vs obstructive roles, challenges in history-taking)
8) Ethical awareness and elder abuse (recognition, reporting practices, institutional pathways)

Most items were rated on 5- or 7-point Likert scales, allowing ordinal analysis of perceptions and experiences.

2.5. Qualitative Component

Design and Sampling

To complement quantitative findings, a qualitative exploratory component was conducted using semi-structured interviews with a purposive subsample of healthcare professionals representing different specialties and professional roles. Sampling continued until thematic saturation was achieved.

Data Collection

Interviews explored:

1) Experiences managing geriatric patients in acute hospital settings
2) Perceived institutional barriers and informal workarounds
3) Emotional and ethical challenges
4) Views on training needs and system reform

Interviews were conducted in a private setting, audio-recorded with consent, and transcribed verbatim.

Qualitative Analysis

Data were analyzed using thematic content analysis, following an inductive approach:

1) Familiarization with transcripts
2) Initial coding
3) Theme development
4) Refinement and triangulation with quantitative findings [14].

Statistical analysis

Statistical analyses were performed using IBM SPSS Statistics version 25.0. Data were screened prior to analysis for completeness and plausibility, including checks for missing values, internal inconsistencies, and extreme observations. Missing data were handled using a complete-case approach for each analysis, with denominators reported where applicable.

Normality of continuous variables was assessed using the Kolmogorov–Smirnov test and inspection of distribution plots. Continuous variables were summarized as mean ± SD when approximately normally distributed and as median (IQR) when non-normally distributed; minimum and maximum values were also reported. Categorical variables were presented as frequencies and percentages. For descriptive and comparative analyses, selected 7-point Likert measures were grouped into low (1–2), moderate (3–5), and high (6–7) categories.

Associations between categorical variables were examined using the Chi-square test or Fisher's exact test when expected cell counts were small. Relationships between ordinal or non-normally distributed variables were assessed using Spearman's rank correlation, while Pearson's correlation was applied only to continuous variables that met assumptions of approximate normality and linearity.

To identify independent predictors of perceived treatment inefficiency attributable to the absence of specialized geriatric care, an ordinal logistic regression model was fitted in line with the ordinal nature of the outcome. Covariates were selected a priori based on conceptual relevance and study objectives (stress related to geriatric care, specialty, empathy/capacity to provide comfort, family involvement, and working conditions/infrastructure). The proportional odds (parallel lines) assumption was evaluated before interpretation. Results were reported as odds ratios (ORs) with 95% confidence intervals (CIs) and corresponding p-values.

All tests were two-tailed, and $p \leq 0.05$ was considered statistically significant. Analyses were conducted according to the thematic structure of the questionnaire to allow domain-specific interpretation and exploration of relationships across domains. In this study, the term "geriatric variables" refers to professional, organizational, and psychosocial factors that shape, or are shaped by, the delivery of care to older inpatients.

2.6. Ethics

Participation was voluntary and based on informed consent

obtained prior to completing the questionnaire and, for the qualitative component, prior to participation in the interviews and any audio recording. No personally identifying information was collected. Survey responses and interview transcripts were anonymized and handled confidentially, with data stored securely and access restricted to the research team. Participants were informed that they could decline to answer any question and could withdraw at any time without consequences. The study was conducted in accordance with the ethical principles for medical research involving human participants set out in the Declaration of Helsinki. The study was reviewed and endorsed by the hospital administration/departmental leadership as part of an academic thesis project.

3. Results

A total of 103 healthcare professionals completed the questionnaire. Women accounted for 58.3% of respondents (n = 60). The sample included 57 nurses (55.3%) and 46 physicians (44.7%). Most participants reported working exclusively in the public sector (65.0%), while 35.0% were engaged in both public and private practice. Regarding clinical background, respondents were distributed across specialty groups, with medical specialties comprising 57.3% (n = 59), followed by surgical specialties (26.2%, n = 27), emergency/anesthesia/critical care (15.5%, n = 16), and diagnostic/imaging (1.0%, n = 1) (Table 1).

Table 1. *Demographic and professional characteristics of participants (N = 103).*

Variable	n	%
Sex		
Female	60	58.3
Male	43	41.7
Profession		
Physicians	46	44.7
Nurses	57	55.3
Area of engagement		
Only public sector	67	65.0
Public and private	36	35.0
Specialty group		
Medical specialties	59	57.3
Surgical specialties	27	26.2
Emergency/Anesthesia/Critical care	16	15.5
Diagnostic/Imaging	1	1.0

Working conditions and the availability of basic infrastructure to support older inpatients were assessed across departments. Nearly half of respondents rated general working conditions as moderate (scores 4–5), while approximately one-fifth rated them high (6–7). Availability of supportive infrastructure was variable, with wheelchairs and elevators being the most commonly reported items, and a minority reporting no dedicated infrastructure. Importantly, no respondent reported the existence of a dedicated geriatric ward/area, and the perceived importance of establishing such a ward was high (Table 2).

Table 2. *General working conditions and internal infrastructure (N = 103).*

Variable	n	%
General working conditions (Likert 1–7)		
1–3	31	30.1

Variable	n	%
4–5	50	48.5
6–7	22	21.4
Special infrastructure to assist geriatric patients in the department † (single response)		
Elevators	35	34.0
Special beds for geriatric patients	6	5.8
Special entry area	11	10.7
Wheelchairs	41	39.8
None	10	9.7
Dedicated ward/area for geriatric patients		
No	103	100.0
Importance of establishing a geriatric ward/area (Likert 1–7)		
1–3	9	8.7
4–5	24	23.3
6–7	70	68.0

†single response

Perceptions of geriatric-care capacity indicated substantial resource constraints. More than half of respondents rated both overall infrastructure and equipment sufficiency in the lowest category (1–3). Medication availability was split between hospital provision and partial patient contribution. Notably, no department reported having a geriatrics specialist, while perceived need for such a specialist was high (Table 3).

Table 3. *Resources and infrastructure for geriatric care (N = 103).*

Variable	n	%
Overall infrastructure for treating geriatric patients (Likert 1–7)		
1–3	57	55.3
4–5	40	38.8
6–7	6	5.8
Medical equipment sufficiency for geriatric care (Likert 1–7)		
1–3	57	55.3
4–5	37	35.9
6–7	9	8.7
Availability of necessary medications for adequate geriatric treatment		
Partially provided by the patients	46	44.7
Provided by the hospital	46	44.7
Secured by the patients themselves	11	10.7
Geriatrics specialist in the department		
No	103	100.0
Perceived need for a geriatrics specialist (Likert 1–7)		

Variable	n	%
1–3	9	8.7
4–5	24	23.3
6–7	70	68.0

Geriatric-specific training opportunities were reported as absent within departments, yet perceived need was high. While no department reported in-house geriatric nursing training, most respondents rated such training as highly important. Self-reported familiarity with geriatric conditions was predominantly moderate, and among those who had attended any training on supporting geriatric patients, perceived usefulness was largely high (Table 4).

Table 4. *Training and knowledge in geriatric care (N = 103).*

Variable	n	%
Any nurse training for geriatric care in the department		
No	103	100.0
Importance of such training (Likert 1–7)		
1–3	5	4.9
4–5	17	16.5
6–7	81	78.6
Self-reported familiarity with geriatric conditions and syndromes (Likert 1–7)		
1–3	26	25.2
4–5	48	46.6
6–7	29	28.2
Attended training on supporting geriatric patients		
No	73	70.9
Yes	30	29.1
Usefulness of attended training (Likert 1–7) (n = 30)		
4–5	8	26.7
6–7	22	73.3

Awareness of external geriatric services in Albania was limited. Only two-fifths of respondents reported knowing institutions that provide geriatric services, most commonly ambulatory services and residential elderly care. Among those aware, perceived service qualities was predominantly moderate, and more than half of respondents reported having recommended specialized geriatric care for patients (Table 5).

Table 5. *External geriatric services.*

Variable	n	%
Aware of institutions providing geriatric services in Albania		

Variable	n	%
No	62	60.2
Yes	41	39.8
Type of institution (among those aware) (n = 41)		
Ambulatory services only	21	51.2
Elderly homes	11	26.8
Nursing homes for patients with dementia	9	22.0
Rated quality of these institutions' services (Likert 1–7) (n = 41)		
1–3	13	31.7
4–5	21	51.2
6–7	7	17.1
Have recommended specialized geriatric care for patients		
No	45	43.7
Yes	58	56.3

Respondents reported substantial operational and emotional challenges when caring for older inpatients in the absence of specialized geriatric services. Perceived inefficiency related to the lack of geriatric care was common, and staff frequently relied on family members to obtain medical histories. Stress levels were predominantly moderate to high, while the ability to consistently provide empathy and comfort was reported as variable. Family presence during hospitalization was also frequently perceived as challenging (Table 6).

Table 6. *Challenges in geriatric care.*

Variable	n	%
Impact of lack of geriatric care on treatment efficiency (Likert 1–7)		
1–3	33	32.0
4–5	47	45.6
6–7	23	22.3
Difficulties taking medical histories from geriatric patients: management approach		
Over time with patience	37	35.9
Talking to family members	66	64.1
Stress for medical staff when dealing with geriatric patients' needs (Likert 1–7)		
1–3	23	22.3
4–5	54	52.4
6–7	26	25.2
Ability of regular staff to consistently provide empathy and comfort (Likert 1–7)		
1–3	25	24.3
4–5	52	50.5
6–7	26	25.2
Family members' presence during hospitalization perceived as problematic (Likert 1–7)		

Variable	n	%
1–3	44	42.7
4–5	39	37.9
6–7	20	19.4

To identify independent predictors of perceived treatment inefficiency attributable to the absence of specialized geriatric care, an ordinal logistic regression model was fitted with the "impact on treatment efficiency" item (Likert 1–7, grouped) as the outcome. The model included stress related to geriatric care, perceived ability to provide sustained empathy and comfort, perceived problems related to family presence during hospitalization, general working conditions, and clinical specialty, and was estimated using complete cases (Table 7).

Table 7. *Ordinal logistic regression predicting perceived impact on treatment efficiency due to lack of geriatric care.*

Predictor	β (SE)	OR	95% CI for OR	p-value
Stress	0.7006 (0.154)	2.02	1.49–2.72	<0.001
Empathy	−0.0172 (0.128)	0.98	0.76–1.27	0.894
Family presence problematic	0.0869 (0.114)	1.09	0.87–1.36	0.444
General working conditions	0.0401 (0.130)	1.04	0.81–1.34	0.757
Specialty (encoded)*	−0.0592 (0.028)	0.94	0.89–0.99	0.032

In the ordinal logistic regression model, higher stress was the strongest independent predictor of higher perceived treatment inefficiency attributable to the absence of specialized geriatric care (OR = 2.02, 95% CI 1.49–2.72, $p < 0.001$). Specialty also showed a statistically significant association with the outcome (OR = 0.94 per unit increase in the encoded specialty variable, 95% CI 0.89–0.99, $p = 0.032$), although interpretation depends on how specialty was coded. Empathy, perceived problems related to family presence, and general working conditions were not independently associated with perceived inefficiency after adjustment (all $p > 0.05$). The final model was estimated on complete cases (N = 100) with a log-likelihood of −159.05 (AIC = 340.1; BIC = 368.7).

Approaches used to obtain illness histories from older patients differed significantly according to the extent to which family presence was perceived as problematic (χ^2 test, $p = 0.03$). In the highest "problematic family presence" category (scores 6–7), respondents more frequently reported relying on time and patience rather than obtaining information through family members (Table 8).

Table 8. *Family presence perceived as problematic by approach used to obtain geriatric medical history (N = 103).*

Approach to obtain illness history	1–3 n (%)	4–5 n (%)	6–7 n (%)	Total n (%)
Over time with patience	15 (34.1)	10 (25.6)	12 (60.0)	37 (35.9)
Talking to family members	29 (65.9)	29 (74.4)	8 (40.0)	66 (64.1)
Total	44 (42.7)	39 (37.9)	20 (19.4)	103 (100.0)

Overall, the quantitative findings show a consistent pattern of reported structural gaps in geriatric capacity (lack of dedicated

services and training), substantial perceived workload and stress, and a measurable perceived impact on treatment efficiency. Reliance on family members to obtain clinical histories was common, and the approach to history-taking differed significantly by how problematic family presence was perceived (Table 8). In multivariable ordinal regression, higher stress remained the strongest independent predictor of higher perceived inefficiency attributable to the absence of specialized geriatric care (Table 7). These quantitative results were complemented by qualitative themes describing fragmented pathways of care and reliance on informal workarounds.

4. Discussion

This mixed-methods study at Albania's largest tertiary hospital highlights a clear structural mismatch: the country is ageing fast, but hospital structures, staffing models, and training remain largely structured around non-geriatric models of care. Albania's 2023 census shows a sharp population ageing shift, with the ≥65-year group now around one-fifth of the population and the average age rising substantially compared with 2011 [15]. In practice, that means more inpatients with multimorbidity, frailty, delirium risk, functional decline, and polypharmacy—patients whose needs are often poorly addressed within single-disease, specialty-silo pathways. This context matters because the study's core findings (no dedicated geriatric ward, no geriatric specialist coverage, low-rated infrastructure/equipment, large perceived training gaps, and reliance on families) are consistent with the structural deficiencies expected when ageing out-runs institutional readiness.

Principal findings and interpretation.

Absence of formal geriatric structures within the hospital. All respondents reported the absence of a dedicated geriatric ward/area and the absence of a geriatric's specialist within their departments. In parallel, ratings for infrastructure and equipment were mostly in the low-to-moderate range, while the perceived need for a geriatric ward and specialist support clustered at the high end. Functionally, this signals that staff are caring for older adults in environments not designed for mobility limitations, delirium prevention, safe toileting, falls reduction, or caregiver engagement—core elements of age-friendly inpatient care.

Formal geriatric training appeared underprioritized, although staff perceived it as essential. Despite universal reporting that no geriatric-care nurse training was provided within departments, most respondents rated the importance of such training very high. This is consistent with what the qualitative component frames as "absence of leadership on geriatrics" and "informal adaptation by staff": when the system does not build competence formally, clinicians compensate ad hoc, with variable quality and high cognitive load.

Family involvement appears to function as an informal compensatory mechanism, although this may create operational challenges. Two-thirds of respondents reported relying on family members to obtain medical history, and the association between "family presence perceived as problematic" and the chosen coping strategy for history-taking was statistically significant ($p=0.03$). This is a pattern consistent with role ambiguity: families become substitute informants and informal contributors to care delivery because formal processes (communication time, staffing, protocols, geriatric assessment routines) are insufficient. The international literature is clear that family caregivers can improve information continuity and support, but only when their role is structured, expected, and supported by staff [11, 16]. In the absence of structure, caregiver presence can also increase conflict, crowding, and workload—especially in high-pressure wards.

Stress is the strongest independent factor associated with perceived inefficiency. In the ordinal regression model (complete-case $n\approx100$), stress showed the strongest independent association with perceiving that lack of geriatric care reduces treatment efficiency ($\beta\approx0.70$, $p<0.001$). Corresponding to an odds ratio, $\exp(0.70) \approx 2.0$, indicating that each unit increase in the stress score roughly doubles the odds of reporting a higher category of perceived inefficiency, under the proportional-odds assumption. Specialty also remained significantly associated with perceived inefficiency after adjustment, suggesting variation across specialties. This finding likely reflects broader systemic inefficiencies rather than occupational strain alone. When geriatric care is fragmented, staff spend more time negotiating complexity (delirium, polypharmacy, mobility, discharge planning, caregiver negotiation) without tools or pathways. This operational burden may manifest as increased stress—and stress is strongly tied to perceived inefficiency in your data.

International evidence supports Comprehensive Geriatric Assessment (CGA) for hospitalized older adults as an effective, outcomes-relevant model. A major Cochrane review found CGA increases the likelihood of being alive and at home and improves several patient-centered outcomes compared with usual care [3]. CGA should not be understood as a single specialist consultation; it is a structured process: multidimensional assessment (medical, functional, cognitive, psychosocial), multidisciplinary planning, and coordinated follow-through. Your results—high perceived need for specialized services, high training demand, and the qualitative themes of fragmentation and informal adaptation—fit precisely the problem CGA is meant to solve.

A practical way to operationalize CGA principles without instantly creating a geriatrics department is the Age-Friendly Health Systems "4Ms" framework (What Matters, Medication, Mentation, Mobility), which gives hospitals a small set of focused care priorities to standardize care for older adults [10, 17]. WHO's Integrated Care for Older People (ICOPE) guidance similarly emphasizes functional ability, person-centered goals, and coordinated care—principles directly aligned with your staff-reported gaps.

Nearly one in five respondents reported awareness of ethi-

cal concerns/abuse, with "lack of respect" and "ignoring special needs" prominent. Even if this reflects perception rather than verified cases, it should be discussed as patient safety and quality of care. WHO estimates that roughly 1 in 6 older adults experience abuse in community settings, with higher rates reported in institutional contexts [18]. Hospitals under strain (high workload, low training, weak accountability) are exactly where less overt forms of harm—neglect, disrespect, poor communication—become normalized. In your dataset, this links back to leadership gaps and informal adaptation: without clear standards and training, ethical quality becomes inconsistently applied across providers and settings.

Implications for Albania: policy and practice priorities

Albania's rapid population ageing is already reshaping inpatient care demands, yet hospital structures and workforce models remain largely non-geriatric. This study demonstrates a clear mismatch between rising clinical complexity among older inpatients and the absence of dedicated geriatric capacity, with staff stress emerging as a key factor associated with perceived treatment inefficiency. These findings indicate a system-level vulnerability affecting both care quality and workforce sustainability.

Important short-term improvements may be feasible through the integration of age-friendly inpatient practices within existing hospital structures. Standardized attention to mobility, mentation (including delirium prevention), medication safety, and patient-defined goals of care would directly address the most frequently reported operational challenges. Frameworks such as the Age-Friendly Health Systems "4Ms" and WHO's Integrated Care for Older People (ICOPE) offer pragmatic, scalable tools suitable for resource-constrained settings.

In the medium term, a pilot Comprehensive Geriatric Assessment (CGA) consult-liaison model in tertiary hospitals represents a feasible strategy. Even small interdisciplinary teams can standardize assessment, improve discharge planning, and reduce reliance on informal care adaptations. Workforce training should accompany structural change, focusing on short, practice-oriented modules targeting delirium, polypharmacy, falls, communication, capacity assessment, and elder abuse recognition [19].

Finally, the widespread reliance on family members underscores the need to formalize caregiver roles within hospital care pathways. Structured caregiver engagement, rather than ad hoc reliance, may improve efficiency while reducing staff burden. Overall, incremental integration of geriatric principles—rather than wholesale system redesign—offers Albania a realistic and evidence-based pathway to safer, more sustainable hospital care for older adults.

Strengths and limitations

This study offers timely evidence from Albania's largest tertiary hospital using a mixed-methods design that combines a structured staff survey with qualitative interviews, allowing triangulation of measurable service gaps with on-the-ground implementation barriers. The high response rate and multidisciplinary participation across specialties strengthen the internal relevance of findings for hospital-based geriatric care. However, limitations should be acknowledged. The single-center setting limits generalizability to other Albanian hospitals with different staffing, infrastructure, and patient mix. The cross-sectional design and reliance on self-reported perceptions do not allow causal inference and may be affected by reporting and social desirability bias.

5. Conclusions

Albania's rapid population ageing is exposing limitations in hospital models that are not yet designed for geriatric complexity. In this tertiary hospital study, staff consistently reported the absence of dedicated geriatric structures and specialist support, major training gaps, and frequent reliance on family members to compensate for system limitations. Family involvement emerged as operationally important but variably challenging, with history-taking approaches differing significantly by how problematic family presence was perceived. In multivariable analysis, higher staff stress was the strongest factor associated with higher perceived treatment inefficiency attributable to the lack of specialized geriatric care. Implementing structured geriatric approaches—such as a CGA-based consult pathway and age-friendly workflows—together with targeted staff training and formalized caregiver engagement, should be prioritized to improve care quality and efficiency.

Abbreviations

UHMT	University Hospital Centre "Mother Teresa" in Tirana, Albania
Ors	Odds Ratios
Cis	Confidence Intervals
ICOPE	Integrated Care for Older People
CGA	Comprehensive Geriatric Assessment

Autor Contributions

Gentian Stroni: Conceptualization, Resources, Supervision, Validation, Writing – review & editing

Rexhina Bici: Data curation, Formal Analysis, Investigation, Methodology, Software, Visualisation, Writing – original draft

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Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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