**Factors Influencing the Quality of Life of the Elderly population: A Prospective Study on Community-Based Methods in Nepal**

**ABSTRACT**

This study explains how quality of life of elderly people is influenced by their physical, psychological, social, and environmental status. Nepal is currently experiencing demographic aging, with the elder population growing faster than the annual population growth rate. Understanding the subjectivity of quality of life (QOL) is essential for comprehending this concept. Social support enhances older individuals' sense of belonging, physical and psychological health, and overall well-being, which are crucial for a happy life. This study aims to assess the quality of life and its associated factors in the elderly population. A community-based cross-sectional study was conducted among 245 elderly individuals aged over 60 years in Banepa Municipality, Kavre. A simple random sampling technique was used, and QOL was assessed using the WHOQOL-BRIEF questionnaire, which includes 26 questions. Data was collected through face-to-face interviews after obtaining informed consent and analyzed using SPSS version 22.0. The results showed that the majority of the elderly population reported fair QOL (75.6%), followed by good QOL (17.6%), and poor QOL (6.5%). There is a strong relationship between QOL and factors such as age group, marital status, education level, employment status, monthly income, living arrangement, chronic health conditions, medical treatment, and access to healthcare services. There were positive correlations between QOL and physical factors (r=0.918), psychological factors (r=0.841), social factors (r=0.655), and environmental factors (r=0.907). The study found that the most significant factor influencing the overall QOL index of older adults is their physical health, followed by psychological state, social activity participation, and environmental factors. The availability of healthcare services, social support, improved sleep patterns, and reduction of negative feelings are crucial for improving QOL in the elderly.

**Keywords:** Quality of Life, Associate factors, Elderly Population, WHOQOL-BREF

1. **INTRODUCTION**

The World Health Organization (WHO) defines Quality of Life (QOL) as an individual's perception of their position in life within the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns. It is a broad-ranging concept influenced in a complex way by an individual's physical health, psychological state, personal beliefs, social relationships, and their interaction with significant features of their environment. The United Nations defines an older person as someone over 60 years of age (1).

Aging is an emerging issue in Nepal, which also uses the WHO definition of old as above 60 years. Advances in science and technology have led to better healthcare, making humans more resilient and capable of living longer (2). By 2030, 1 in 6 people globally will be 60 or older, with the population increasing from 1 billion in 2020 to 1.4 billion. By 2050, the number will double to 2.1 billion, with two-thirds living in low- and middle-income countries (3).

The World Data Atlas 2022 estimates Nepal's population at 30.5 million, growing from 13.3 million in 1973 at an average annual rate of 1.71%. In Nepal, 6.1% of the population is aged 65 or older. The projected life expectancy for 2023 is 71.74 years (4). Nepal has an increasing elderly population and has enacted measures to support older individuals. However, persistent inequalities, policy implementation issues, and limited data resources hinder improvement in the lives of Nepal's elderly (5).

The needs of the senior population are varied and complex due to escalating health issues with age. Many elderlies live independently in rural areas. Understanding factors affecting their quality of life is crucial, especially as the elderly population grows. Senior Nepalese citizens' life satisfaction tends to decline with deteriorating nutritional and mental health (6).

WHO defines Quality of Life (QOL) as an individual's perception of their position in life within the context of their culture and value systems. It is influenced by physical health, psychological state, personal beliefs, social relationships, and environmental factors (8). Quality of life is a multifaceted issue relevant to various sciences and public policy, but there is no consensus on its definition. It encompasses aging styles from successful aging to aging with disabilities (7).

A study in rural Nepal found that 19% of the elderly had low QOL, associated with age, gender, marital status, housing conditions, and physical health (10). Research in Nepal's Morang area among 50 older adults in an old-age home showed poor social domain and QOL ratings (11). In Nepal's Baglung district, 51.1% of 403 older people aged 60 had high QOL, linked to age, gender, marital status, family structure, social capital, neighborhood aesthetics, and crime rates. Initiatives promoting active aging and age-friendly environments should be explored (12).

To study QOL in older individuals, we must acknowledge the diversity in physical and psychological functioning among those over 60. While physical capability often declines with age due to chronic diseases and disability, there is significant individual variance. Behavioral and psychosocial variables are crucial predictors of QOL in old age (13).

Toward this, conducting this study is essential for several reasons. First, the findings will be valuable to healthcare providers and nursing students at all levels, as it offers a comprehensive understanding of quality of life (QOL) from various perspectives, including physical health, mental health, environmental factors, and overall life satisfaction. The study will provide baseline data on the QOL of the elderly, aiding healthcare institutions in developing creative activities targeted at enhancing their well-being. By understanding what is important to elderly individuals, the study will inform the creation of tailored interventions. Additionally, significant questions arising from this research can enhance awareness of critical issues among different subgroups of older adults, necessitating further research to explore variations in QOL ratings among these groups. The findings will also assist government bodies in formulating relevant policies and social security measures to improve the lives of the elderly population, making their lives easier and more meaningful. By offering a quantitative examination of Nepal's aging process and social security system, this study will benefit readers, educators, academics, and other stakeholders by providing a fundamental understanding of these traits.

1. **METHODOLOGY**

A descriptive cross-sectional research design was employed to assess the quality of life and its associated factors among the elderly population living in Ugrachandi Nala, Banepa, situated in the Kavrepalanchowk district.

The study population consisted of the elderly residents of Ugrachandi Nala, Banepa. The required sample size was calculated using Cochran’s equation. A target sample of 245 was determined for this study at a 95% confidence level, with a 5% margin of error. A simple random sampling technique was adopted to select the desired sample for data collection.

Our inclusion criteria were as follows: elderly males and females aged 60 and over residing in Ugrachandi Nala, Banepa, who granted their permission to participate. Our exclusion criteria included individuals under the age of 60, elderly individuals unable to complete the questionnaire due to illness, those with cognitive disabilities, individuals unable to communicate, and those unwilling to engage in the study.

Questionnaires were the primary instrument for data collection. Self-administered socio-demographic questionnaires and the WHOQOL tool were used according to the objectives of this study. The required information was collected from the elderly population aged 60 years and above, with questionnaires prepared in English and then translated into Nepali for convenient data collection in the community. The questionnaire consisted of two parts: socio-demographic information and quality of life and its associated factors using the WHOQOL BREF questionnaire.

The collected data were regularly verified for completeness and accuracy. All data were saved for modification and coding. MS Excel and SPSS version 22.0 were used to process the data. The data were evaluated using various statistical techniques such as frequency, percentage, mean, median, and standard deviation. The findings were presented in tabular format and interpreted based on the research goals.

1. **RESULTS AND DISCUSSION**

We summarize our findings in three categories: Socio-demographic Characteristics of Respondents, Quality of Life and Its Associated Factor, and Association between Independent Variables and QOL.

Socio-demographic characteristics:

Our data demonstrate that among the 245 respondents, the majority (41.6%) were aged 60-69 years, of which 60% were females. Most respondents were Hindu (97.6%), and a significant majority (77.1%) had no formal education. Additionally, 55.5% of the respondents were married, 41.6% were widowed, 1.2% were divorced, and 1.6% were unmarried. The majority of respondents (88.6%) were unemployed, with the primary source of income being social security (72.7%). The maximum monthly income of respondents ranged from 10,000 to 20,000, with 53.9% falling within this range.

From a demographic perspective, our data reveal that the majority of respondents (81.6%) lived in joint families, while only 2.4% had extended families. Additionally, 53.9% of respondents lived with their spouses, 35.9% lived with their children, 9.8% lived alone, and only 0.4% lived with relatives. A total of 72.7% of the study population reported having chronic health conditions, whereas 0.8% of the respondents were unsure about any chronic health conditions. Similarly, 71.4% of the respondents were receiving medical treatment or taking medication for disease conditions. Furthermore, the majority (56.7%) of respondents had moderately accessible healthcare services, while 2.0% had no accessible healthcare services.

Quality of Life (QOL) and Its Associated Factor:

Most of the elderly population reported Fair QOL (n = 186; 75.9%), followed by Good QOL (n = 43; 17.6%) and Poor QOL (n = 16; 6.5%). Our quality-of-life assessment involved several factors: physical, psychological, social, and environmental. The data highlights several aspects. For instance, regarding physical factors, 34.3% of respondents reported that a small amount of physical pain prevents them from doing what they need to do, and 35.9% reported needing medical treatment to function in their daily life.

In terms of psychological aspects, 56.3% enjoy life moderately, 53.5% feel life is meaningful, and 43.3% are able to concentrate moderately. Regarding social factors, questions about satisfaction in relationships and sex life were asked. The findings reveal that 47.8% of respondents were neutral about general relationship satisfaction, while 42.0% were fairly dissatisfied with their sex life. For environmental factors, questions about safety and financial conditions were asked. The study revealed that 64.9% moderately felt safe in daily life, and 69.4% moderately felt healthy in their physical environment.

Association between Independent Variables and QOL:

To understand the impact of independent variables on quality of life, we calculated the p-value across different factors and present our findings in Table 1, which demonstrates a significant relationship between QOL and factors such as age group, marital status, education level, employment status, income, living arrangement, chronic health condition, medical treatment, and healthcare accessibility. We also calculated the association between four associated factors and QOL and found a positive correlation (calculated as Pearson correlation) for the physical factor at 0.918, the psychological factor at 0.841, the social factor at 0.655, and the environmental factor at 0.907.

## Table 1: Association between Independent Variables and Quality of Life (N=245)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | **Categories** | **Poor** | **Good** | **Fair** | **Total** | **P-value** |
| Age group | 60-69 | 3.9% | 67.6% | 28.4% | 102 | <0.001 |
| 70-79 | 3.4% | 86.4% | 10.2% | 88 |
| 80-89 | 9.1% | 79.5% | 11.4% | 44 |
| 90+ | 45.5% | 54.5% | 0.0% | 11 |
| Gender | Male | 4.1% | 76.5% | 19.4% | 98 | 0.384 |
| Female | 8.2% | 75.5% | 16.3% | 147 |
| Marital status | Single | 25.0% | 25.0% | 50.0% | 4 | 0.031 |
| Married | 5.1% | 72.1% | 22.8% | 136 |
| Divorced | 0.0% | 100.0% | 0.0% | 3 |
| Widowed | 7.8% | 82.4% | 9.8% | 102 |
| Religion | Hindu | 6.3% | 76.2% | 17.6% | 239 | 0.685 |
| Christian | 16.7% | 66.7% | 16.7% | 6 |
| Education | No formal education | 7.4% | 74.6% | 18.0% | 189 | 0.042 |
| Primary school | 2.4% | 90.5% | 7.1% | 42 |
| Secondary school | 7.7% | 53.8% | 38.5% | 13 |
| Graduation+ | 0.0% | 0.0% | 100.0% | 1 |
| Employment | Employed | 0.0% | 46.4% | 53.6% | 28 | 0.000 |
| Unemployed | 7.4% | 79.7% | 12.9% | 217 |
| Income (NPR/month) | <10,000 | 12.7% | 77.8% | 9.5% | 63 | 0.039 |
| 10,000-20,000 | 5.3% | 76.5% | 18.2% | 132 |  |
| >20,000 | 2.0% | 72.0% | 26.0% | 50 |  |
| Family type | Nuclear | 2.6% | 84.6% | 12.8% | 39 | 0.253 |
| Joint | 7.0% | 74.0% | 19.0% | 200 |  |
| Extended | 16.7% | 83.3% | 0.0% | 6 |  |
| Living arrangement | Alone | 0.0% | 95.8% | 4.2% | 24 | 0.005 |
| With spouse | 4.5% | 72.7% | 22.7% | 132 |
| With children | 10.2% | 76.1% | 13.6% | 88 |
| Relative | 100.0% | 0.0% | 0.0% | 1 |
| Chronic condition | Yes | 8.4% | 80.3% | 11.2% | 178 | 0.001 |
| No | 1.5% | 63.1% | 35.4% | 65 |
| Not sure | 0.0% | 100.0% | 0.0% | 2 |
| Medical treatment | Yes | 9.1% | 79.4% | 11.4% | 175 | 0.000 |
| No | 0.0% | 67.1% | 32.9% | 70 |
| Healthcare access | Easily accessible | 6.5% | 80.6% | 12.9% | 139 | 0.021 |
| Moderately | 40.0% | 60.0% | 0.0% | 5 |
| Not accessible | 5.0% | 70.3% | 24.8% | 28 |

1. **CONCLUSION**

A total of 245 respondents participated in this study. They were asked a series of questions to gather their sociodemographic characteristics with the ultimate goal of assessing their quality of life and understanding how different factors might impact it. The majority of the elderly population reported Fair QOL (75.9%), followed by Good QOL (17.6%), and Poor QOL (6.5%). These findings are consistent with a prior study conducted among the elderly population (6) (14).

In this study, four different associated factors like physical, psychological, social, and environmental were considered on the basis of common issue. Participants were asked about their perceptions, feelings, and concerns related to these domains. The study revealed a strong relationship between QOL and various factors including age group, marital status, level of education, current employment status, monthly income status, current living arrangement, chronic health conditions, receiving medical treatment, and access to healthcare services. Moreover, there was a significant correlation between the QOL domain and overall QOL, with p-values less than 0.05.

Specifically, the positive correlation between associated factors and QOL was evident, with the physical factor having an r-value of 0.918, the psychological factor an r-value of 0.841, the social factor an r-value of 0.655, and the environmental factor an r-value of 0.907. This indicates that the most significant factor influencing the overall QOL index of older adults was their physical health, followed by their psychological state (stress in life), social activity participation, and environmental factors.

In conclusion, this study underscores the importance of physical health as the most critical determinant of QOL among the elderly. Psychological well-being, social engagement, and environmental conditions also play substantial roles. Therefore, efforts to enhance the QOL for older adults should prioritize improving physical health and managing stress. Additionally, fostering intergenerational bonds, promoting a culture of respect for older individuals within families and society, and enhancing social and community participation are vital strategies to prevent isolation and improve the QOL for older people.

Ethical approval and consent

We ensured that appropriate ethical considerations were followed during data collection, including obtaining Institutional Research Committee (IRC) approval from NAMS College, Old Baneshwor, Kathmandu. We also requested written consent from participants and ensured their confidentiality.

Disclaimer (Artificial intelligence)

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