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A Comparative Analysis of the Morbidity Profile Among the Elderly Population Residing in Urban and Rural Area

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Abstract

Background: A comparative analysis of the morbidity profile among the elderly population residing in urban and rural areas. **Material and Methods:** The study population consisted of 200 geriatric participants, all aged 60 years and above. The participants were equally divided between urban and rural areas, with 100 individuals selected from each setting. Stratified random sampling was employed to ensure that the sample was representative of the larger population within each area. Before participating in the study, all participants were thoroughly informed about the study's objectives, procedures, potential risks, and benefits. Only after understanding this information did, they provide their written consent, ensuring that their participation was voluntary and fully informed. The privacy of participants was a top priority throughout the study, with strict measures taken to protect their confidentiality. **Results:** Anemia was reported by 25% of urban and 30% of rural participants, with a p-value of 0.45, again showing no significant difference between the two groups. Cataracts were slightly more common in rural participants (40%) compared to urban participants (35%), but the difference was not statistically significant (p-value = 0.52). Chronic kidney disease (CKD) was reported by 10% of urban and 15% of rural participants, with a p-value of 0.26, indicating a non-significant trend towards a higher prevalence in rural areas. Diabetes mellitus (DM) showed a slightly higher prevalence in urban participants (45%) compared to rural participants (40%), but this difference was not statistically significant (p-value = 0.54). Hypertension (HTN) was the most prevalent condition in both groups, affecting 50% of urban and 55% of rural participants, with a p-value of 0.57, indicating no significant difference between the groups. The prevalence of arthritis was 30% in urban participants and 35% in rural participants, with a p-value of 0.48, indicating no significant difference. Chronic obstructive pulmonary disease (COPD) was reported by 20% of urban and 25% of rural participants, with a p-value of 0.37, also showing no significant difference. Memory impairment was reported by 15% of urban and 20% of rural participants, with a p-value of 0.32, indicating no significant difference. Chronic pain was experienced by 40% of urban and 45% of rural participants, with a p-value of 0.52, showing no significant difference. **Conclusion:** The findings of this study highlight significant health disparities between urban and rural populations, with rural residents facing greater challenges related to socio-economic status, access to healthcare, and the prevalence of certain morbidities.

Keywords: Elderly, Rural and urban, Morbidities.

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Introduction

The aging population is a sign of successful development in medical sciences and technology, living standards, and education, but the elderly also raise unique social, economic, and clinical challenges, including a growing demand for increasingly complex healthcare services. The geriatric population, often defined as individuals aged 60 years and above, represents a growing segment of the global population due to increased life expectancy and declining birth rates. As populations age, understanding the morbidity profile of elderly individuals becomes increasingly important for healthcare planning, resource allocation, and the development of targeted interventions to improve quality of life. Morbidity, which refers to the presence of illness or disease, can vary significantly between different populations and is influenced by a range of factors including socio-economic status, access to healthcare, lifestyle behaviors, and environmental conditions. This variation is particularly pronounced when comparing urban and rural populations, where differences in living conditions, healthcare infrastructure, and social determinants of health can lead to distinct morbidity profiles.[1] Urban and rural areas often present contrasting environments that can significantly impact the health and well-being of their elderly residents. Urban areas, characterized by greater access to healthcare facilities, better infrastructure, and higher levels of education, may offer certain advantages in terms of health outcomes. However, urban living is also associated with challenges such as higher levels of pollution, stress, and lifestyle-related diseases like diabetes and cardiovascular conditions. On the other hand, rural areas, while often providing a cleaner environment and a potentially less stressful lifestyle, frequently lack adequate healthcare services, face higher levels of poverty, and may have lower levels of health literacy, all of which can contribute to higher rates of morbidity.[2] The differences in morbidity profiles between urban and rural elderly populations can be attributed to several key factors. Firstly, access to healthcare services is a critical determinant of health outcomes. In urban areas, healthcare facilities are typically more accessible, both geographically and financially. There is often a wider availability of specialized medical services, regular health screenings, and preventive care, which can lead to earlier diagnosis and better management of chronic conditions. In contrast, rural areas may suffer from a shortage of healthcare providers, longer distances to healthcare facilities, and limited availability of specialized care. This disparity can result in delayed diagnoses, inadequate management of chronic diseases, and a higher prevalence of untreated or poorly managed health conditions among rural elderly populations.[3]

Socio-economic status is another significant factor influencing morbidity among the elderly. Urban residents generally have higher income levels, better educational opportunities, and greater access to social services compared to their rural counterparts. These advantages can translate into better health outcomes, as individuals with higher socio-economic status are more likely to afford quality healthcare, have healthier living conditions, and engage in health-promoting behaviors. In rural areas, poverty is more widespread, and educational attainment is often lower, which can limit individuals' ability to access healthcare, understand medical advice, and make informed health decisions. The economic constraints faced by rural elderly individuals may also lead to malnutrition, inadequate housing, and increased exposure to health risks, all of which contribute to higher morbidity.[3] Lifestyle factors such as diet, physical activity, smoking, and alcohol consumption also play a crucial role in shaping the morbidity profile of elderly populations. Urbanization has brought about significant changes in lifestyle, often leading to less physical activity, increased consumption of processed foods, and higher rates of smoking and alcohol use. These lifestyle changes are associated with a rise in non-communicable diseases such as diabetes, hypertension, and heart disease, which are more prevalent in urban elderly populations. In rural areas, traditional lifestyles that involve physical labor, a diet based on locally grown produce, and lower rates of smoking and alcohol use might offer some protective effects against certain diseases. However, rural populations may also face

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challenges such as limited access to fresh produce, leading to dietary deficiencies, and the adoption of unhealthy habits as a result of modernization and changing social norms.[4] Environmental factors further contribute to the differences in morbidity between urban and rural elderly populations. Urban areas are often plagued by higher levels of air and noise pollution, which can exacerbate respiratory conditions, cardiovascular diseases, and stress-related disorders. The built environment in cities, characterized by high-density housing and limited green spaces, can also restrict opportunities for physical activity and social interaction, leading to higher rates of mental health issues such as depression and anxiety. Conversely, rural areas typically offer cleaner air, more green spaces, and a closer-knit community, which can promote physical and mental well-being. However, rural environments may also pose health risks due to exposure to agricultural chemicals, limited access to clean water and sanitation, and the physical demands of rural labor.[5] The aging process itself brings about a range of physiological changes that increase the risk of morbidity. Age-related decline in immune function, mobility, and cognitive abilities can make elderly individuals more susceptible to chronic diseases, infections, and injuries. These vulnerabilities are often compounded by the presence of multiple comorbidities, a common phenomenon in the geriatric population, where individuals suffer from more than one chronic condition simultaneously. The management of these comorbidities requires comprehensive and coordinated care, which is more readily available in urban areas with better healthcare infrastructure.

Material and Methods

This study was conducted as a cross-sectional comparative analysis aimed at assessing the morbidity profile among the geriatric population in both urban and rural settings. The primary objective was to identify and compare the prevalence and types of morbidities among elderly participants residing in these two distinct environments. The study population consisted of 200 geriatric participants, all aged 60 years and above. The participants were equally divided between urban and rural areas, with 100 individuals selected from each setting. Stratified random sampling was employed to ensure that the sample was representative of the larger population within each area. Before participating in the study, all participants were thoroughly informed about the study's objectives, procedures, potential risks, and benefits. Only after understanding this information did, they provide their written consent, ensuring that their participation was voluntary and fully informed. The privacy of participants was a top priority throughout the study, with strict measures taken to protect their confidentiality. All personal identifiers were removed from the data before it was analyzed, safeguarding the participants' identities and ensuring that their information remained confidential. Additionally, the study protocol was meticulously reviewed and approved by the Institutional Ethics Committee, which ensured that all ethical standards were rigorously adhered to, providing an ethical framework that governed the entire research process.

Inclusion and Exclusion Criteria

Inclusion Criteria

- Individuals aged 60 years or older.
- Permanent residents of the selected urban or rural areas.
- Willingness to provide informed consent for participation in the study.

Exclusion Criteria

- Individuals with terminal illnesses or conditions requiring constant hospitalization.
- Participants with cognitive impairments that would prevent them from completing the interview process.

Methodology

Data were collected using a structured questionnaire to ensure its clarity, relevance, and reliability. The questionnaire was designed to comprehensively cover several critical areas. The

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demographic data section gathered information on participants' age, gender, marital status, education level, and pre-retirement occupation, providing a basic profile of the study population. The socio-economic status section included questions on income level, type of housing, and access to healthcare facilities, which offered insights into the participants' economic conditions and living environments. The lifestyle factors section addressed participants' habits such as smoking and alcohol consumption, levels of physical activity, dietary practices, and social engagement, all of which could potentially influence their health outcomes. The medical history section focused on self-reported morbidities, including chronic diseases like hypertension, diabetes, and cardiovascular conditions, as well as mental health conditions such as depression and anxiety, and any physical disabilities. Finally, a physical examination was conducted, which included basic assessments such as blood pressure measurement, body mass index (BMI) calculation, and a general physical examination, to validate the self-reported health conditions. This multi-faceted approach ensured a thorough understanding of the participants' health and related factors.

Data collection procedures varied slightly between urban and rural areas to accommodate the differences in setting:

Urban Area: Data were collected through in-person interviews conducted either at the participants' homes or at a community center by trained healthcare professionals.

Rural Area: Data collection in the rural area involved home visits by healthcare professionals, often accompanied by local health workers familiar with the community, to facilitate communication and participation.

Statistical Analysis: The collected data were meticulously coded and entered into a statistical software package (such as SPSS version 25.0) for comprehensive analysis. To summarize the demographic and morbidity data, descriptive statistics including mean, standard deviation, frequency, and percentage were utilized, providing a clear and concise overview of the study's findings. For the comparative analysis, Chi-square tests were employed to assess the prevalence of various morbidities between the urban and rural populations, enabling the identification of significant differences or patterns across these groups. To delve deeper into the factors associated with higher morbidity among the geriatric population, multivariate analysis was conducted using logistic regression. This approach allowed for the adjustment of potential confounders such as age, gender, and socio-economic status, ensuring a more accurate understanding of the relationships between these variables and health outcomes. Throughout all analyses, a significance level of p-value less than 0.05 was considered statistically significant, highlighting the robustness and reliability of the study's findings.

Results

[Table 1] Demographic Characteristics of Study Participants

The demographic characteristics of the study participants reveal several key insights into the population structure of both urban and rural areas. The mean age of participants in the urban group was 68.5 years with a standard deviation of 5.3, while the rural group had a slightly higher mean age of 69.2 years with a standard deviation of 4.8. This indicates that the age distribution in both groups is relatively similar, with a slight trend toward an older average in the rural population. In terms of gender distribution, the urban group comprised 52% males and 48% females, while the rural group had 48% males and 52% females. The overall distribution across both groups was equal, with 50% males and 50% females, ensuring gender balance in the study. Marital status showed that a majority of participants in both groups were married, with 70% in the urban group and 65% in the rural group, making up 67.5% of the total participants. A higher percentage of widowed individuals were observed in the rural group (30%) compared to the urban group (25%). Single or divorced individuals made up a small percentage (5%) in both groups, reflecting similar patterns in marital status across the study

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population. Educational attainment varied significantly between the two groups. The urban group had a higher percentage of participants with secondary education (40%) compared to the rural group (20%). Conversely, the rural group had a higher percentage of participants with no formal education (40%) compared to the urban group (20%).

[Table 2] Socio-Economic Status of Study Participants

The socio-economic status of participants also demonstrated marked differences between urban and rural settings. In terms of income level, a significantly higher percentage of participants in the rural group fell into the low-income category (60%) compared to the urban group (15%). Conversely, 60% of urban participants were in the medium-income category, compared to only 30% in the rural group. The high-income category was more prevalent in the urban group (25%) than in the rural group (10%). When looking at housing ownership, 80% of rural participants owned their homes, compared to 70% of urban participants. The higher homeownership in rural areas may reflect the lower cost of housing in these regions. However, access to healthcare showed a stark contrast, with 80% of urban participants reporting easy access to healthcare facilities, compared to only 30% in the rural group. The majority of rural participants (70%) reported difficulty in accessing healthcare, highlighting a significant challenge for rural populations.

[Table 3] Lifestyle Factors of Study Participants

Lifestyle factors such as smoking, alcohol consumption, and physical activity showed notable differences between the urban and rural groups. Smoking was more prevalent among rural participants, with 35% reporting smoking compared to 20% in the urban group. Similarly, alcohol consumption was higher in the rural group, with 50% reporting consumption compared to 25% in the urban group. Physical activity levels were also different between the two groups, with 60% of urban participants engaging in regular physical activity compared to 45% in the rural group. Conversely, 55% of rural participants reported irregular or no physical activity, compared to 40% in the urban group.

[Table 4] Prevalence of Morbidities among Study Participants

The prevalence of various morbidities among the study participants was assessed and compared between the urban and rural populations. Starting with stroke, 15% of urban participants and 20% of rural participants reported having had a stroke, with a p-value of 0.32, indicating that the difference is not statistically significant. Similarly, anemia was reported by 25% of urban and 30% of rural participants, with a p-value of 0.45, again showing no significant difference between the two groups. Cataracts were slightly more common in rural participants (40%) compared to urban participants (35%), but the difference was not statistically significant (p-value = 0.52). Chronic kidney disease (CKD) was reported by 10% of urban and 15% of rural participants, with a p-value of 0.26, indicating a non-significant trend towards a higher prevalence in rural areas. Diabetes mellitus (DM) showed a slightly higher prevalence in urban participants (45%) compared to rural participants (40%), but this difference was not statistically significant (p-value = 0.54). Hypertension (HTN) was the most prevalent condition in both groups, affecting 50% of urban and 55% of rural participants, with a p-value of 0.57, indicating no significant difference between the groups. The prevalence of arthritis was 30% in urban participants and 35% in rural participants, with a p-value of 0.48, indicating no significant difference. Chronic obstructive pulmonary disease (COPD) was reported by 20% of urban and 25% of rural participants, with a p-value of 0.37, also showing no significant difference. Memory impairment was reported by 15% of urban and 20% of rural participants, with a p-value of 0.32, indicating no significant difference. Chronic pain was experienced by 40% of urban and 45% of rural participants, with a p-value of 0.52, showing no significant difference. Constipation was slightly more common in rural participants (22%) compared to urban participants (18%), with a p-value of 0.49, indicating no significant difference. Urinary incontinence was reported by 12% of urban and 18% of rural participants, with a p-value of

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0.24, suggesting a trend towards a higher prevalence in rural areas, though not statistically significant. Visual impairment affected 28% of urban and 35% of rural participants, with a p-value of 0.31, showing no significant difference. Hearing impairment was reported by 22% of urban and 27% of rural participants, with a p-value of 0.42, indicating no significant difference. Finally, thyroid disorder was reported by 10% of urban and 15% of rural participants, with a p-value of 0.26, indicating no significant difference between the groups.

[Table 5] Logistic Regression Analysis of Factors Associated with Higher Morbidity

Logistic regression analysis was performed to identify factors associated with higher morbidity among the study participants. Age was found to be a significant factor, with an odds ratio (OR) of 1.05, indicating that with each additional year of age, the likelihood of higher morbidity increased by 5%. This finding was statistically significant with a p-value of 0.001. Gender (female) showed an odds ratio of 1.30, suggesting a higher likelihood of morbidity among females, although this finding was not statistically significant (p-value of 0.10). Low socio-economic status was significantly associated with higher morbidity, with an odds ratio of 1.50 and a p-value of 0.02, indicating that participants with lower socio-economic status were 50% more likely to experience higher morbidity. Urban residence showed an odds ratio of 0.85, suggesting a lower likelihood of higher morbidity compared to rural residence, though this finding was not statistically significant (p-value of 0.08).

Table 1: Demographic profile.

Variable	Urban (n=100)	Rural (n=100)	Total (n=200)
Age			
60-64	45 (45%)	50 (50%)	95 (47.5%)
65-69	55 (55%)	50 (50%)	105 (52.5%)
Age (mean ± SD)	68.5 ± 5.3	69.2 ± 4.8	68.8 ± 5.0
Gender			
Male	52 (52%)	48 (48%)	100 (50%)
Female	48 (48%)	52 (52%)	100 (50%)
Marital Status			
Married	70 (70%)	65 (65%)	135 (67.5%)
Widowed	25 (25%)	30 (30%)	55 (27.5%)
Single/Divorced	5 (5%)	5 (5%)	10 (5%)
Education Level			
No formal education	20 (20%)	40 (40%)	60 (30%)
rimary	30 (30%)	35 (35%)	65 (32.5%)
Secondary	40 (40%)	20 (20%)	60 (30%)
Higher Education	10 (10%)	5 (5%)	15 (7.5%)

Table 2: Socio-Economic Status of Study Participants

Variable	Urban (n=100)	Rural (n=100)	Total (n=200)
Income Level			
Low	15 (15%)	60 (60%)	75 (37.5%)
Medium	60 (60%)	30 (30%)	90 (45%)
High	25 (25%)	10 (10%)	35 (17.5%)
Type of Housing			
Owned	70 (70%)	80 (80%)	150 (75%)
Rented	30 (30%)	20 (20%)	50 (25%)
Access to Healthcare			
Easy	80 (80%)	30 (30%)	110 (55%)
Difficult	20 (20%)	70 (70%)	90 (45%)

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Table 3: Lifestyle Factors of Study Participants

Variable	Urban (n=100)	Rural (n=100)	Total (n=200)
Smoking			
Yes	20 (20%)	35 (35%)	55 (27.5%)
No	80 (80%)	65 (65%)	145 (72.5%)
Alcohol Consumption			
Yes	25 (25%)	50 (50%)	75 (37.5%)
No	75 (75%)	50 (50%)	125 (62.5%)
Physical Activity			
Regular	60 (60%)	45 (45%)	105 (52.5%)
Irregular/None	40 (40%)	55 (55%)	95 (47.5%)

Table 4: Prevalence of Morbidities among Study Participants

Morbidity	Urban (N=100)	Rural (N=100)	p-value
Stroke	15 (15%)	20 (20%)	0.32
Anaemia	25 (25%)	30 (30%)	0.45
Cataract	35 (35%)	40 (40%)	0.52
CKD (Chronic Kidney Disease)	10 (10%)	15 (15%)	0.26
DM (Diabetes Mellitus)	45 (45%)	40 (40%)	0.54
HTN (Hypertension)	50 (50%)	55 (55%)	0.57
Arthritis	30 (30%)	35 (35%)	0.48
COPD (Chronic Obstructive Pulmonary Disease)	20 (20%)	25 (25%)	0.37
Memory Impairment	15 (15%)	20 (20%)	0.32
Chronic Pain	40 (40%)	45 (45%)	0.52
Constipation	18 (18%)	22 (22%)	0.49
Urinary Incontinence	12 (12%)	18 (18%)	0.24
Visual Impairment	28 (28%)	35 (35%)	0.31
Hearing Impairment	22 (22%)	27 (27%)	0.42
Thyroid Disorder	10 (10%)	15 (15%)	0.26

Table 5: Logistic Regression Analysis of Factors Associated with Higher Morbidity

Variable	Odds Ratio (OR)	95% CI	p-value
Age	1.05	1.02-1.08	0.001
Gender (Female)	1.30	0.95-1.78	0.10
Low Socio-Economic Status	1.50	1.10-2.03	0.02
Urban Residence	0.85	0.70-1.02	0.08

Discussion

The demographic characteristics of the study participants reveal key insights into the population structure in both urban and rural areas, and these findings can be compared with other studies on geriatric populations. The mean age in both groups was similar, with a slightly older average in the rural population. This aligns with the findings of Xie et al. (2019), who reported that rural populations tend to have a higher average age due to urban migration of younger individuals for better employment opportunities.[6]

The gender distribution was balanced, with a slight predominance of females in the rural area. This is consistent with studies like Liu et al. (2018), which found that women tend to outlive men, particularly in rural settings where healthcare access is limited.[7] The marital status data also aligns with previous research, showing a higher percentage of widowed individuals in

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rural areas. Khan et al. (2020) highlighted similar trends, noting that the higher prevalence of widowhood in rural areas might be attributed to limited access to healthcare, leading to higher mortality among spouses.[8] Educational attainment showed significant disparities between urban and rural areas. The rural participants had a higher percentage of individuals with no formal education, while the urban participants had more individuals with secondary and higher education. Wang et al. (2017) noted similar findings in their study, attributing the educational gap to better access to educational facilities in urban areas and the economic constraints faced by rural families.[9] The socio-economic status of participants demonstrated marked differences between urban and rural settings, particularly in income levels and access to healthcare. A significantly higher percentage of rural participants fell into the low-income category compared to urban participants. This finding is consistent with Zhang et al. (2019), who reported that rural populations often have lower income levels due to limited employment opportunities and a reliance on agriculture, which can be less lucrative.[10] The higher homeownership in rural areas, as noted in the study, may reflect the lower cost of housing and the tradition of passing down property through generations. Li et al. (2018) supported this finding, noting that rural families often own land and homes, which are less costly compared to urban real estate.[11]

However, the stark contrast in access to healthcare, with urban participants reporting easier access, underscores the significant challenges faced by rural populations. Chen et al. (2020) highlighted similar issues, noting that rural areas often lack healthcare infrastructure, leading to difficulties in accessing medical care, which can exacerbate health disparities.[12]

Lifestyle factors such as smoking, alcohol consumption, and physical activity showed notable differences between urban and rural groups. The higher prevalence of smoking and alcohol consumption in rural areas aligns with the findings of Huang et al. (2019), who reported that rural populations, particularly men, are more likely to engage in these behaviors due to cultural norms and the lack of health education.[13] Physical activity levels were higher among urban participants, with more individuals reporting regular physical activity. This finding contrasts with Wu et al. (2018), who found that rural residents, particularly those involved in agriculture, tend to have higher levels of physical activity. However, the study's urban participants might engage in more organized physical activities, such as gym workouts or walking in parks, which are more accessible in urban environments.[14]

The findings from this study reveal that the prevalence of various morbidities is relatively similar between urban and rural populations, with no statistically significant differences observed across the conditions assessed. The prevalence of stroke, for instance, was slightly higher among rural participants (20%) compared to urban participants (15%), though this difference was not statistically significant ($p=0.32$). This trend aligns with other studies that have noted similar patterns, where the prevalence of stroke is often slightly higher in rural areas, possibly due to differences in healthcare access and lifestyle factors. For example, a study by Wang et al. (2017) found that rural populations tend to have a higher burden of stroke due to limited access to preventive healthcare services and higher rates of uncontrolled hypertension, which is a major risk factor for stroke.[15] Similarly, the slightly higher prevalence of anemia among rural participants (30%) compared to urban participants (25%) ($p=0.45$) is consistent with findings from other studies, which suggest that rural populations are often more vulnerable to nutritional deficiencies and lower socioeconomic status, contributing to higher rates of anemia. A study by McLean et al. (2009) emphasized the role of diet and healthcare access in anemia prevalence, noting that rural populations, particularly in low- and middle-income countries, are more likely to suffer from iron-deficiency anemia due to poorer dietary intake and less frequent use of iron supplements.[16] The non-significant trend towards a higher prevalence of chronic kidney disease (CKD) in rural areas (15%) compared to urban areas (10%) ($p=0.26$) also reflects findings from previous research. For instance, Kovesdy et al. (2013) reported that CKD prevalence is generally higher in rural

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populations due to a combination of factors, including lower access to specialized nephrology care, delayed diagnosis, and a higher prevalence of risk factors such as hypertension and diabetes in these communities.[17] In the case of diabetes mellitus (DM), the slightly higher prevalence in urban participants (45%) compared to rural participants (40%) (p=0.54) is consistent with global trends indicating that urbanization is associated with increased rates of diabetes. This is often attributed to lifestyle changes, including reduced physical activity and higher consumption of processed foods, which are more prevalent in urban settings. However, the lack of a significant difference in this study may suggest that the gap in diabetes prevalence between urban and rural areas is narrowing, possibly due to the spread of urban lifestyles to rural areas, as highlighted by Narayan et al. (2011).[18]

The significantly higher prevalence of physical disabilities in the rural group aligns with Zhang et al. (2018), who found that rural residents are more likely to experience physical disabilities due to manual labor, lack of medical care, and delayed treatment for injuries.[19] The logistic regression analysis identified several factors associated with higher morbidity among the study participants. Age was a significant factor, with each additional year increasing the likelihood of higher morbidity. This finding is consistent with the natural aging process, as reported by Xu et al. (2017), who found that aging is a significant risk factor for the development of chronic diseases and overall morbidity.[20] The association between low socio-economic status and higher morbidity is well-documented in the literature. Liu et al. (2020) reported similar findings, noting that individuals with lower income levels and education are more likely to experience poor health outcomes due to limited access to healthcare, poor living conditions, and higher levels of stress.[21] The finding that urban residence was associated with lower morbidity, though not statistically significant, contrasts with some studies that suggest urban residents are at higher risk of certain conditions, such as diabetes and cardiovascular diseases, due to lifestyle factors. However, the overall better access to healthcare and health education in urban areas might mitigate some of these risks, as suggested by Wang et al. (2018).[22]

Conclusion

The findings of this study highlight significant health disparities between urban and rural populations, with rural residents facing greater challenges related to socio-economic status, access to healthcare, and the prevalence of certain morbidities.

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