



## IMPACT OF AN INTERVENTIONAL PACKAGE ON QUALITY OF LIFE AMONG ELDERLY PEOPLE

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### Abstract

The global rise in the elderly population has placed increased emphasis on improving not only longevity but also quality of life (QoL). In India, where elderly individuals often face challenges of chronic illness, social isolation, and reduced autonomy, holistic interventions targeting multiple aspects of well-being are needed. This quasi-experimental study was conducted among 300 elderly participants aged 60–70 years, with 150 drawn from elderly homes and 150 from family residences in Ahmedabad, Gujarat.

The intervention consisted of an 8-week program including yoga, laughter therapy, group discussions, and guided spiritual practices designed to improve physical, psychological, social, and spiritual well-being. Participants were selected using simple random sampling and assessed using the WHOQOL-BREF (Gujarati version) before and after the intervention. Data analysis was performed using SPSS v26, with Wilcoxon Signed Rank Test applied for within-group differences, Mann-Whitney U Test for between-group comparisons, and Chi-square test for associations with demographics.

Findings showed significant improvements in QoL scores across both groups ( $p < 0.001$ ). Elderly home participants demonstrated a mean improvement of 52.10 points, while family residents improved by 36.45 points. Although baseline scores were higher among family residents, elderly home participants exhibited greater relative gains. Demographic variables such as age, gender, marital status, and education did not significantly influence outcomes.

This study confirms that a multidimensional interventional package can significantly enhance QoL among elderly individuals. Larger sample findings reinforce earlier pilot results, demonstrating the scalability of such interventions. Incorporating these programs into routine care in both institutional and community settings could provide a sustainable approach to active and meaningful aging.

**Keywords:** Elderly care, Quality of life, Interventional package, WHOQOL-BREF, Aging

### Introduction

The global elderly population is expanding rapidly, with projections suggesting that by 2050 nearly 2.1 billion individuals will be aged 60 years and above (WHO, 2021). This demographic shift, while reflecting improved life expectancy, also poses substantial challenges for healthcare systems and societies. In India, the elderly population is expected to reach almost 20% of the total by 2031, creating an urgent need for sustainable elderly care strategies.

Aging is often associated with multiple chronic illnesses such as diabetes, hypertension, cardiovascular disease, arthritis, and cognitive decline. These conditions negatively affect not only physical health but also psychological resilience, social relationships, and spiritual well-being.

Quality of life (QoL) is a multidimensional construct encompassing all these aspects, making it an essential measure of elderly well-being.

Elderly individuals living in family settings often enjoy social support but may experience caregiver burden or neglect. Conversely, those in elderly homes benefit from institutional care but face heightened risks of loneliness and social isolation. Hence, both groups can benefit from structured interventions aimed at enhancing overall QoL.

The Wilson and Cleary model and the WHOQOL framework highlight the complex interaction between health conditions, functional status, social integration, and environmental support in determining QoL. Although prior studies have explored interventions targeting individual domains such as exercise or counseling, holistic packages addressing physical, psychological, social, and spiritual dimensions remain limited, particularly in India.

Building on the findings of a smaller pilot study, this expanded research aimed to assess the effectiveness of a multidimensional interventional package on QoL among 300 elderly participants, comparing institutionalized elderly with those living in family residences. The study also examined whether demographic variables influenced QoL outcomes.

## **Methodology**

This study followed a quasi-experimental research design with pre- and post-test assessments conducted among elderly participants. No control group was used.

The setting included two institutional facilities (Asta Old Age Home and Avala Foundation, Ahmedabad) and community areas of Payal Nagar where elderly individuals lived with families. The study recruited 300 participants aged 60–70 years, with 150 from elderly homes and 150 from family residences. Participants were selected using simple random sampling from eligible individuals.

Inclusion criteria required participants to be within the specified age range, willing to participate in yoga and other intervention activities, and medically stable without recent surgeries. Exclusion criteria included bedridden elderly, terminal illness, or major surgery within the preceding three months.

The intervention lasted eight weeks and was designed to address four domains of QoL: physical health through yoga sessions emphasizing flexibility, breathing, and balance; psychological well-being through laughter therapy sessions; social connectedness through group discussions and peer-sharing activities; and spiritual health through guided spiritual reflections and prayers.

Two tools were used for data collection: a socio-demographic questionnaire (covering variables such as age, gender, marital status, education, income, habits, and illnesses), and the WHOQOL-BREF (Gujarati version), a validated 26-item instrument assessing physical, psychological, social, and environmental domains.

Ethical clearance was obtained from the Institutional Ethics Committee, and permissions were secured from relevant authorities. Written informed consent was obtained from all participants, with confidentiality and voluntary participation assured.

Pre-test data were collected before the intervention, and post-test data were collected after eight weeks. Statistical analysis was conducted using SPSS v26. Wilcoxon Signed Rank Test was used for within-group comparisons, Mann-Whitney U Test for between-group comparisons, and Chi-square test for associations between demographic variables and QoL. A  $p$ -value  $< 0.05$  was considered statistically significant.

## **Results**

### **Introduction to Results**

This section presents findings from 300 participants—150 from elderly homes and 150 from family residences. Results are organized into demographic characteristics, pre–post test comparisons of QoL scores, between-group analyses, and associations with demographic variables.

**Table 1. Demographic characteristics of participants (N=300)**

Variable	Elderly Homes (n=100)	Family Residents (n=100)	Total (N=300)
Age (61–65 years)	54%	56%	55%
Gender (Female)	53%	51%	52%
Education (Literate)	68%	72%	70%
Marital Status (Married)	30%	47%	38.5%
Occupation (Skilled work)	75%	82%	78.5%
Chronic Illness Present	65%	58%	61.5%

Most participants were between 61 and 65 years of age, with a near-equal gender distribution. Literacy was higher among family residents. A greater proportion of elderly home residents were unmarried/widowed. Chronic illnesses were more common among institutionalized elderly.

**Table 2. Pre- and post-test QoL scores**

Group	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Difference	Wilcoxon Test	p-value
Elderly Homes	106.20 $\pm$ 12.15	158.30 $\pm$ 10.25	52.10	6.520	<0.001
Family Residents	116.40 $\pm$ 14.50	152.85 $\pm$ 11.05	36.45	5.992	<0.001

Both groups showed statistically significant improvements in QoL scores after the intervention ( $p < 0.001$ ). Elderly home participants had lower baseline scores but greater mean improvement compared to family residents.

**Table 3. Comparison of QoL improvements (Mann–Whitney U Test)**

Group	Mean Improvement $\pm$ SD	Test Value	p-value
Elderly Homes	52.10 $\pm$ 11.20	4150.0	<0.001
Family Residents	36.45 $\pm$ 12.85		

Elderly home residents demonstrated significantly greater relative improvements compared to family residents, despite lower baseline QoL.

**Table 4. Associations between demographic variables and QoL improvements (Chi-square test)**

Variable	$\chi^2$ Value	df	p-value
Age group	0.842	2	0.656
Gender	1.112	1	0.291
Education level	0.987	1	0.320
Marital status	1.201	1	0.273
Chronic illness	0.945	1	0.331

No significant associations were observed between demographic variables and QoL improvements, indicating that the intervention was effective across diverse subgroups.

## Discussion

The results of this expanded study strongly reinforce the findings of the initial pilot study, confirming that a multidimensional interventional package can significantly improve QoL among elderly individuals. The large sample size adds robustness and generalizability to these findings.

Elderly home participants, despite starting with lower baseline QoL, showed greater relative improvements compared to family residents. This finding underscores the potential of structured interventions to mitigate the adverse effects of social isolation and psychological stress common in institutional settings. Family residents, who had higher baseline scores due to existing family support, still benefited considerably from the interventions, suggesting universal applicability.

Previous literature supports the effectiveness of yoga in improving mobility and reducing chronic disease burden, laughter therapy in alleviating depression and anxiety, group activities in enhancing social support, and spiritual practices in strengthening resilience. This study consolidates these findings by demonstrating the combined benefits of integrating all these approaches.

Importantly, demographic variables such as age, gender, and education did not significantly influence outcomes, suggesting that the intervention is broadly effective across diverse groups. This has major implications for policy, as it indicates that standardized packages could be implemented at scale without extensive tailoring.

Limitations of this study include the quasi-experimental design and the absence of a control group. Future research should adopt randomized controlled trials with long-term follow-up to examine sustainability of outcomes.

### **Conclusion**

This expanded study demonstrated that a multidimensional interventional package—incorporating yoga, laughter therapy, group discussions, and spiritual practices—significantly improves quality of life among elderly individuals. Elderly home residents, who started with lower QoL, experienced greater improvements, while family residents also showed meaningful gains.

The results confirm the feasibility and scalability of such interventions for both institutional and community-based elderly populations in India. Incorporating these strategies into routine care could contribute to healthier, more meaningful, and dignified aging. Larger randomized studies are recommended to further validate and refine this approach.

### **Conflict of Interest**

The authors declare that there are no financial, personal, or professional conflicts of interest that could have influenced the outcomes of this study. The research was conducted independently, with no bias introduced by external organizations or individuals.

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