

Health Problems of Older Adults at Tansen Municipality, Palpa, Nepal

Damodar Ghimire^{1*}; Subhash Prasad²; Mohan Singh Rana³

1 Butwal Multiple Campus, Rupandehi, Tribhuvan University, Nepal

2 Thakur Ram Multiple Campus, Birgunj, Parsa, Tribhuvan University, Nepal

3 Mahendra Multiple Campus, Dang, Tribhuvan University, Nepal

***Corresponding author**

Email: dgpalpali@gmail.com

Abstract

Ageing is an inevitable biological process associated with increasing health vulnerabilities. This study assesses the health issues of older adults (aged 60 and above) in Tansen Municipality, Nepal, with a focus on gender disparities, the impact of literacy, and access to social security. A descriptive survey design was employed, with data collected from 147 respondents through a self-administered questionnaire. Findings revealed that 82.5% of females and 62.2% of males reported health problems, indicating the vivid gender disparities in the elders' health. Approximately dozens of diseases are prevalent among the respondents, where hypertension (46.6%), diabetes (22.3%), gastritis (16.5%), and arthritis (14.56%) ranked in the top four positions, respectively. Illiterate elders faced higher health issues (84.4%). Elders from the Magar community have remarkably high rates of health problems (92.7%), followed by the Brahmin, Newar, and Kshetri, underscoring the need for health education intervention programs to address the socio-cultural practices of elders from an ethnic perspective. About 87% respondents have reported varied suggestions to the government, focusing on the provision of reliable cum accessible social security services regarding the care of the elderly. Results showed that older adults' health problems were significantly associated with sex, caste, and literacy status. Due to the cross-sectional design, the study lacks the establishment of causal relationships, indicating the need for future longitudinal studies to explore the varied cum deeper findings related to the elders' health problems. The study highlights the urgent need for gender-sensitive health policies, literacy-based health education, and strengthened elder care programs in Nepal.

Keywords: ageing, chronic health problems, physiology of ageing, older adults, social security programs

Introduction

Ageing can be defined as a progressive loss of physiological integrity, leading to impaired function pathologies, including cancer, diabetes, cardiovascular disorders, and neurodegenerative diseases (López-Otín et al., 2013). The global population is ageing rapidly, with the proportion of people aged 60 and above expected to double by 2050 (WHO, 2022). The world is witnessing an unprecedented demographic shift, with the population aged 60 and above expected to reach 2.1 billion by 2050, up from 962 million in 2017 (United Nations, 2017). Asia accounts for 60 % of the world's elderly population,

with South Asia experiencing accelerated ageing due to demographic transitions (Schmitz & Mitchell, 2025). In Asia, this demographic shift is particularly pronounced due to declining fertility rates and increased life expectancy, which has risen from 46.5 years in 1950 to 72.8 years in 2023 (Brown & Losina, 2025; World Health Organization [WHO], 2023). The ASEAN region reports that 48% of elders lack regular health screenings (ASEAN Secretariat, 2023). Developed nations, such as Japan and Italy, already have populations with over 28% aged 60 and above, whereas developing countries are experiencing rapid ageing due to improved healthcare (Gerland, 2023). By 2050, one in five South Asians will be aged 60 or older (United Nations, 2022). India, Bangladesh, and Nepal face unique challenges due to their weak healthcare infrastructure and declining traditional family support systems (Chalise & Khanal, 2020).

Old age is regarded as the final stage of the human life cycle, featuring overall physiological decline. Due to biological, psychosocial, and economic factors, they face diverse challenges. Maharjan (2067 BS) and Dharmarajan (2021) noted that as they age, older adults face various problems, including physical, mental, social, and emotional issues. Gradual weakening of physiological metabolism leads them to depend on others' support. At the same time, different socio-cultural values, taboos, and superstitions also led them towards a vulnerable situation. Despite constitutional guarantees (Right to Health, Article 35), Nepal's elderly face multidimensional health challenges, including a high prevalence of non-communicable diseases (NCDs) due to limited healthcare access (WHO, 2023); Gender disparities, with women experiencing higher morbidity due to socioeconomic marginalization (Yadav & Poudel, 2016). Elderly health problems are a pressing issue in contemporary society; therefore, further research is needed to elucidate their causes and consequences, as well as the practices of older adults. However, few studies have been conducted in this area. In this context, this study examines these issues in Tansen Municipality, offering insights for policy interventions at the local (family-to-community) level, and at the provincial and federal government agency levels to identify, enhance, and promote the health of the older adults.

Nepal's elderly population (aged 60 years and above) has increased from 6.5% in 2001 to 10.21% in 2021 (Prachhai, 2025) and is projected to reach 18.6% by 2050 (Chalise & Khanal, 2020). This transition brings significant health challenges, as elders face higher risks of chronic diseases, disabilities, and inadequate healthcare access. Furthermore, these health challenges among the elderly are exacerbated by socioeconomic factors, limited access to healthcare, and shifting family structures (Shrestha et al., 2021). Life expectancy has increased to 71.17 years, but healthcare access remains inadequate, particularly in rural areas (Poudel et al., 2024). In Nepal, traditional family-based elder care is eroding due to urbanization and youth migration (Yadav & Poudel, 2016). Despite constitutional guarantees such as the right to health (Article 35), the right to care for the elderly (Article

41), and the right to social security (Article 42) (Government of Nepal, 2015), implementation remains weak. Although the government provides a monthly old-age allowance (NPR 4,000), 63% of elders report financial insecurity (NPC, 2023). Studies highlight disparities in elder health, particularly among women and illiterate populations. Chronic diseases such as hypertension (23%), diabetes (11%), and arthritis (18%) are prevalent (Shrestha et al., 2021). Additionally, 50.3% of elders experience abuse, including neglect (41.2%) and financial exploitation (10.2%) (Chalise & Poudel, 2020).

The population of older adults should be studied within the framework of prospective ageing, a forward-looking approach that examines not only chronological age but also future health potential, life expectancy, functional capacity, and health trajectories (Sanderson & Scherbov, 2007). It recognizes that ageing outcomes vary significantly across individuals based on health behaviors, lifestyle, and disease burden (Karki et al., 2025; Zhai et al., 2024). Community studies demonstrate older adults' concerns about health risks and their motivation for active health management (Zhai et al., 2024). Prospective ageing thus provides a nuanced understanding of ageing beyond simple chronological measures.

Despite the evident urgency, there is a paucity of localized, evidence-based data on older adults' health, particularly in Western Nepal. To date, most studies have focused on the national or district level, leaving municipal-level insights underexplored. This study responds to three critical gaps: Municipal-level data vacuum (scarce reliable data is describing the health status and social conditions of senior citizens at the municipal level in Western Nepal, including Tansen Municipality), Intersectional analysis (existing research inadequately addresses the intersection of gender and literacy status with health outcomes among the elderly, factors known to influence healthcare access and disease prevalence), and Policy feedback loop (limited understanding of senior citizens' perceptions of government social security programs restricts effectiveness and refinement of these policies). Given the context, this study aimed to examine the health problems of older adults in Tansen Municipality, with a focus on gender and literacy-based disparities in health outcomes. Another objective of the study is to reveal the elders' perceptions of the government-run social security program.

Methods and Materials

Study Design

The study employed a quantitative survey design to assess the health problems of older adults in Tansen Municipality, focusing on gender- and literacy-based disparities in health outcomes.

Study Population, Sample Size, and Sampling Procedure

The elderly population aged 60 years and above in the Tansen municipality comprises 5,830 individuals across the 14 wards, representing 11.47% of the total population (Municipal Profile Tansen, 2022). The researcher randomly selected wards 2 and 4, comprising 298 and 225 members, respectively, for a total of 523 members, which is the actual survey population. The sample size for these two wards was determined using Slovin's formula, yielding 147 (with a 7% margin of error). A simple random sampling method was used to select wards, and a proportionate simple random sampling to select respondents. Hence, 84 respondents from Ward 2 and 63 from Ward 4 were selected. For this purpose, the lottery method was used to reach the respondents. The list of all 523 household owners was obtained from the relevant wards, and 147 respondents were selected via a random draw from the basket. During this process, missing household heads were managed by including nearby respondents.

Tools of Data Collection

A self-administered questionnaire comprising both closed- and open-ended items has been developed for data collection. Fifteen elders from neighboring Ward 1 were selected for the tool's pretest, and the feedback, including comments from the pretested respondents, was used to finalize the tools in accordance with the requirements. Experts' suggestions were also highly accepted to enhance the effectiveness and validity of the tools during this process. The data collection tool was designed to incorporate significant constructs from independent variables such as gender, literacy status, caste/ethnicity, and their impacts on elders' health as the outcome (dependent) variable.

Data Collection Procedure and Method of Analysis

The researcher collected the required data for the study during two weeks of fieldwork in the third and fourth weeks of Chaitra, 2079 BS. To collect data from the selected respondents, a direct home visit was conducted. The researcher obtained the required permissions from the relevant wards prior to data collection and maintained ethical standards throughout the data collection. SPSS version 20 was used to analyze the data. Frequency and percentage were used to describe the respondents' sociodemographic characteristics and health problems. Subsequently, cross-tabulation and chi-square test were used to assess whether sex, caste, and literacy level were associated with health problems.

Results

Background Characteristics of the Respondents

This study examines the health problems of older adults aged 60 years and older and analyzes them across various aspects. The socio-demographic characteristics of the respondents are presented in Table 1.

Table 1 shows that amongst the respondents, approximately two-fifths (38.8%) were female and the remaining (61.2%) were male. Regarding age, respondents fall into four categories. About one-fourth of elders (27.2%) are aged 60-69 years. More than one-third (37.4%) of older adults are aged 70-79 years, followed by 30.6% aged 80-89 years, and the remaining 4.8% are aged 90 years and above. By religion, only about one-tenth (12.9%) are Buddhist, whereas Hindus are about seven times as numerous (87.1%) as Buddhists. By caste, about half (45.6%) of the respondents are Brahmin, followed by Magar (27.9%), Newar (13.6%), and Kshetri (12.9%).

Table 1

Background Characteristics of the Respondents

Characteristics	Numbers	Percentage
Sex		
Male	90	61.2
Female	57	38.8
Total	147	100.0
Age in Year		
60-69	40	27.2
70-79	55	37.4
80-89	45	30.6
90 and more	7	4.8
Total	147	100.0
Religion		
Bouddha	19	12.9
Hindu	128	87.1
Total	147	100.0
Caste		
Brahmin	67	45.6
Magar	41	27.9
Newar	20	13.6
Kshetri	19	12.9
Total	147	100.0
Education		
Illiterate	64	43.5
Only literate	17	11.6
Primary education	24	16.3
Secondary education	21	14.3
Higher education	21	14.3
Total	147	100.0

Views on Causes of health problems		
Environmental pollution	9	6.1
Genetic	12	8.1
Lack of awareness, poor hygiene, and an unhealthy diet	6	4.0
lifestyle-related factors	47	32.0
Nutrition+ lack of exercise+ heredity	6	4.1
Nutrition	50	34.0
Old age only	13	8.8
Stress/ psychological factor	4	2.7
Total	147	100.0
Caretaker of the elders		
Daughter	7	4.8
Daughter in-law	6	4.1
Grandson and Granddaughters	9	6.1
Son	26	17.7
Son + daughter-in-law	33	22.4
Spouse	29	19.7
Spouse+ son	37	25.2
Total	147	100.0
Need for an elder-care center		
No	71	48.3
Yes	76	51.7
Total	147	100.0
Treatment place		
Government as well as private hospitals	4	2.7
Government hospital	56	38.1
Private clinics	3	2.0
Private hospital or nursing home	84	57.1
Total	147	100
Presence of health problems		
No	44	29.9
Yes	103	70.1
Total	147	100

Note. Source: Field Survey, 2022.

In Table 1, slightly more than one-third (34%) of elders reported that nutrition or dietary intake factors were responsible for disease occurrence. Similarly, about one-third (32%) of respondents reported that lifestyle-related factors are responsible for disease causation, followed by ageing (8.8%), genetic factors (8.1%), and environmental pollution (6.1%). Stress or psychological factors (2.7%) are the least reported cause of disease.

An equal number of responses indicated the need for an elder care centre in the community. More than half of respondents (51.7%) reported that an elder care centre is necessary, whereas the remaining (48.7%) reported that it is not.

Regarding literacy status, slightly more than two-fifths of respondents (43.5%) were illiterate. Similarly, approximately 12% (11.6%) were only literate; primary education, 16.3%; and both secondary and higher education, each at 14.3%.

Respondents were asked about their caregiver person at the time of emergency, and from the varied responses, about one-fourth (25.2%) reported that their spouse and son are caregivers at the time of necessity, followed by son and daughter-in-law (22.4%), spouse only (19.7%), son only (17.7%). Grandson and granddaughters (6.1%), daughter (4.8%), and daughter-in-law (4.1%) were the least represented caretakers, which may be due to the increasing trend toward nuclear families and a lack of affection among members of affinal relationships.

Table 1 further showed that the treatment-seeking place categorized respondents. More than half (57.1%) chose a private hospital or nursing home for their treatment, whereas nearly two in five (38.1%) used a government hospital. This may be, on the one hand, because the respondents are city dwellers with easy access to private nursing homes, and, on the other hand, because government hospitals are poorly maintained or lack patient-friendly services.

Respondents were asked whether they experienced any health problems; more than two-thirds (70.1%) reported at least one.

Health Problems of the Respondents

Table 2

Respondents by Types of Health Problems

Health problems	Frequency	Percentage
Asthama	9	8.73
Athritis	15	14.56
Bachache	11	10.67
Gastritis	17	16.50

Heart disease/High Blood Pressure (BP)	48	46.60
Prostate	9	8.73
Diabetes /Sugar	23	22.3
Eye problem	5	4.85
ENT problem	6	5.82
Thyroid	7	6.79
Uric acid	5	4.85
Total	155	150.4

Note. The data in Table 2 is based on multiple responses.

Nearly half of the respondents (46.6%) were found to have heart disease or high blood pressure (BP) as the highest and most alarming health problem. Diabetes or sugar lies in the second-highest order, where about one-fourth (22.3%) of elders face the problem. Similarly, elders are found having other health problems, such as gastritis (16.5%), followed by arthritis (14.56%), backache (10.67%), asthma and prostate, both being equal (8.73%), thyroid (6.79). About one in sixteen (5.82%) reported ENT problems, and eye problems were the smallest portion of health problems (4.85%).

Respondent's Suggestion to the Government Regarding Elder Care

The Government of Nepal has been providing the Elder Allowance Program since 2051 BS, which is part of the social security program. During data collection, respondents were asked whether they were satisfied with the government's policies and programs regarding issues affecting older adults and whether they had suggestions for improving elder care. Responses obtained from the interview are presented in Table 3.

Table 3

Respondents' Suggestions to the Government Regarding Elder Care

Suggestion to the government	Frequency	Percentage
No suggestion	19	12.9
Increase the facilities of government hospitals	6	4.1
Manage a free health service	22	15.0
Policy-level reform is necessary	28	19.0
Raise allowances	30	20.4
There should be a provision of a reliable social security service	42	28.6
Total	147	100.0

Table 3 shows that almost all (87.1%) respondents provided suggestions to the government regarding their own issues. Compared with other groups, fewer than one-third of elders (28.6%) reported that reliable social security services for the elderly should be available. About one-fifth of respondents (19%) advocated policy-level reform, whereas a similar proportion (20.4%) suggested raising elderly allowances. Approximately one in seven respondents focused on managing the free health service. A tiny proportion (4.1%) of respondents suggested increasing the facilities of government hospitals. Amongst respondents, 12.9% did not provide any suggestions to the government regarding elder care.

Bivariate Analysis

As the study aims to assess the health problems of older adults, the data collected from respondents are analyzed using bivariate cross-tabulation. Here, the health problem is assessed by sex, caste, and literacy status to identify associations and strengths among these variables. A separate cross-tabulation was conducted in SPSS, and the chi-square test results are presented in the following tables.

Gender-wise Health Problem

Table 4

Gender-wise Health Problem

Sex/Gender	Health problems		Total	P value
	No	Yes		
Female	10 (17.5%)	47 (82.5%)	57 (100%)	0.009
Male	34 (37.8%)	56 (62.2%)	90 (100%)	
Total	44 (29.9%)	103 (70.1%)	147 (100.0%)	

Note. *Significant at $p < 0.05$ for χ^2 tests.

Table 4 shows that females had more health problems (82.5%) than males (62.2%). Patriarchal Nepali society, low access to the family income or property, household burden, etc., may be the reasons behind the vulnerable situation of females regarding their health. To find the association between the gender and health problems of the respondents, the chi-square (χ^2) test was applied, where the chi-square (χ^2) value is 6.812, and the p-value is .009. This indicates that there is a significant relationship between gender and the health problems of the respondents.

Caste-wise Health Problem

The respondents in the study area belonged to different caste groups, including Brahmin, Magar, Newar, and Kshetri. Because health is multi-factorial, it is appropriate to assess it by caste or ethnicity. The respondents were asked whether they had any health problems. The responses given by the respondents are shown in the following table;

Table 5
Caste-wise Health Problems

Caste	Having health problems		Total	P value
	No	Yes		
Brahmin	21 (31.3%)	46 (68.7%)	67 (100 %)	0.001
Kshetri	13 (68.4%)	6 (31.6%)	19(100 %)	
Magar	3 (7.3%)	38 (92.7%)	41(100 %)	
Newar	7 (35%)	13 (65%)	20 (100 %)	
Total	44 (29.9%)	103(70.1%)	147 (100%)	

Note. *Significant at $p < 0.05$ for χ^2 tests.)

Among the four caste groups, an overwhelming majority (92.7%) of Magar respondents reported health problems, followed by Brahmins (68.7%), Newars (65%), and the lowest proportion among Kshetris (31.6%). To assess the association between caste and respondents' health problems, Pearson's Chi-square test was computed, which indicated a significant association ($\chi^2 = 23.727$, $p < 0.001$).

Association between Education and Health Problems

Education is a factor capable of bringing about desired changes in an individual's overall behavior. The WHO defines health education as an educational process through which positive changes can be made in an individual's knowledge, attitudes, and behaviors. In this regard, older adults' health is assessed based on their literacy level. The following table shows the association between education and health.

Table 6
Literacy-wise Health Problem

Literacy status	Having health problems		Total	P value*
	No	Yes		
Illiterate	10 (15.6%)	54 (84.4%)	64 (100 %)	.006
Normal literate	8 (47.1%)	9 (52.9%)	17 (100 %)	
Primary education	9 (37.5%)	15 (62.5%)	24 (100 %)	
	11 (52.4%)	10 (47.6%)	21 (100%)	

Secondary education	6 (28.6%)	15 (71.4%)	21 (100 %)
Higher education			
Total	44 (29.9%)	103 (70.1%)	147 (100 %)

Note. *Significant at $p < 0.05$ for χ^2 tests.

Table 6 illustrates that illiterate elders have reported the highest percentage (84.4%) of health problems among any other literate group. The proportion of people with health problems across literacy groups is not uniform. Literate respondents from secondary-level education accounted for less than half (47.6%) of those with health problems. About two-thirds (62.5%) of elders from the primary education group reported that they have a health problem. The result for the higher education group is exceptional, as the vast majority (71.4%) of older adults reported having a health problem. To assess the association between education and health problems, a chi-square test was conducted, which showed a significant association ($p = 0.006$).

Discussion

The findings of the present study are broadly consistent with the existing national and international literature on ageing and older adults' health, particularly regarding the high burden of chronic non-communicable diseases (NCDs), gender disparities, and the role of socioeconomic determinants such as literacy and ethnicity. In Tansen Municipality, nearly two-thirds of older adults (64.6%) reported at least one health problem, with hypertension, diabetes, gastritis, and arthritis being the most prevalent conditions. Similar patterns have been documented in other parts of Nepal, where high blood pressure, diabetes, musculoskeletal disorders, and gastrointestinal problems dominate morbidity profiles among older adults (Poudel et al., 2022; Shrestha et al., 2021). A recent study from western Nepal also reported a high prevalence of multimorbidity, particularly cardiovascular and metabolic conditions, reinforcing that the findings from Tansen reflect a broader regional and national trend (Shrestha et al., 2025).

The observed gender disparity, where female elders reported significantly higher health problems (82.5%) than males (62.2%), aligns with prior Nepalese evidence. Studies have consistently shown that older women in Nepal experience poorer health outcomes due to cumulative life-course disadvantages, including limited access to education, economic dependency, heavy caregiving roles, and delayed healthcare seeking (Yadav & Poudel, 2016). Internationally, similar gender gaps have been reported in South Asia and other low- and middle-income countries, where older women exhibit higher morbidity despite more extended life expectancy, a phenomenon often described as the “gender health paradox”

(Amuthavalli Thiyagarajan, 2022; WHO, 2018). Thus, the gendered health pattern observed in this study is consistent with both national and global evidence scenarios.

Caste-wise variation in health problems, particularly the disproportionately high burden among Magar elders (92.7%), highlights the influence of socio-cultural and structural determinants of health. Although caste-based comparisons are relatively underexplored in Nepalese gerontological research, existing studies suggest that ethnic minorities often face compounded disadvantages related to health literacy, occupational exposure, and healthcare access (Chalise & Khanal, 2020; Poudel, 2025). Comparable findings from India and other South Asian contexts indicate that socially marginalized ethnic groups experience higher levels of chronic morbidity in later life, primarily due to lifelong socioeconomic inequities (Schmitz & Mitchell, 2025). The present findings, therefore, extend the existing literature by providing municipal-level evidence on ethnic disparities in older adults' health in western Nepal.

The strong association between literacy status and health problems found in this study is also well supported by prior research. Illiterate elders in Tansen reported significantly higher morbidity (84.4%) than their literate counterparts, echoing findings from Kathmandu and eastern Nepal, where education has been shown to influence health awareness, preventive care utilization, and chronic disease management (Adhikari & Acharya, 2024; Poudel et al., 2022). International studies similarly confirm that low educational attainment is a major predictor of poor health outcomes in old age, particularly in low-resource settings (Suwankhong & Liamputtong, 2025; WHO, 2018). This suggests that literacy-based health education interventions may play a crucial role in improving health outcomes among older adults.

Furthermore, respondents' strong emphasis on the need for reliable social security services aligns with earlier Nepalese studies highlighting dissatisfaction with existing elder care and social protection mechanisms (Chalise et al., 2022; Shrestha et al., 2021). Globally, the World Health Organization's Integrated Care for Older People (ICOPE) framework emphasizes the importance of accessible, community-based health and social care systems to address the complex needs of ageing populations (WHO, 2018). The consistency between the present findings and global policy frameworks underscores the urgency of strengthening elder-friendly health systems in Nepal.

Concludingly, the convergence of findings between this study and prior national and international research reinforces the validity of the results and situates elderly health problems in Tansen Municipality within broader demographic, social, and epidemiological transitions. At the same time, the municipal-level focus provides localized evidence that

complements existing district- and national-level studies, addressing an important gap in Nepalese ageing research.

Strengths and Limitations

This study is important because such studies are rare in western Nepal and provide insight into elders' overall health status. However, the study has limitations, as it is based on a small sample from a single territory. The study lacks the incorporation of other variables, such as economic status and occupation, that may affect the health of older adults. A self-administered questionnaire has been used as the sole data-collection tool. Additionally, the results relied on self-reported data, which may have introduced social desirability bias. Finally, as a cross-sectional study, it could not establish causal relationships, underscoring the need for future interventional and longitudinal studies.

Conclusion

This study assessed the health problems of older adults in Tansen Municipality, Palpa. The findings revealed that approximately two-thirds of respondents reported experiencing any prevalent health issues. In contrast, female elders faced a considerably higher proportion (82.5%) of health problems than males (62.2%). Elders from the Magar community have remarkably high health problems (92.7%), followed by other caste groups. Similarly, illiterate elders have reported the highest percentage (84.4%) of health problems among all literate groups. Thus, it can be concluded that senior citizens' health problems are associated with their gender, caste, and level of education. As a cross-sectional study, it lacks causal relationships; hence, there is a need for future interventional and longitudinal studies. Moreover, policymakers could consider the findings in policy planning and program design, given the rapid population aging and its implications for overall well-being. The study highlights the urgent need for gender-sensitive health policies, literacy-based health education, and strengthened elder care programs in Nepal.

Acknowledgements

We extend our heartfelt appreciation to all participants, including the elders from the Tansen Municipality, Palpa, for their valuable involvement in this study. Similarly, special thanks go to the entire administrative team, including wards 2 and 4 of the Tansen Municipality. We would also like to thank all the anonymous reviewers for their invaluable comments and suggestions to make this manuscript publishable.

Funding

No funding was received for research and publication.

Conflict of Interest

The authors declare no conflict of interest regarding the authorship and publication of this manuscript.

Authors' Contribution

DG conducted the study as part of his MPhil assignment. DG and MSR developed the manuscript and edited the draft in the first round. DG, SP, and MSR critically reviewed and rigorously edited the manuscript for the final production. All the authors read, finalized, and approved the manuscript for authorship and publication.

References

- Adhikari, M. R., & Acharya, A. (2024). Association between literacy status and well-being of elderly people living in old care homes in Kathmandu. *Education Quarterly*, 5(1), 21–34.
- ASEAN Secretariat. (2023). Old age poverty and active ageing in ASEAN: Trends and opportunities. ASEAN Secretariat. <https://asean.org/publications/old-age-poverty-and-active-ageing-in-asean-trends-and-opportunities/>
- Brown, C., & Losina, E. (2025). Epidemiology of aging (Socioeconomic Impact). In Springer.
- Chalise, H., Bohora, P., & Khanal, T. (2022). Older people and social security system in Nepal. *Gerontol Geriatr Res*, 8(2), 1075.
- Chalise, H. N., & Khanal, B. (2020). Functional disability on instrumental/activities of daily livings among rural older people in Nepal. *Journal of Karnali Academy of Health Sciences*, 3(3).
- Chalise, H., & Paudel, B. (2020). Elderly abuse among community-living older adults of least developed country-Nepal. *Arch Phys Rehabil Med*, 1(1), 1–8.
- Dharmarajan, T. S. (2021). Physiology of aging. In *Geriatric gastroenterology* (pp. 101-153). Cham: Springer International Publishing.
- Gerland, P. (2023). What's beneath the future: World population prospects. In *Semaine Data-SHS*.
- Government of Nepal. (2015). Constitution of Nepal-2015. Author. <https://narayanilawfirm.org.np/constitution-of-nepal-2072/>
- Government of Nepal. (2022). Social security allowance operational guidelines. Ministry of Women, Children, and Senior Citizens.
- López-Otín, C., Blasco, M. A., Partridge, L., Serrano, M., & Kroemer, G. (2013). The hallmarks of aging. *Cell*, 153(6), 1194-1217.
- Maharjan, S.K. (2067 BS). Human sexuality and reproductive health. Kathmandu: Sunlight Publication.
- National Planning Commission (2023). Preliminary report of the national population census 2021.
- Paudel, J. (2025). Facing aging in transition: Population dynamics, challenges, and opportunities in Nepal and Aatharai. *Pranayan प्रणयन*, 26(8), 121-130.
- Poudel, M., Ojha, A., Thapa, J., Yadav, D. K., Sah, R. B., Chakravartty, A., Ghimire, A., & Sundar Budhathoki, S. (2022). Morbidities, health problems, health care seeking

- and utilization behaviour among elderly residing on urban areas of eastern Nepal: A cross-sectional study. *PLoS One*, 17(9), e0273101.
- Poudel, P., Khatri, R., Bhatt, L., Thapa, P., Mishra, R. K., Tuladhar, S., & Panahi, E. (2024). Baseline status of basic health service delivery, 2022 Nepal DHS and 2021 Nepal HFS. *DHS Further Analysis Reports*(157).
- Prachhai, D. B. (2025). Demographic Dynamics of Nepal: Key Findings from the National Population and Housing Census 2021. *Patan Prospective Journal*, 5(1), 45-59.
- Sanderson, W. C., & Scherbov, S. (2007). A new perspective on population aging. *Demographic research*, 16, 27–58.
- Schmitz, H. P., & Mitchell, G. E. (2025). A Framework for Understanding and Evaluating Localization: The Case of HelpAge International. *Public Administration and Development*.
- Shrestha, S., Aro, A. R., Shrestha, B., & Thapa, S. (2021). Elderly care in Nepal: Are existing health and community support systems enough. *Sage Open Medicine*, 9, 20503121211066381.
- Shrestha, A., Sapkota, K. P., Karmacharya, I., Tuladhar, L., Bhattarai, P., Bhattarai, P., & Kafle, B. (2025). Chronic morbidity levels and associated factors among older adults in western Nepal: A cross-sectional study. *Journal of Multimorbidity and Comorbidity*, 15, 26335565251325920.
- Suwankhong, D., & Liamputtong, P. (2025). Aging and health promotion. In *Handbook of Concepts in Health, Health Behavior and Environmental Health* (pp. 1-17). Springer.
- Tansen Municipality. (2023). Tansen municipality profile 2023: Facts & statistics.
- United Nations, Department of Economic and Social Affairs, Population Division. (2017). *World population ageing 2017: Highlights* (ST/ESA/SER.A/397). United Nations.
- United Nations, Department of Economic and Social Affairs, Population Division. (2022). World population prospects 2022: *Population ageing*. United Nations: https://digitallibrary.un.org/record/4042780/files/UNDESA_POP_2023_TR_No.5-EN.pdf
- WHO. (2018). Integrated care for older people (ICOPE) implementation framework: Guidance for systems and services. World Health Organization.
- World Health Organization. (2022). Ageing and health (fact sheet). WHO
- World Health Organization. (2023). Ageing and health fact sheet / Country profile: Nepal. WHO.
- World Health Organization. (2023). WHO country stories: Delivering for all. World Health Organization.
- Yadav, U. N., & Paudel, G. (2016). Prevalence and associated factors of elder mistreatment: a cross-sectional study from urban Nepal. *Age and ageing*, 45(5), 609–613.