

Evaluating the Domains of Health Related Quality of Life: A Cross-Sectional Study in Eraviperoor Grama Panchayat

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ABSTRACT

Background: Health-Related Quality of Life (HRQOL) is a multidimensional construct that reflects an individual's subjective perception of their physical, psychological, social, and environmental well-being. Measuring HRQOL is essential to identify health disparities, tailor interventions, and evaluate the impact of diseases and treatments on individuals' lives. This case study analyses HRQOL among residents of Eraviperoor Grama Panchayat, Kerala, using the WHOQOL-BREF questionnaire, focusing on the four core domains: Physical, Psychological, Social, and Environmental.

Objective: To compare the different domains of HRQOL among a general population sample using a questionnaire validated using the WHOQOL-BREF.

Material and Methods: A cross-sectional study was carried out in Eraviperoor Grama Panchayat to compare different domains of HRQOL with 703 individuals ranging in age from 15 to 85 years. Over a six-month period (November 2023 – April 2024), participants were asked to complete a questionnaire based on their knowledge, and the tool was validated using the WHOQOL-BREF. The WHOQOL-BREF was used to measure HRQOL, which considers the physical, psychological, social, and environmental aspects. Descriptive statistics were used for analysis and comparison of scores of each domain.

Results: The physical domain demonstrated the highest mean HRQOL score, while the social domain showed the lowest. Younger age, male gender, higher education, and better socioeconomic status were associated with higher scores across all domains. Lifestyle factors such as smoking and alcohol consumption were linked to lower scores, particularly in the social and psychological domains. Statistically significant differences were observed between domains and among various population subgroups.

Conclusion: The comparative analysis of HRQOL domains revealed notable disparities, with physical health perceived more positively than social well-being. These findings highlight the importance of domain-specific assessment to identify targeted areas for intervention and to improve overall quality of life in community populations. Furthermore, the low awareness of HRQOL and its determinants among participants highlights the need for ongoing community based education.

KEYWORDS: Health – Related Quality of Life, Quality of Life.

INTRODUCTION

According to the WHO, quality of life (QOL) is how a person perceives their position in life within the

context of their culture, value system, goals, expectations, and concerns as well as in relation to their objectives, standards, expectations, and worries. Health is more than just the absence of illness or disability; it is a state of complete physical, mental, and social well-being.[1]

Health-Related Quality of Life (HRQOL) has become an essential concept in public health, emphasizing not just freedom from illness but also the comprehensive well-being of individuals in various aspects of life.[2] [3] Unlike traditional health metrics that focus solely on morbidity and mortality, HRQOL encompasses a holistic assessment of how people perceive their physical, psychological, social, and environmental health. This multidimensional approach is particularly valuable in community health research, as it provides nuanced insights into the lived experiences of populations and helps identify areas where interventions can most effectively enhance well-being. The concept of Health-Related Quality of Life (HRQOL) has become central in public health, focusing not only on the lack of illness but also on individuals' overall well-being across physical, mental, and social dimensions.

The domains of health-related quality of life (HRQOL) encompass the fundamental dimensions that collectively determine an individual's overall well-being as impacted by their health status. The most widely recognized and commonly assessed domains include the following:

- **Physical Health:** Encompasses pain, physical function, energy and fatigue, sleep, mobility, and the ability to perform daily activities.
- **Psychological Health:** Includes well-being, mood, self-esteem, cognitive function, and the presence of negative or positive feelings.
- **Social Health:** Includes social functioning, personal relationships, social support, and participation in community or work life.
- **Environmental/Functional Health:** Involves aspects such as safety, financial resources, access to healthcare, home environment, and opportunities for recreation.[4]

Mobility, everyday activities, functional ability, energy, pain, and sleep are all covered under the physical health area. Physical, psychological, social and environmental health are generally associated with fundamental aspects of quality of life. Physical dimension is described as an individual's sense of their own skills and their physiological performance of their body. A person's harmony and balance with others and with themselves are aspects of psychological makeup. This domain assesses the impact of disease on the activities of daily living, dependence on medicinal substances, fatigue, restricted mobility, presence of pain and discomfort, sleep and rest, a lack of energy and initiative and working capacity. Measures of the psychological domain include learning ability, memory focus, mentality, self-esteem, positive and negative ideas, self-image, and mental status. Environmental health has focused on an individual's capacity to exercise and carry out observable daily tasks, while the social dimension is associated with their capacity to interact with others. Physical health, which concerns how the body grows, feels, and moves as well as how one takes care of and nourishes it, can be defined as the body's correct functioning. It is a component of total wellness. The domain of environmental health encompasses matters pertaining to financial resources, safety, health and social services, physical living environment (pollution, noise, traffic, climate), learning possibilities, involvement in the recreational activity, an individual's health and quality of life are linked to lifestyle, according to the WHO. Urban areas with green space have been shown to have a positive impact on resident's resilience, quality of life, and physical and mental health. They also encourage the adoption of sustainable lifestyles. It gives people in cities access to the outdoors and visual beauty, which has the potential to improve mental, physical, and environmental health. It has been noted that accessibility to green space is a significant element that influences health [5] [6].

A comparison of health-related quality of life (HRQOL) domains allows for a deeper understanding of how different aspects of health—physical, psychological, social, and environmental—impact overall well-being. HRQOL is a multidimensional concept, and various validated instruments such as the WHOQOL-BREF and HRQ-6D assess these domains separately to highlight strengths and deficits unique to each area [7]. By systematically comparing domain scores, researchers can identify which areas are most affected in specific populations or conditions, inform targeted interventions, and contribute to more patient-centred care and effective public health strategies [8]. This approach is essential for tailoring health services and resources to address the most significant determinants of quality of life within a community.

METHODOLOGY

A cross sectional study was conducted in the Eraviperoor Grama Panchayat of Pathanamthitta district, Kerala, India. By employing the WHOQOL-BREF questionnaire, a globally validated tool for measuring HRQOL, the study captures self-reported data from 703 residents aged 15 to 85 years. The study was initiated after obtaining the approval from the Institutional review board of Nazareth college of pharmacy.

Inclusion criteria

Patient age above 15 years.

Exclusion criteria

Individuals who were unwilling to give details.

Individuals with cognitive impairments or dementia.

Data collection method

Data collection was carried out using pre-structured data collection forms, ensuring that each participant's consent and perspective were obtained in their local language. Information was gathered through face-to-face interactions and meetings, following ethical clearance from the Institutional Review Board of Nazareth College of Pharmacy. In the study process, participants were initially given a questionnaire based on the WHOQOL-BREF tool to assess their quality of life. Once this assessment was completed, an educational session was conducted to raise awareness on ways to enhance quality of life. The collected data were then subjected to statistical analysis to identify the key factors influencing the quality of life in the general population.

Statistical analysis

The analysis was performed after entering the data in Microsoft Excel – 2013 version, then the results obtained were analysed and represented with graphs and tabulations.

RESULTS

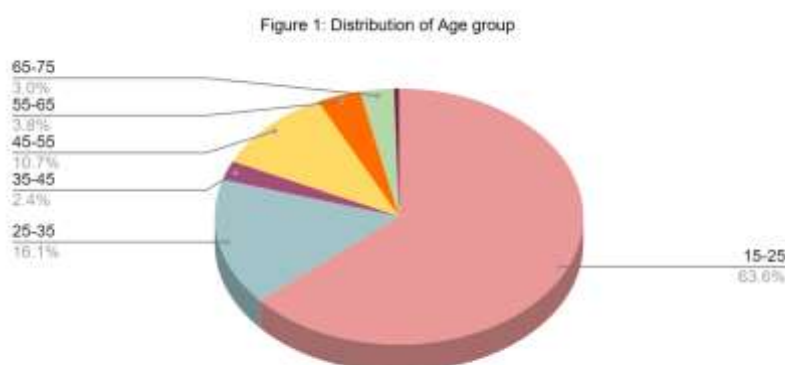


Figure 2: Distribution of gender

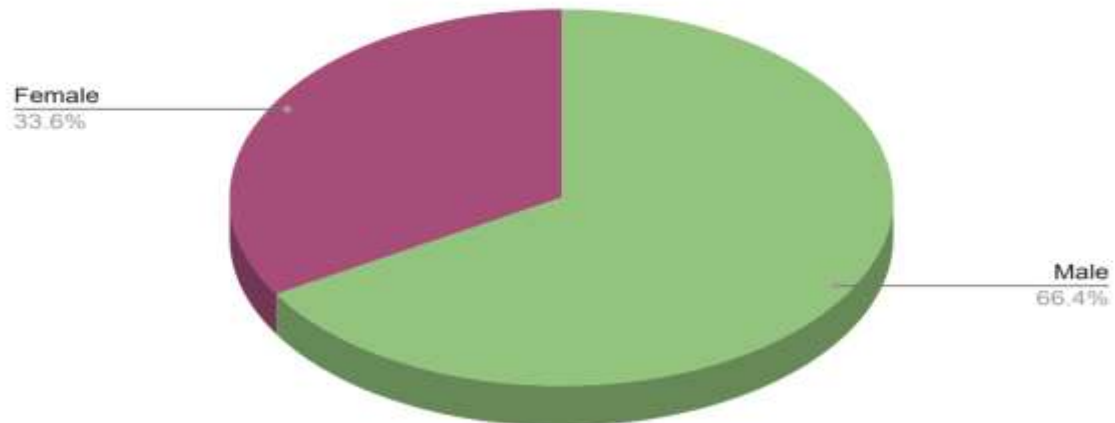
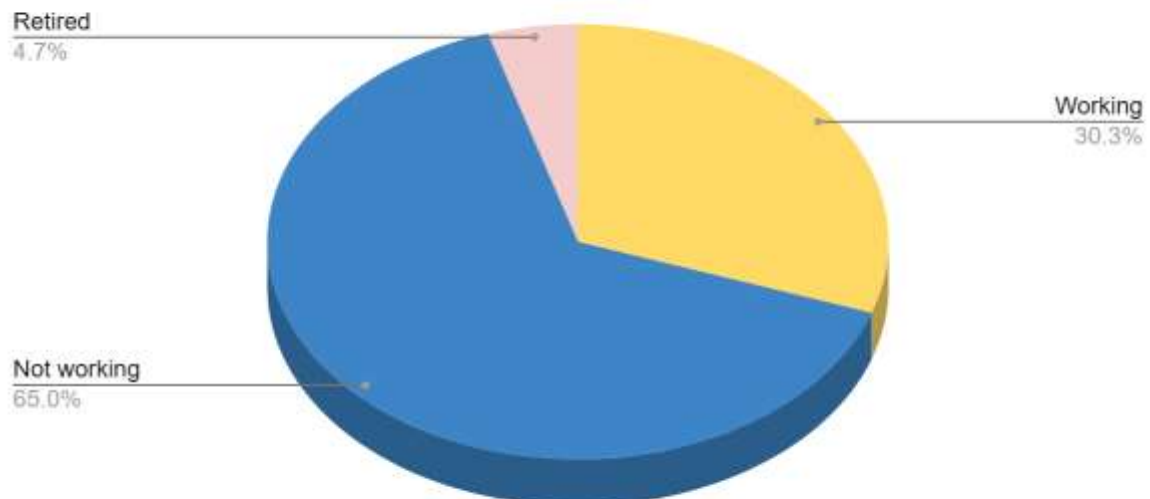


Figure 3: Distribution of employment status



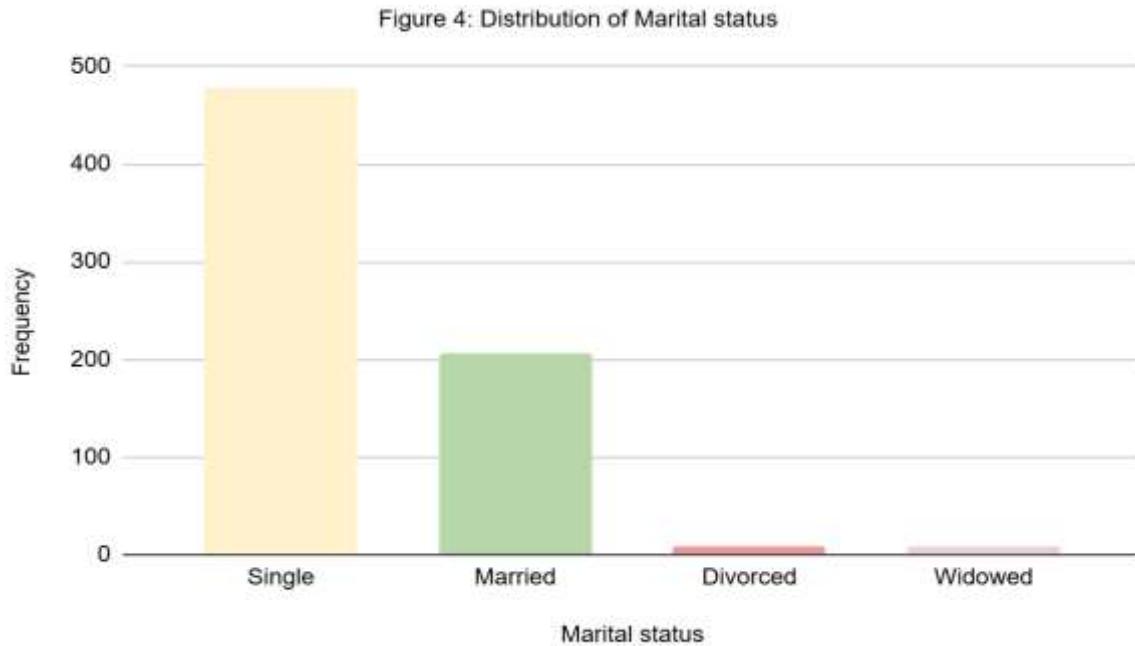


Table 1: Physical Domain

	Not at all	A little	A moderate amount	Very much	Extreme amount	Total
Pain and Discomfort	126	199	269	90	19	63.83%
Energy and fatigue	24	74	283	264	58	
Need for medical treatment	251	205	142	70	35	
	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied	
Physical health	12	55	207	371	58	
Sleep and rest	23	101	158	314	107	
Work capacity	17	60	214	357	55	
	Very poor	Poor	Neither poor nor good	Good	Very good	
Mobility	13	56	190	396	48	

The table above demonstrates the responses from the physical domain of the WHOQOL questionnaire.

Table 2: Psychological Domain

	Positive feelings	Learning and concentration	Body image and appearance	Personal belief	Total
Not at all	16	26	45	18	60.05%
A little	64	80	56	56	
A moderate amount	257	340	225	244	
Very much	311	230	300	342	
An extreme amount	55	27	77	43	

	Self esteem	Total
Very dissatisfied	23	60.05%
Dissatisfied	44	
Neither satisfied nor satisfied	187	
Satisfied	385	
Very satisfied	64	

	Negative feelings	Total
Never	134	60.05%
Seldom	143	
Quite often	221	
Very often	145	
Always	60	

The table above demonstrates the responses from the psychological domain of the WHOQOL questionnaire.

Table 3: Social Domain

	Personal relationships	Social support	Sexual activity	Total
Very dissatisfied	13	22	58	59.85%
Dissatisfied	32	52	49	
Neither satisfied nor dissatisfied	132	184	157	
Satisfied	454	342	283	
Very satisfied	72	103	36	

The table above demonstrates the responses from the social domain of the WHOQOL questionnaire.

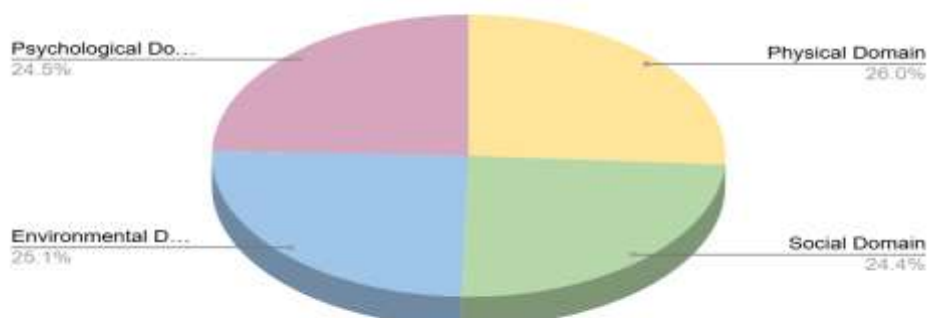
Table 4: Environmental Domain

	Freedom and physical safety	Physical environment	Financial resources	Opportunity for leisure activities	Accessibility to social care	Total
Not at all	29	8	25	40	8	61.55 %
A little	45	72	98	106	76	
A moderate amount	216	274	269	253	280	
Very much	348	285	261	269	283	
An extreme amount	65	64	50	35	56	

	Home environment	Accessibility to health care	Transportation	TOTAL
Very dissatisfied	16	24	38	61.55%
Dissatisfied	54	85	79	
Neither satisfied nor dissatisfied	186	151	112	
Satisfied	377	378	371	
Very satisfied	70	65	103	

The table above demonstrates the responses from the environmental domain of the WHOQOL questionnaire.

Figure 4: Domains of HRQOL



DISCUSSION

The four domains recognised by WHO include physical domain, psychological domain, social domain and environmental domain. In the study conducted by **Fiona y. Wong**.et al.(2018) it was found that 317 residents participate in this study. Residents in this study exhibited a relatively greater quality of life (QOL) in the physical domain (70.83%) and a lower QOL in the environmental domain (61.98%), out of the four QOL categories [9]. This is comparable to our study where it was found out that physical domain (63.83%) showed greater quality of life and environmental domain (61.55%) showed lower QOL. The above observations indicate that the physical domain had higher QOL and environmental domain had lower QOL out of the four domains.

The findings are consistent with broader literature, which emphasizes that HRQOL is not a single construct but a composite of interrelated domains—physical, psychological, social, and environmental—each contributing uniquely to overall quality of life. Physical health emerged as the strongest domain in this population, with the highest mean scores, particularly among younger, male, and higher socioeconomic status groups. This aligns with evidence that physical function and the absence of pain or fatigue are often prioritized by individuals as key contributors to their perceived quality of life. The importance of physical health is further underscored in studies of chronic conditions, where limitations in mobility, pain, and energy levels are consistently reported as major determinants of HRQOL. The psychological domain showed moderate scores, but notable disparities were observed among older adults, females, and those with lower education or risky health behaviour. Psychological well-being, including self-esteem and the ability to manage negative feelings, is closely linked to both physical health and social support. Literature suggests that mental health is frequently nominated as a critical HRQOL domain, especially in the presence of chronic illness or social disadvantage. Social well-being was the lowest-scoring domain, highlighting the vulnerability of elderly, female, and low-SES individuals to social isolation or reduced support. This finding is consistent with research indicating that social function and relationships are central to HRQOL but are often compromised in marginalized groups or those facing health challenges. Social support not only buffers psychological distress but also influences health behaviours and access to care. The environmental domain reflected moderate scores, with financial resources and access to services as key differentiators. The literature recognizes that environmental factors—such as safety, access to healthcare, and financial stability are essential for enabling individuals to maintain good health and participate fully in society. Disparities in this domain often mirror broader social inequalities. [10] [11]. The study reinforces the need for domain-wise assessment in both research and clinical practice. Focusing solely on one aspect of HRQOL risks overlooking critical deficits in others, which may be equally or more impactful on individuals' lives. The use of validated, multidimensional tools like the WHOQOL-BREF ensures a comprehensive evaluation and supports the development of targeted, holistic interventions.

CONCLUSION

This study provides a comprehensive comparison of HRQOL domains among a general population in Eraviperoor Grama Panchayat. The findings reveal that the physical domain consistently demonstrated the highest quality of life scores, while the social domain was most frequently reported as deficient.

This case study demonstrates that while physical health may be relatively well-perceived, gaps in social and environmental well-being persist, particularly among high-risk groups. Addressing these gaps requires integrated strategies that combine health promotion, social support enhancement, and improved access to resources, ultimately fostering a more equitable improvement in HRQOL across all domains. Continued

research and routine HRQOL assessment should be integrated into public health practice to monitor trends, evaluate interventions and guide resource allocation for maximum impact on community well-being.

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