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Factors Influencing Geriatric Health: A Systematic Review

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Abstract

Background: As the world's population ages, the burden of chronic illnesses and functional loss among older persons rises. Effective therapies require an understanding of the factors that influence elderly health.
Objective: The goal is to systematically identify, combine, and use statistical findings to quantify the factors influencing elderly health.
Methods: A systematic review was conducted following PRISMA guidelines. Databases including PubMed, Scopus, Web of Science, and Google Scholar were searched for studies published between 2015 and 2026. A total of 70 studies met the inclusion criteria. Quality appraisal was performed using the Joanna Briggs Institute checklist.
Results: Using PRISMA principles, a systematic review was carried out. Studies published between 2015 and 2026 were found by searching databases such as PubMed, Scopus, Web of Science, and Google Scholar. Seventy studies in all satisfied the requirements for inclusion. The Joanna Briggs Institute criteria were used to evaluate quality.
Conclusion: Multifaceted issues impacting geriatric health necessitate coordinated, nurse-led, community-based treatments.

1. Introduction

1.1 Background

One of the most important global demographic trends of the twenty-first century is the aging of the population. Global estimates indicate that the percentage of people 60 years of age and beyond is rising quickly, with predictions indicating a doubling by 2050 (1,2,3). The number of elderly people in India is predicted to increase significantly, creating significant problems for social structures and healthcare systems (4,5,6).

Physiological, psychological, and social changes that impact general health status are linked to aging. The coexistence of two or more chronic illnesses is known as multimorbidity, and it is very common in older persons and has a substantial impact on both functional independence and quality of life (7,8,9,10).

1.2 Concept of Geriatric Health

Physical, mental, social, economic, and environmental well-being are all included in the multifaceted concept of geriatric health (11,12,13). A thorough framework for comprehending these factors is offered by the biopsychosocial model (14,15,16).

1.3 Physical Determinants

Elderly people frequently suffer from chronic illnesses like diabetes, hypertension, arthritis, and cardiovascular

disorders (17,18,19,20). Vulnerability to unfavorable outcomes, such as falls, disability, and hospitalization, is further increased by frailty and functional decline (21, 22, 23).

1.4 Psychological Determinants

Reduced quality of life among older adults is largely caused by mental health disorders, especially depression and cognitive impairment (24, 25, 26, 27). Particularly in environments with limited resources, these disorders frequently go undiagnosed and undertreated (28, 29, 30).

1.5 Social Determinants

Increased morbidity and death are closely linked to social isolation, loneliness, and diminished family support (31, 32, 33, 34). Traditional support networks have been undermined by rapid urbanization and shifting family structures (35, 36, 37).

1.6 Economic Determinants

Elderly people's health outcomes are greatly impacted by financial dependence and restricted access to healthcare services (38,39,40,41). These difficulties are made worse by high out-of-pocket costs and a lack of insurance coverage (42, 43, 44).

1.7 Environmental Determinants

Health status is significantly influenced by environmental variables, including living conditions, sanitation, and accessibility to medical facilities (45,46,47,48).

1.8 Rationale of the Study

With the percentage of people 60 and older predicted to double by 2050, population aging has become a major global public health concern (1-3). The burden of chronic diseases, disability, and healthcare use is increased in India due to the country's fast-growing older population (4–6). Research indicates that multimorbidity affects 55–68% of older persons, which has a substantial impact on their quality of life and functional independence (7–9). Additionally, around 28–35% of senior citizens suffer from depression, which frequently goes undiagnosed and worsens overall health outcomes (10–12).

These difficulties are made worse by social and economic factors. Low socioeconomic status is linked to more than twice the likelihood of poor health outcomes (OR = 2.3), and social isolation has been demonstrated to increase mortality risk by 29% (HR = 1.29) (13–15). Increased morbidity is also a result of environmental variables, including substandard housing and restricted access to healthcare services (RR = 1.5–2.0) (16–18).

Despite the increasing amount of data, the majority of research concentrates on discrete factors rather than offering a thorough and integrated viewpoint. The synthesis of multifaceted elements impacting senior health still has a large gap (19–20). By offering a comprehensive understanding of factors, this systematic review seeks to close this gap and promote the creation of focused, empirically supported treatments and policies that encourage healthy aging.

1.9 Objectives

1) To identify factors influencing geriatric health
2) To analyze statistical associations
3) To categorize determinants
4) To provide evidence-based recommendations

2. Methodology

To guarantee transparency, reproducibility, and methodological rigor, this systematic review was carried out in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) criteria. Identification, screening, eligibility, and inclusion of pertinent studies were among the several structured stages of the procedure.

2.1 Identification Phase

The goal of the identification step was to thoroughly extract all pertinent research on the variables affecting senior health. Keywords and Boolean operators were combined to create a thorough and methodical search approach. PubMed, Scopus, Web of Science, and Google Scholar were the main databases that were searched. To guarantee completeness, additional sources, such as the reference lists of certain publications, were also personally examined.

Selecting Keywords

The study aims and the body of existing literature were taken into consideration when choosing keywords. Combinations of "geriatric health," "elderly," "older adults," "ageing," "determinants," "risk factors," and "quality of life" were among the search phrases. The search approach was refined using Boolean operators like AND and OR. For example: (“geriatric health” OR “elderly”) AND (“determinants” OR “risk factors”).

Initial Search

1,342 records in all databases were found in the first search. To guarantee the inclusion of current and pertinent data, the search was restricted to research released between 2015 and 2026. Only English-language, peer-reviewed publications were taken into account.

2.2 Duplicate Removal

Reference management software was used to find and eliminate duplicate records after the first search. After 452 duplicate data points were removed, 890 distinct items remained for additional screening.

2.3 Screening Phase

Title screening and abstract screening were the two stages of the screening process. Relevant studies were eliminated during this phase using predetermined standards. The 890 articles' titles and abstracts were examined separately to see how pertinent they were to the subject of the study. Excluded were studies that did not concentrate on health determinants or geriatric populations.

2.4 Inclusion and Exclusion Criteria (Impurity Removal)

To ensure methodological clarity, strict inclusion and exclusion criteria were applied.

Inclusion Criteria

- Studies involving participants aged 60 years and above
- Peer-reviewed research articles
- Observational (cross-sectional, cohort, case-control) and interventional studies
- Studies examining factors affecting geriatric health (physical, psychological, social, economic, or environmental)

Exclusion Criteria

- Disease-specific studies without broader health determinants
- Non-English publications
- Conference abstracts, editorials, and grey literature
- Studies lacking full-text availability

This process ensured the removal of irrelevant or “impure” data, thereby improving the quality of evidence synthesis.

2.5 Eligibility Phase

Following screening, the eligibility of 120 full-text publications was evaluated. Every paper was thoroughly examined to ascertain

its applicability, methodological excellence, and congruence with the research goals. At this point, studies lacking statistical analysis or insufficient data on determinants were eliminated. Ultimately, 70 papers were included in the review since they satisfied all qualifying requirements.

2.6 Quality Assessment

The Critical Appraisal Skills Programme (CASP) checklist was used to evaluate the methodological quality of the included research. This tool assesses studies according to standards, including validity of findings, suitability of methodology, sampling strategy, data gathering techniques, and clarity of research objectives. To guarantee the validity and dependability of the results, only studies with a moderate to high quality rating were included.

2.7 Data Extraction and Synthesis

A structured data extraction form was used to methodically extract pertinent data from the chosen studies. Author information, publication year, study design, sample size, important variables, and statistical results were among the data gathered. Determinants were divided into five domains using a thematic synthesis approach: physical, psychological, social, economic, and environmental.

4. Results and Discussion (Table Format with Statistical Findings)

Table 1: Summary of Factors Influencing Geriatric Health (n = 70 studies)

Domain	Key Factors	No. of Studies (%)	Statistical Findings	Impact on Geriatric Health
Physical Factors	Multimorbidity, frailty, chronic illness, malnutrition, falls	64 (91.4%)	- Multimorbidity prevalence: 55–68% - Frailty: 10–27% - Falls: 28–35% annually	Strong predictor of disability, hospitalization, and mortality
Psychological Factors	Depression, anxiety, cognitive decline, loneliness	57 (81.4%)	- Depression prevalence: 28–35% - Cognitive impairment: 15–22% - Loneliness: 25–40%	Associated with poor QoL, increased mortality risk
Social Factors	Social support, family structure, isolation	55 (78.5%)	- Social isolation increases mortality risk by 29% - Strong support reduces depression by 35–40%	Improves mental health and longevity
Environmental Factors	Housing, healthcare access, safety	46 (65.7%)	- Poor housing linked to 1.5–2× higher morbidity	Influences independence and safety

			- Limited access → 30% delayed care	
Economic Factors	Income, pension, and healthcare affordability	50 (71.4%)	- Low SES → 2.3× higher risk of poor health - Out-of-pocket expenditure: 60–80% in LMICs	Determines healthcare access and treatment adherence
Lifestyle Factors	Physical inactivity, diet, smoking, and alcohol	52 (74.2%)	- Physical inactivity prevalence: 40–60% - A healthy diet reduces chronic disease risk by 25%	Modifiable risk factor for chronic disease

Table 2: Statistical Association Between Determinants and Health Outcomes

Factor	Outcome Variable	Statistical Measure	Findings
Multimorbidity	Functional dependency	OR = 2.8–3.5	Strong association with disability
Depression	Quality of life	r = -0.62	Significant negative correlation
Social isolation	Mortality	HR = 1.29	Increased mortality risk
Physical inactivity	Chronic disease	RR = 1.7–2.2	Increased risk of NCDs
Low income	Healthcare utilization	OR = 2.3	Reduced access to care
Frailty	Hospitalization	RR = 2.0–2.6	Higher admission rates

Table 3: Regional Trends (Selected Findings)

Region	Key Findings
India (LASI, NFHS)	- 23% elderly have ≥2 chronic conditions - 20% report depressive symptoms
Europe	- Frailty prevalence: ~17% - Strong welfare reduces health disparities
USA	- Multimorbidity >65% - High healthcare access but costly
LMICs	- Out-of-pocket expenses are high - Limited geriatric care services

5. Discussion

The current systematic review summarizes data from 70 studies and emphasizes how a complex interplay of several factors affects elderly health. The majority of studies indicated multimorbidity, and physical health issues were shown to be the most prevalent (53–56). The requirement for integrated healthcare approaches rather than disease-specific management is indicated by the high correlation between multimorbidity and functional reliance (OR: 2.8–3.5) (57–59).

Another important predictor of unfavorable outcomes, such as falls, disability, and mortality, was frailty (60–62). These results are in line with earlier studies that highlight the significance of early detection and treatment of frailty in older persons (63–64).

Depression in particular had a considerable negative connection (r = -0.62) with quality of life, underscoring its important influence on general well-being (65–66). The senior population is more dependent, and health management is made more difficult by cognitive deterioration (67).

It was discovered that social variables, including loneliness and social isolation, considerably raise the risk of death (HR = 1.29) (68). This growing concern is exacerbated by the deterioration of traditional family support networks and the rise in urbanization.

Poor health outcomes were linked to economic characteristics, such as low socioeconomic status (OR = 2.3), mostly because of restricted access to medical care and prescription drugs (69). One of the biggest obstacles to older persons reaching optimal health is still financial restrictions.

Morbidity and general quality of life have also been reported to be influenced by environmental factors, such as substandard housing and restricted access to medical facilities (70). These results emphasize the necessity of supportive community infrastructure and age-friendly settings.

The biopsychosocial paradigm, which emphasizes how interrelated physical, psychological, and social aspects influence elderly health, is generally supported by the data. Improving health outcomes for the aged population requires a comprehensive and integrated strategy incorporating multidisciplinary teams, including nurse-led interventions.

6. Implications for Nursing Practice

- Putting nurse-led geriatric care models into practice
- Regular screening for malnutrition, depression, and frailty
- Enhancing community-based initiatives
- Encouraging healthy ways of living
- Improving programs for family and caregiver support

7. Conclusion

Physical and psychological variables play major roles in the multifaceted determinants of geriatric health. Improving senior well-being and attaining healthy aging require addressing issues through comprehensive, multidisciplinary approaches.

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