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Health Care Access and Quality of Life of Community-Dwelling Senior Citizens in Pampanga, Philippines

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Abstract

This study examined the association between healthcare access and quality of life (QOL) among senior citizens in Pampanga, Philippines. We conducted a cross-sectional study among 410 community-dwelling senior citizens aged 60 and above. Using validated scales, we assessed both healthcare access and QOL. Descriptive statistics were employed to characterize the senior citizens, and multiple linear regression was used to examine the association between healthcare access and QOL. Senior citizens, averaging 69 years old, were predominantly women, single/widowed, and with comorbidities. They reported high healthcare access (mean = 120.13) and moderate QOL (mean = 70.79). Environmental health scored highest in QOL domains, while social relationships scored lowest. Overall healthcare access was positively associated with overall QOL (B [unstandardized beta] = .22, 95% CI [confidence interval] 0.10, 0.33) and its domains. Significant associations with overall QOL were observed for accessibility (B = 1.95, 95% CI 0.98, 2.91) and affordability (B = −1.60, 95% CI −2.46, −0.74). Filipino senior citizens in Pampanga demonstrated high healthcare access and moderate QOL. The study highlights the importance of healthcare access in enhancing senior citizens' QOL, particularly regarding accessibility and affordability. Further research is needed to explore the nuanced relationships between healthcare access subscales and specific QOL domains.

Keywords

aging, healthcare access, Philippines, quality of life, senior citizens

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Introduction

Global aging presents a significant demographic shift with profound implications. As populations age, there are trends toward decreased fertility rates and increased life expectancy, leading to an increased portion of senior citizens within societies (Ismail et al., 2021). These demographic changes pose various challenges, including strains on healthcare systems, pension sustainability, and economic productivity (National Institute on Aging, 2007). Addressing these challenges can ultimately lead to the development of innovative solutions that promote healthy aging, intergenerational solidarity, and inclusive social policies (Mohd Tohit & Haque, 2024).

The transition to an aging population is particularly noteworthy in low- and middle-income countries, where the number of senior citizens is expected to surge to nearly 2.1 billion by 2050 (Felex-Nobrega et al., 2021). Understanding quality of life (QOL) becomes imperative in this context, as it serves as an individual's subjective perception of their overall life situation (Rony et al., 2024). QOL for senior citizens encompasses various aspects, including physical and cognitive abilities, independence in daily tasks, and engagement in social and recreational activities, all of which contribute significantly to mental well-being and overall life satisfaction (World Health Organization [WHO], 2004).

While many factors may influence the QOL among senior citizens, healthcare access is one of the key determinants. Access to healthcare significantly enhances the QOL for seniors by allowing for early detection and management of health issues, ensuring that they receive

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timely and appropriate medical care, and providing vital support services (T. Zhang et al., 2019). Additionally, it helps with medication management and rehabilitation and connects seniors to community resources, promoting independence and lowering the risk of complications (Yamada et al., 2015). For instance, a study in Nepal found that senior citizens with community-level access to quality healthcare had a higher QOL (Acharya Samadarshi et al., 2022). However, they often face barriers to accessing resources and services due to socio-economic disparities and challenges such as poverty, lack of education, and healthcare costs (Acharya Samadarshi et al., 2022). Additionally, health issues like mental health disorders and physical ailments complicate access to healthcare and may affect QOL (Bastani et al., 2021; Karma et al., 2021) Affordable medical services significantly improve QOL by enabling better health management, while limited insurance coverage and high healthcare expenses make quality care inaccessible (Garcia-Ramirez, 2020). Furthermore, shortages of healthcare resources and professionals hinder timely medical assistance. In Australia, the shortage of healthcare workers exacerbates the difficulty of accessing quality care, leading to poorer health outcomes and financial strain (van Gaans & Dent, 2018).

The aging population in the Philippines poses significant challenges for the country's healthcare and social welfare systems. Like many other countries, the Philippines is experiencing a rapidly aging population. In 2000, there were 4.6 million senior citizens (60 years or older), representing about 6.0% of the total population. Over two decades, this number has increased to 9.4 million, or approximately 8.6%. By 2050, senior citizens are projected to make up around 16.5% of the total population (United Nations, 2019). An aging population can strain healthcare systems, social welfare programs, and families who may struggle to meet the increasing care needs of seniors.

Filipino senior citizens face significant health and social challenges that impact their QOL. They commonly suffer from both degenerative and communicable diseases, with infections, visual impairment, difficulty walking, chewing, hearing loss, osteoporosis, arthritis, and incontinence being prevalent issues (Statista, 2019). A study revealed that these seniors often encounter unmet healthcare needs due to staffing shortages, drug supply issues, and difficulty accessing primary healthcare (Carandang et al., 2019). Additionally, QOL is higher among seniors with positive self-rated health, psychological resilience, and perceived social support (Carandang et al., 2020). Those with higher socio-economic status, more education, and better access to community resources also report better QOL (De Leon, 2014; Tariga & Cutamora, 2016). Addressing these challenges requires improved healthcare access, stronger social support systems, and enhanced community resources to ensure the well-being of the aging population in the Philippines.

Since 2019, the Philippine government has steadfastly committed to achieving universal health coverage for all citizens through the Universal Health Care Act (RA 11223). This legislation, commonly known as the UHC Act, mandates that all Filipinos receive affordable and quality healthcare services through PhilHealth, the country's national health insurance program (Arellano Law Foundation, 2019). The overarching goal of the UHC program is to reduce health inequalities and ensure equitable access to healthcare services for every Filipino (Arellano Law Foundation, 2019). However, despite these efforts, disparities persist in the availability and accessibility of healthcare resources across different regions. Rural and semi-urban areas face challenges due to the relatively limited healthcare facilities and services compared to urban areas. Consequently, residents in these regions often encounter significant obstacles in accessing medical care, which can have detrimental effects on their health. Common barriers include financial constraints, transportation limitations, and lack of health insurance coverage (Abdullah et al., 2018).

Insufficient access to healthcare presents significant challenges for senior citizens in rural and semi-urban areas, impeding their ability to maintain optimal health and well-being. This lack of access makes it difficult for seniors to manage chronic conditions and receive timely medical interventions, leading to deteriorating health outcomes and a diminished QOL. Despite substantial efforts by the Philippines to improve healthcare delivery nationwide, the benefits of these initiatives are predominantly concentrated in major urban areas like Metro Manila. While extensive research has explored the relationship between healthcare access and QOL, there remains a scarcity of studies examining this association in rural and semi-urban settings. Consequently, much remains unknown about how different aspects of healthcare access influence various domains of QOL. Thus, this study examined the association between healthcare access and the QOL, including its various domains, among senior citizens residing in a semi-urban area in the Philippines.

Methods

Study Design and Description of Participants

We conducted a community-based cross-sectional study to examine the association between healthcare access and the QOL among community-dwelling senior citizens in Pampanga, Philippines. Using OpenEpi, we calculated the sample size with the following parameters: a population of 17,457 senior citizens, 80% power, a 95% confidence interval, and a 10% dropout rate, resulting in a minimum sample size of 400. Employing a proportion-to-size calculation, we determined the required number of respondents in each of the 27 barangays (communities), which varied according to the senior citizen population in each area.

Data was collected between March 2023 and April 2023. We included Filipino senior citizens aged 60 years or older who were residents of the study area and registered at the Office of Senior Citizens Affairs with senior ID. Exclusion criteria were applied to individuals with communication problems, hearing disabilities, or neurological disorders.

We employed random sampling to select participants for the study, aiming to capture a representative sample of senior citizens living within the jurisdiction of Mabalacat City. However, due to logistical constraints, we were only able to access a portion of the senior citizen roster. Consequently, we collaborated with the barangay and obtained approval from the Local Government Unit to utilize the provided list of senior citizens. Following this, we conducted random house-to-house visits to assess the eligibility of potential participants. During these visits, we thoroughly explained the study's purpose and obtained written consent forms from eligible participants. We prioritized addressing any concerns or questions raised by the senior citizens and their families to ensure their comfort and understanding. Furthermore, to enhance the quality of data collection and minimize errors, we conducted a pre-test of the survey questionnaires among 30 senior citizens.

Data Collection and Measurements

We utilized the Kobo Toolbox, open-source data collection software, for both data gathering and management. This user-friendly tool allowed us to create customized data collection forms and access them via electronic tablets for efficient field data collection. Kobo Toolbox's cloud-based platform facilitated real-time data synchronization and collaboration among team members, ensuring data integrity, and consistency throughout the study.

Outcome Variables

Quality of Life. We used the World Health Organization Quality of Life (WHOQOL-BREF) scale, to measure the quality of life of community-dwelling senior citizens (WHO, 2024). The instrument identifies 26 items with four different domains of quality of life: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); this also contains QOL and general health items (WHO, 2024). Examples of questions asked include, "To what extent do you feel that physical pain prevents you from doing what you need to do?" and "How much do you enjoy life?" The 1 to 5 scale typically includes five answer options, with each number representing a specific level of agreement or intensity. For instance, a rating of 1 corresponds to a very poor, very dissatisfied, or very low experience or feeling. A rating of 2 indicates a poor, dissatisfied, or low experience or feeling. A rating of 3 means neither poor nor good, neither satisfied nor dissatisfied, or neither low nor high. A rating of 4 stands for a good, satisfied, or high experience or feeling. Finally, a rating of 5 represents a very good, very satisfied, or very high experience or feeling. We reverse-coded certain items to ensure that all items were scored in the same direction. Scores for each domain were transformed to a scale of 0 to 100 and presented as means, following the guidelines in the WHOQOL Team's manual (WHO, 1996). Higher mean scores indicate a better perception of quality of life. In this study, the Cronbach's alpha for the WHOQOL-BREF scale was .86, indicating good reliability.

Exposure Variables

Healthcare Access. We used the Healthcare Access scale to assess senior citizens' perceived healthcare access (Hoseini-Esfidarjani et al., 2021). We calculated both total and subscale scores, where higher scores reflect better-perceived accessibility to healthcare. Senior citizens were presented with statements reflecting various aspects of healthcare access, such as "The services I need are provided at the health center," "Access to facilities such as wheelchairs and walkers is available at the health center," and "The facilities at the health center meet the health needs of the clients." These statements corresponded to the six dimensions of healthcare access: accessibility, availability, acceptability, affordability, accommodation, and awareness. Responses were collected using a Likert scale ranging from 1 (completely disagree) to 5 (absolutely agree), facilitating a detailed assessment of participants' perceptions regarding healthcare access. This structured scale has been widely employed in healthcare research to explore access to care and patient satisfaction across diverse settings and populations (Hoseini-Esfidarjani et al., 2021). The Perceived Access to Health Care Questionnaire showed good internal consistency, with a Cronbach's alpha coefficient of .85.

Covariates and Potential Confounders

We collected sociodemographic data on senior citizens, encompassing age, sex, marital status, education, employment, monthly income, living arrangement, and income source. We also included chronic disease history and vices like smoking and drinking. Marital status was categorized into single, married, and widowed. Educational attainment included four options: no formal education, elementary education, secondary education, or higher education. Monthly income was divided into five categories, from no income to above-high income. General health was categorized into five options based on self-assessment: very good, good, fair, bad, and very bad. This classification system provides clear distinctions for each variable, facilitating accurate data analysis and interpretation.

Data Analysis

We summarized the sociodemographic characteristics of senior citizens using descriptive statistics and cross-tabulation. We conducted multiple linear regression analyses to examine the association between healthcare access and seniors' QOL. All models were adjusted for sociodemographic variables, including age, sex, marital status, educational status, monthly income, self-rated healthcare, living arrangements, comorbidities, smoking, drinking, and health insurance. We set the significance level at .05 (two-tailed). Statistical analyses were conducted using Stata software Version 14 (College Station, TX: StataCorp LLC).

Ethical Considerations

We obtained ethical approval from the University Ethics Research Committee (Approval Code: 2022-02-PHA-14). Senior citizens participated voluntarily and were free to withdraw at any time without any harm or penalty. All responses were kept confidential following the Data Privacy Act of the Philippines.

Results

General Characteristics of Participants

Table 1 shows the general characteristics of participants. The mean age of the 410 senior citizens is 68.99 (standard deviation [SD] 6.09). The majority of them are female (54.6%), single/widowed (52.7%), have an educational status of high school and above (63.9%), and belong to middle income and above income status (58.3%). They rated their health as good/very good (60.0%) and living with others (80.7%). The majority have comorbidities (54.2%), never smoked (66.3%), are non-drinkers (74.3%), and have no health insurance (56.1%).

Table 2 displays mean scores for various metrics, including the healthcare access subscale, WHOQOL domains, and standalone questions related to general health and overall QOL. The overall healthcare access scale ranges from 17 to 150, with a mean of 120.13 (SD 31.21). Among the components of healthcare access, acceptability has the highest mean at 37.29 (SD 10.65), while affordability has the lowest mean at 9.63 (SD 4.03). Regarding standalone questions on QOL, the mean score for overall QOL is 70.79 (SD 30.72), and general health achieves a mean of 72.01 (SD 29.02). Concerning WHOQOL domains, the highest mean score is observed in environmental health, at 79.49 (SD 18.34), while the lowest mean score pertains to social relationships, at 66.62 (SD 21.73).

Healthcare Access and Quality of Life

Bivariate analyses revealed that healthcare access is positively associated with QOL (unstandardized beta

Table 1. Sociodemographic Characteristics of Community-Dwelling Senior Citizens ($n = 410$).

Characteristics	*n* (%)
Sociodemographic	
Age, mean (SD); range: 60–92 years	68.99 (6.09)
Sex	
Female	224 (54.6)
Male	186 (45.4)
Marital status	
Single/widowed	216 (52.7)
Married/remarried	194 (47.3)
Education	
Elementary and below	148 (36.1)
High school and above	262 (63.9)
Monthly income	
No income/low income	171 (41.7)
Middle-income and above	239 (58.3)
Self-rated health status	
Good/very good	246 (60.0)
Fair	124 (30.2)
Bad/very bad	40 (9.76)
Living arrangement	
Living alone	79 (19.3)
Living with others	331 (80.7)
Comorbidities	
Absent	188 (45.9)
Present	222 (54.2)
Smoking	
Never smoked	272 (66.3)
Ex-smoker/current smoker	138 (33.7)
Drinking alcohol	
Non-drinker	304 (74.3)
Former/occasional/current drinker	105 (25.7)
Health insurance	
Yes	180 (43.9)
No	230 (56.1)

Table 2. Healthcare Access and Quality of Life of Community-Dwelling Senior Citizens ($n = 410$).

Variables	Mean (SD)
Overall healthcare access, range: 30–150	120.13 (31.21)
Healthcare access subscales	
Accessibility, range: 4–20	16.04 (4.60)
Availability, range: 3–15	12.91 (3.82)
Acceptability, range: 9–45	37.29 (10.65)
Affordability, range: 3–15	9.63 (4.03)
Accommodation, range: 6–30	22.22 (7.13)
Awareness, range: 5–25	22.03 (6.98)
Perceived quality of life	
General health, range: 0–100	72.01 (29.02)
Overall QOL, range: 0–100	70.79 (30.72)
QOL domains	
Physical health, range: 0–100	69.01 (23.19)
Psychological health, range: 0–100	78.83 (18.80)
Environment, 0–100	79.49 (18.34)
Social relationship, range: 0–100	66.62 (21.73)

Table 3. Association Between Healthcare Access and Perceived Quality of Life of Community-Dwelling Senior Citizens ($n = 410$).

	Overall quality of life and its domains					
Healthcare access and its subscales	Physical health B (95% CI)	Psychological health B (95% CI)	Environmental health B (95% CI)	Social relationship B (95% CI)	Overall QOL B (95% CI)	General health B (95% CI)
Overall healthcare access	0.08 (0.02, 0.14)*	0.08 (0.02, 0.14)**	0.10 (0.04, 0.16)**	0.10 (0.05, 0.15)***	0.22 (0.10, 0.33)***	−0.19 (−0.11, 0.07)
Accessibility	1.16 (0.79, 1.54)***	0.90 (0.17, 1.62)*	0.83 (0.54, 1.11)***	−0.14 (−0.63, 0.35)	1.95 (0.98, 2.91)***	−0.15 (−0.83, 0.53)
Availability	0.39 (−1.10, 1.88)	0.33 (−0.70, 1.35)	−0.24 (−1.05, 0.57)	−0.07 (−2.00, 1.85)	0.81 (−1.89, 3.52)	−1.41 (−2.87, 0.05)
Acceptability	−0.54 (−1.24, 0.15)	−0.40 (−1.16, 0.36)	−0.44 (−1.09, 0.21)	−0.51 (–0.91, −0.10)	−0.16 (−1.12, 0.79)	−0.08 (−0.94, 0.78)
Affordability	−0.43 (−1.16, 0.29)	−0.91 (−1.47, −0.35)**	−0.40 (−1.14, 0.33)	0.79 (0.28, 1.30)**	−1.60 (−2.46, −0.74)**	−0.18 (−0.84, 0.48)
Accommodation	0.54 (−0.13, 1.20)	0.24 (−0.36, 0.84)	0.76 (0.08, 1.44)*	0.41 (−0.09, 0.92)	0.57 (−0.62, 1.77)*	1.27 (0.65, 1.89)
Awareness	0.28 (−0.53, 1.09)	0.69 (−0.38, 0.84)	0.43 (−0.41, 1.27)	0.63 (0.28, 0.99)**	0.28 (−0.69, 1.25)	−0.37 (−1.26, 0.51)

Note. All models were adjusted for age, sex, marital status, educational status, monthly income, self-rated healthcare, living arrangements, comorbidities, smoking, drinking, and health insurance. B = unstandardized coefficient; CI = confidence interval; QOL = quality of life. Statistical significance indicated by *$p < .05$. **$p < .01$. ***$p < .001$.

[B] = .21, 95% CI [Confidence Interval] 0.11, 0.31). Additionally, healthcare access accounts for 4.2% of the variance in QOL ($R^2 = .042$). Table 3 presents the results of the multiple linear regression analysis, which examine the relationship between each exposure and the outcome variable subscale. Overall healthcare access is positively associated with Overall QOL (B = .22, 95% CI 0.10, 0.33). Additionally, overall healthcare access is associated with the following QOL domains: physical health (B = .08, 95% CI = 0.02, 0.14), psychological health (B = .08, 95% CI 0.02, 0.14), environmental health (B = .10, 95% CI 0.04, 0.16), and social relationship (B = .10, 95% CI 0.05, 0.15).

We found statistically significant associations between the Healthcare Access subscale and QOL domains. Accessibility showed a positive association with physical health (B = 1.16, 95% CI 0.79, 1.54), psychological health (B = .90, 95% CI 0.17, 1.62), and environmental health (B = .83, 95% CI 0.54, 1.11) Affordability showed a negative association with psychological health (B = −.91, 95%CI −1.47, −0.35), but a positive association with social relationships (B = .79, 95% CI 0.28, 1.30). Accommodation positively correlated with environmental health (B = .76, 95% CI 0.08, 1.44) and awareness is similarly correlated with social relationships (B = .63, 95% CI 0.28, 0.99). These findings highlight the diverse impacts of healthcare access on various domains of quality of life.

Discussion

Study findings indicate that senior citizens demonstrate high levels of healthcare access and a moderate quality of life (QOL). Environmental health ranks the highest among the various domains of QOL, while social relationships rank the lowest. Moreover, there is a positive association between overall healthcare access and overall QOL and its domains. Notably, the accessibility and affordability aspects of healthcare access are significantly associated with overall QOL.

The study found that Filipino senior citizens have good access to healthcare, but their QOL is moderate. While they have ample access to healthcare services tailored to their needs, their overall QOL may be only moderate due to various factors. These factors encompass individual, social, and systemic determinants influencing their health and well-being. Personal factors such as socioeconomic status significantly influence their ability to navigate healthcare services effectively and maintain a better QOL (Carandang et al., 2019). Senior citizens with higher education, income, and health literacy are more likely to access care effectively (De Leon, 2014; Tariga & Cutamora, 2016). In contrast, those with multiple chronic conditions, functional impairments, and limited resources may face significant challenges in managing their health, leading to a lower QOL (McGilton et al., 2018). Social factors such as social support, community involvement, and caregiving resources also impact healthcare access and QOL for senior citizens (Sarla et al., 2020). Strong social networks and significant social roles are associated with improved health outcomes and QOL for senior citizens. In contrast, social isolation and insufficient support can worsen health and decrease well-being (Gouveia et al., 2016).

Filipino senior citizens reported low scores in social relationships but high scores in the environmental aspect

of QOL. A favorable environment significantly contributes to better QOL by reducing disease risks (Di Ciaula & Portincasa, 2020). Still, as seniors age, their social circles often diminish due to the loss of family and friends, family migration, and changes in social support systems. This results in smaller social networks, especially for those who are widowed or living alone (Luong et al., 2011). While environmental health is crucial and consistently scores high in QOL assessments, social relationships often score lower, highlighting the need for strong social connections alongside a clean and safe environment (Bentley, 2013). Research shows supportive social networks are vital for mental and emotional well-being, leading to happier, healthier, and longer lives (Vila, 2021). Therefore, programs should focus on enhancing both environmental quality and social connections for senior citizens to improve their overall QOL.

The accessibility of healthcare services is closely linked to Filipino senior citizens' overall QOL. Research suggests unrestricted access to medical care and consistent healthcare support are crucial in enhancing senior citizens' QOL (Tamornpark et al., 2022). Moreover, effective utilization of healthcare services can facilitate the early detection and diagnosis of illnesses (Mesquita-Neto et al., 2020), further highlighting the significant impact of healthcare access on senior citizens' well-being. Several studies have explored the relationship between healthcare access and QOL, consistently demonstrating that individuals with better access to healthcare services, including regular check-ups, preventive screenings, and timely treatment, generally experience higher overall QOL (Cu et al., 2021). Healthcare access influences various aspects of individuals' QOL, including physical, mental, and social well-being (Asadi-Lari et al., 2004). Those with improved healthcare access report higher QOL and increased life satisfaction (Dawkins et al., 2021). This relationship can be attributed to several factors. First, healthcare access aids in preventing and treating illnesses and injuries, leading to improved physical health, increased energy, and overall well-being. Second, it assists in managing chronic conditions such as diabetes or heart disease, reducing symptoms, and enhancing daily functioning. Third, access to healthcare provides individuals with peace of mind and reduces stress by ensuring they can obtain assistance when needed (Asadi-Lari et al., 2004). These findings underscore the importance of accessible healthcare in enhancing senior citizens' overall QOL within their local communities.

Conversely, affordability is negatively associated with quality of life among Filipino senior citizens, suggesting that a decrease in healthcare services costs correlates with a reduction in psychological well-being. Multiple studies supported this finding and have indicated a negative association between affordability and overall QOL, particularly in healthcare services for senior citizens (Cu et al., 2021). It has been suggested that greater affordability of healthcare services could lead to a decline in QOL among senior citizens (Asadi-Lari et al., 2004). However, a contrasting study has shown that affordable services can significantly impact the QOL of senior citizens by increasing their life expectancy (Ma & Shen, 2023). Furthermore, an analysis of data from China has revealed that senior citizens with medical insurance to support their healthcare needs tend to have better health conditions (H. Zhang et al., 2023). This indicates that access to medical insurance can lead to long-term positive effects by improving physical attributes and behaviors. These mixed results point towards further investigation into the relationship between affordability and QOL of senior citizens.

It is important to recognize that simply having access to healthcare services does not ensure a good QOL for senior citizens. The quality of the healthcare services they receive is a critical factor influencing their QOL (Malley et al., 2019). While access is crucial, the differing quality of care can greatly affect the overall well-being of senior citizens. Some may receive excellent care that effectively addresses their needs, while others may encounter obstacles like lengthy wait times, insufficient resources, or difficulties in communication with healthcare providers, ultimately impacting their QOL (Hartgerink et al., 2015). Therefore, programs should prioritize enhancing senior citizens' access to high-quality healthcare services.

The study provides valuable insights, but it does have some limitations that should be taken into consideration. First, the geographical restriction to one city means that the findings may not be easily applicable to a broader population. Second, the exclusion of senior citizens with cognitive impairment, terminal diseases, and communication disorders introduces a potential bias in the study. Third, the reliance on self-reported measures may affect the accuracy of the results. However, despite these limitations, the study's comprehensive exploration of sociodemographic, healthcare-related access, economic, and QOL variables within the local senior community provides a solid foundation for future research and targeted interventions.

Conclusions

Filipino senior citizens generally had high overall healthcare access and moderate overall QOL. However, due to variations in the availability of medical services and facilities across barangays, there were disparities in how individuals perceived access and how this impacted their QOL. Overall healthcare access was positively associated with overall QOL; affordable healthcare services, a supportive environment, and easily accessible healthcare services contributed to the overall QOL of senior citizens. Access to healthcare showed a favorable relationship with total QOL and its four dimensions. Therefore, there is a clear association between healthcare access and

QOL. These results were gathered from a semi-urbanized city, limiting the findings' generalizability. Thus, further studies in geographically isolated areas must explore the connections between healthcare access subscales and QOL domains.

Declaration of Conflicting Interests

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Ethical Approval

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References

Abdullah, J. M., Ahmad, M. M., & Saqib, S. E. (2018). Understanding accessibility to healthcare for elderly people in Bangladesh. *Development in Practice*, *28*(4), 552–561. https://doi.org/10.1080/09614524.2018.1450845

Acharya Samadarshi, S. C., Taechaboonsermsak, P., Tipayamongkholgul, M., & Yodmai, K. (2022). Quality of life and associated factors amongst older adults in a remote community, Nepal. *Journal of Health Research*, *36*(1), 56–67. https://doi.org/10.1108/JHR-01-2020-0023

Arellano Law Foundation. (2019). *Republic act no. 11223*. Lawphil.net. https://lawphil.net/statutes/repacts/ra2019/ra_11223_2019.html

Asadi-Lari, M., Tamburini, M., & Gray, D. (2004). Patients' needs, satisfaction, and health related quality of life: Towards a comprehensive model. *Health and Quality of Life Outcomes*, *2*, 32. https://doi.org/10.1186/1477-7525-2-32

Bastani, P., Mohammadpour, M., Samadbeik, M., Bastani, M., Rossi-Fedele, G., & Balasubramanian, M. (2021). Factors influencing access and utilization of health services among older people during the COVID-19 pandemic: A scoping review. *Archives of Public Health*, *79*(1), 190. https://doi.org/10.1186/s13690-021-00719-9

Bentley, M. (2013). An ecological public health approach to understanding the relationships between sustainable urban environments, public health and social equity. *Health Promotion International*, *29*(3), 528–537. https://doi.org/10.1093/heapro/dat028

Carandang, R. R., Asis, E., Shibanuma, A., Kiriya, J., Murayama, H., & Jimba, M. (2019). Unmet needs and coping mechanisms among community-dwelling senior citizens in the Philippines: A qualitative study. *International Journal of Environmental Research and Public Health*, *16*(19), 3745. https://doi.org/10.3390/ijerph16193745

Carandang, R. R., Shibanuma, A., Asis, E., Chavez, D. C., Tuliao, M. T., & Jimba, M. (2020). "Are Filipinos aging well?": Determinants of subjective well-being among senior citizens of the community-based ENGAGE study. *International Journal of Environmental Research and Public Health*, *17*(20), 7636. https://doi.org/10.3390/ijerph17207636

Cu, A., Meister, S., Lefebvre, B., & Ridde, V. (2021). Assessing healthcare access using the Levesque's conceptual framework – a scoping review. *International Journal for Equity in Health*, *20*(1), 116. https://doi.org/10.1186/s12939-021-01416-3

Dawkins, B., Renwick, C., Ensor, T., Shinkins, B., Jayne, D., & Meads, D. (2021). What factors affect patients' ability to access healthcare? An overview of systematic reviews. *Tropical Medicine & International Health*, *26*(10), 1177–1188. https://doi.org/10.1111/tmi.13651

De Leon, A. (2014). *The quality of life of the Filipino elderly in selected cities and provinces*. Tsao Foundation. Retrieved July 2024, from http://tsaofoundation.org

Di Ciaula, A., & Portincasa, P. (2020). The environment as a determinant of successful aging or frailty. *Mechanisms of Ageing and Development*, *188*, 111244. https://doi.org/10.1016/j.mad.2020.111244

Felez-Nobrega, M., Haro, J. M., Stubbs, B., Smith, L., & Koyanagi, A. (2021). Moving more, ageing happy: Findings from six low- and middle-income countries. *Age and Ageing*, *50*(2), 488–497. https://doi.org/10.1093/ageing/afaa137

Garcia-Ramirez, J., Nikoloski, Z., & Mossialos, E. (2020). Inequality in healthcare use among older people in Colombia. *International Journal for Equity in Health*, *19*(1), 168. https://doi.org/10.1186/s12939-020-01241-0

Gouveia, O. M. R., Matos, A. D., & Schouten, M. J. (2016). Social networks and quality of life of elderly persons: A review and critical analysis of literature. *Revista Brasileira de Geriatria e Gerontologia*, *19*, 1030–1040. https://doi.org/10.1590/1981-22562016019.160017

Hartgerink, J. M., Cramm, J. M., Bakker, T. J., Mackenbach, J. P., & Nieboer, A. P. (2015). The importance of older patients' experiences with care delivery for their quality of life after hospitalization. *BMC Health Services Research*, *15*, 311. https://doi.org/10.1186/s12913-015-0982-1

Hoseini-Esfidarjani, S. S., Negarandeh, R., Delavar, F., & Janani, L. (2021). Psychometric evaluation of the perceived access to health care questionnaire. *BMC Health Services Research*, *21*(1), 638. https://doi.org/10.1186/s12913-021-06655-2

Ismail, Z., Ahmad, W. I. W., Hamjah, S. H., & Astina, I. K. (2021). The impact of population ageing: A review. *Iranian Journal of Public Health*, *50*(12), 2451–2460. https://doi.org/10.18502/ijph.v50i12.7927

Karma, B., Ada-Katrin, B., & Händler-Schuster, D. (2021). Exploring health-related needs of elderly people (70+) at home: A qualitative study from Switzerland. *Journal of Primary Care & Community Health*, *12*, 21501327211055635. https://doi.org/10.1177/21501327211055635

Luong, G., Charles, S. T., & Fingerman, K. L. (2011). Better with age: Social relationships across adulthood. *Journal of Social and Personal Relationships*, *28*(1), 9–23. https://doi.org/10.1177/0265407510391362

Ma, W., & Shen, Z. (2023). Impact of community care services on the health of older adults: Evidence from China. *Frontiers in Public Health*, *11*, 1160151. https://doi.org/10.3389/fpubh.2023.1160151

Malley, J., D'Amico, F., & Fernandez, J.-L. (2019). What is the relationship between the quality of care experience and quality of life outcomes? Some evidence from long-term home care in England. *Social Science & Medicine*, *243*, 112635. https://doi.org/https://doi.org/10.1016/j.socscimed.2019.112635

McGilton, K. S., Vellani, S., Yeung, L., Chishtie, J., Commisso, E., Ploeg, J., Andrew, M. K., Ayala, A. P., Gray, M., Morgan, D., Chow, A. F., Parrott, E., Stephens, D., Hale, L., Keatings, M., Walker, J., Wodchis, W. P., Dubé, V., McElhaney, J., & Puts, M. (2018). Identifying and understanding the health and social care needs of older adults with multiple chronic conditions and their caregivers: A scoping review. *BMC Geriatrics*, *18*(1), 231. https://doi.org/10.1186/s12877-018-0925-x

Mesquita-Neto, J. W. B., Cmorej, P., Mouzaihem, H., Weaver, D., Kim, S., & Macedo, F. I. (2020). Disparities in access to cancer surgery after Medicaid expansion. *The American Journal of Surgery*, *219*(1), 181–184. https://doi.org/10.1016/j.amjsurg.2019.06.023

Mohd Tohit, N. F., & Haque, M. (2024). Preparing the younger generation for an aging society: Strategies, challenges, and opportunities. *Cureus*, *16*(7), e64121. https://doi.org/10.7759/cureus.64121

National Institute on Aging (NIA). (2007). *Why population aging matters: A global perspective*. https://www.nia.nih.gov/sites/default/files/2017-06/WPAM.pdf

Rony, M. K. K., Parvin, M. R., Wahiduzzaman, M., Akter, K., & Ullah, M. (2024). Challenges and advancements in the health-related quality of life of older people. *Advances in Public Health*, *2024*(1), 8839631.

Sarla, E., Lambrinou, E., Galanis, P., Kalokairinou, A., & Sourtzi, P. (2020). Factors that influence the relationship between social support and health-related quality of life of older people living in the community. *Gerontology and Geriatric Medicine*, *6*, 2333721420911474. https://doi.org/10.1177/2333721420911474

Statista. (2019). *Share of diagnosed illnesses among the ageing population in the Philippines in 2019, by type and age group*. https://www.statista.com/statistics/1115522/philippines-share-diagnosed-illness-ageing-population-by-type-and-age/

Tamornpark, R., Utsaha, S., Apidechkul, T., Panklang, D., Yeemard, F., & Srichan, P. (2022). Quality of life and factors associated with a good quality of life among diabetes mellitus patients in northern Thailand. *Health and Quality of Life Outcomes*, *20*(1), 81. https://doi.org/10.1186/s12955-022-01986-y

Tariga, J. A., & Cutamora, J. C. (2016). Assessment of the common predictors and their correlation in subjective wellbeing among elderly in Bohol, Philippines. *The Malaysian Journal of Nursing*, *8*, 19–38.

United Nations. 2019. *World population prospects 2019*. United Nations Population Division: https://population.un.org/wpp/Download/Standard/Population/

van Gaans, D., & Dent, E. (2018). Issues of accessibility to health services by older Australians: A review. *Public Health Reviews*, *39*, 20. https://doi.org/10.1186/s40985-018-0097-4

Vila, J. (2021). Social support and longevity: Meta-analysis-based evidence and psychobiological mechanisms. *Frontiers in Psychology*, *12*, 717164. https://doi.org/10.3389/fpsyg.2021.717164

World Health Organization. (1996). *WHOQOL-BREF: Introduction, administration, scoring and generic version of the assessment: Field trial version*. Retrieved December 1996, from https://www.who.int/publications/i/item/WHOQOL-BREF

World Health Organization. (2004). *The World Health Organization quality of life (WHOQOL)*. https://www.who.int/publications-detail-redirect/WHO-HIS-HSI-Rev.2012.03

World Health Organization. (2024). *WHOQOL: Measuring quality of life. WHOQOL-BREF*. https://www.who.int/tools/whoqol/whoqol-bref?fbclid=IwAR3ik9g9OtzrddrImu7hMdoOdqP0sTnXlIyrJxBl48Id5ZOExWgoLDqrtx4

Yamada, T., Chen, C. C., Murata, C., Hirai, H., Ojima, T., Kondo, K., & Harris, J. R., III (2015). Access disparity and health inequality of the elderly: Unmet needs and delayed healthcare. *International Journal of Environmental Research and Public Health*, *12*(2), 1745–1772. https://doi.org/10.3390/ijerph120201745

Zhang, H., Cheng, P., & Huang, L. (2023). The impact of the medical insurance system on the health of older adults in urban China: Analysis based on three-period panel data. *International Journal of Environmental Research and Public Health*, *20*(5), 3817. https://doi.org/10.3390/ijerph20053817

Zhang, T., Liu, C., & Ni, Z. (2019). Association of access to healthcare with self-assessed health and quality of life among old adults with chronic disease in China: Urban versus rural populations. *International Journal of Environmental Research and Public Health*, *16*(14), 2592. https://doi.org/10.3390/ijerph16142592