

Impact of Community Interventions on Quality of Life of Rural Elderly: A Pilot Study Report

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ABSTRACT

Introduction/Objective: Quality of life refers to older adults' subjective expression of their health, living conditions, and satisfaction to the old age condition, may vary between urban and rural condition. The growing older age resulted in functional, psychological and social impairment affecting in their quality of life. So, this study was conducted with the aim of improving quality of life of elderly by providing structured interventions.

Methods: A community interventional study was conducted among eleven older people aged 60 to 75 years in ward no. 9 of Roshi rural municipality, by interview using Nepalese version of quality of life tool in September 2021. After baseline observation by home visiting, intervention was provided for six weeks, twice a week, 90 minutes of each session, in their community then impact was assessed by post intervention observation, adopting inferential statistics.

Results: The study revealed the remarkable impact of community intervention on quality of life; all of its' domains (physical, psychological, social relationship and environmental) were significantly improved ($p < 0.001$). Elderly health related habits were also improved like eating pattern (50% to 100%), eight hours sleeping (40% to 90%) and regular physical exercise (0% to 80%).

Conclusion: Community intervention is very effective to improve the quality of life of elderly from a cost as well as program point of view. It helps to improve all four domains of quality of life as well as health related personal habits of the elderly such as daily food and water intake, regular exercise, sleeping hour, health check-up and leisure time activities. Thus, it is strongly recommended to provide community health interventions for older people in rural areas.

Keywords: *Quality of Life, Community Interventions, Elderly, Rural Community*

INTRODUCTION

Ageing is universal process but also a detrimental and degenerative process causes variety of physiological, neurological as well as psychological degradation. Due to the resulted conditions, older peoples' physical activities, exercise, socialization

decrease and become their surrounding world narrower. Elderly live their older life but missed the quality of life. They perceive their older life difficult and painful comparing to their other age life.¹

World's ageing population is accelerating, becoming a global challenge for proper care

and management including quality life perspective. There is a need for double focus on ageing population as it is predicted to be double, reaching more than two billion (22% of the global population) by 2050.^{2,3} The gradual growing populations of senior people are similar in India and Nepal, accounting 10.1% and 10.21% of the country's total population respectively.^{3,4} Older people are predisposed to physical and mental health issues due to the various risk factors such as social isolation, reduced family support, feeling of loneliness, widowhood and poverty, which affect in their daily life and the poor quality. Among the older group, the QOL is lower than the young old group.^{5,6} Some of the Nepalese studies had also shown the poor quality of elderly in the community. There were nineteen percent of elderly having poor QOL among 547 people in 396 households and 69% had physical health problems. Another community based study showed that in spite of having average quality of life, the social relationships were low among sample of fifty older people.^{7,6} To achieve the goal of the Decade of Healthy Ageing (2020 to 2030 AD), there should be the provision of older friendly environment, improved long term care and continuous research on elderly issues.² There are very few researches on older issues in the community and rural areas especially in Nepal. And this type of community interventional research focusing on health activities is new for Nepalese older people as found from thorough literature review. There is a proof provided by some studies that the structured program helps to improve elderly quality of life, life satisfaction and general symptoms of the body.^{8,9} This study was conducted with the aim to promote and improve quality of life of elderly by providing community nursing interventions. So, the primary objective of the study was to assess the impact of community nursing interventions on quality of life among elderly in rural community of Kavrepalanchok district, Nepal.

MATERIALS AND METHODS

A community interventional pilot study was conducted among eleven older people in Nepalese rural community by taking ten percent sample of the main study, ward number nine of Roshi Gaupalika/rural municipality of Kavrepalanchok district as a similar rural community of the main study site. The older people aged 60 to 75 years, who could talk, listen and walk, and living at their own home in that community for at least six months were selected for the study as inclusion criteria. The data was collected by using validated semi structured questionnaire such as socio demographic characteristics, clinical performance and WHO Quality of Life Bref (WHOQOL BREF) as the standard tool. The face to face interview was conducted for data collection after cluster random sampling.

In the research tool; socio demographic characteristics and clinical performance were validated before using and the quality of life measuring tool as the standard tool, WHOQOL-BREF, a validated Nepalese version was used to assess the impact of the community nursing interventions (CNIs). The reliability of the tool was already maintained (r-0.84). There are four domains of WHOQOL i.e. physical, psychological, social relationship & environment with total 26 Questions or statements, presented in the 5 point likert scale. The WHOQOL is interpreted as higher the total score, greater will be the quality of life.

After obtaining an informed consent from the older people, and assuring their voluntary participation in the study, the baseline data was collected by home visiting. Then nursing interventions was provided in a comprehensive way for 6 weeks period in a group in the same community. The nursing intervention was provided twice a week, each session having 90 minutes in one of the house in the community. The community nursing interventions include physical, social and psychological activities combined with health education in different topics in a structured way. The ethical approval was

obtained from both the Swami Rama Himalayan University, India and Nepal Health Research Council, Nepal.

The data collection was started with the help of female community leader to identify senior's house. Focusing on the intervention, houses were selected consecutively based on the proximity after the random selection of first house. Mostly one elderly were included in the study to participate more houses and elderly. The study was started on 5th of September and completed on 27th of October 2021 AD.

STATISTICAL ANALYSIS

After organizing and categorizing the collected data, analysis was done both descriptively and inferentially (paired t test) by using 20.0 version of SPSS.

RESULTS

The result of this pilot study mentions the analytical description of the socio-demographic characteristics, health related behavior and quality of life status of the older people before and after the community interventions.

Table No. 1a: Socio-demographic Characteristics of Elderly in Rural Community. N=10

Characteristics	Category	frequency	Percent
Age in years	$\bar{x} \pm \sigma$	86.2±5.2	
	≤ 69	6	60.0
	> 69	4	40.0
Gender	Male	4	40.0
	Female	6	60.0
Ethnicity	Brahmin/Chettri	8	80.0
	Janajati	2	20.0
Religion	Hindu	8	80.0
	Non-Hindu	2	20.0
Mother Tongue	Nepali	9	90.0
	Tamang	1	10.0
Education Status	Illiterate	7	70.0
	Literate	3	30.0
Family Income in Rupees	≤ 6200	6	60.0
	> 6200	4	40.0
Type of Family	Nuclear	4	40.0
	Joint	6	60.0
Marital Status	Married	7	70.0
	Widow/Widower	3	30.0
No of Children	< 3 Children	4	40.0
	≥ 3 Children	6	60.0

According to table 1a, the majority of the elderly (60.0%) were in the age group of 60 to 69 years, female (60.0%) and most of them (80.0%) were from Brahmin/Chhetri ethnic group. Majority of the elderly

(70.0%) were illiterate and married (70.0%), were living in joint family (60.0%) and majority of them (60.0%) had three and more children.

Table No. 1b: Socio-demographic Characteristics of Elderly in Rural Community. N=10

Characteristics	Category	frequency	Percent
Current Living status	Single	1	10.0
	with family	9	90.0
Past occupation	Agriculture	9	90.0
	Service	1	10.0
Take care of personal expenditure	Self	7	70.0
	Spouse	3	30.0
Type of House	Kachha	10	100.0

Floor of household	Ground	8	80.0
	First	2	20.0
Water supply	Municipal Corporation	10	100.0
Mode of Transportation	Public	9	90.0
	Private	1	10.0

Table 1b shows that most of the elderly (90.0%) were living with their family, majority (70.0%) of them managed their personal expenditure by themselves, hundred percent of them lived in Kaccha type of house, had private toilet and drank

water provided by the municipal corporation. Regarding living floor of house, most of them (80.0%) stayed in the ground floor of the house and 90.0% of elderly used public transportation for travel.

Table No. 2a: Health Related Personal Habits of the Elderly Before and After the Intervention. N=10

Variables	Category	Before Intervention		After Intervention	
		frequency	Percent	frequency	Percent
Daily Water Intake	< 2 liter/day	4	40.0	2	20.0
	≥ 2 liter/day	6	60.0	8	80.0
Eating Pattern	< 3 times/day	5	50.0	0	0.0
	≥ 3 times/day	5	50.0	10	100.0
Feeling of Anorexia	Yes	1	10.0	0	0.0
	No	9	90.0	10	100.0
Fasting habit	Yes	6	60.0	2	20.0
	No	4	40.0	8	80.0
Average Sleeping hour	< 8 hours	6	60.0	1	10.0
	≥ 8 hours	4	40.0	9	90.0
Regular physical Exercise	Yes	0	0.0	8	80.0
	No	10	100.0	2	20.0

Table 2a reveals that there was slight improvement in the health related personal habits of the elderly after the community intervention. Sixty percent of the respondents had ≥ 2 liter/day water intake which was improved and seen among eighty percent. Average eating pattern ≥ 3 times/day was also improved and seen among cent percent of the respondents after the intervention. No elderly had feeling of

anorexia and most of them (80.0%) had no fasting habit after intervention. Regarding sleeping habit, 40.0% had ≥ 8 hours sleep before intervention which improved to 90.0% of elderly after the intervention. When regular physical exercise is related to quality of life, cent percent had no habit but after the intervention, 80.0% of elderly had habit of regular physical exercise.

Table No. 2b: Health Related Personal Habits of the Elderly Before and After the Interventions. N=10

Variables	Category	Before Intervention		After Intervention	
		frequency	Percent	frequency	Percent
Regular health check	Yes	1	10.0	9	90.0
	No	9	90.0	1	10.0
Any screening	Yes	0	0.0	0	0.0
	No	10	100.0	10	100.0
Self-medication without prescription	Yes	4	40.0	0	0.0
	No	6	60.0	10	100.0
Presence of any form of physical disability	Yes	0	0.0	0	0.0
	No	10	10.0	10	10.0
Use of any supportive devices or appliances for the disability	Yes	0	0.0	0	0.0
	No	10	10.0	10	10.0
Leisure time activities	Yes	8	80.0	10	100.0
	No	2	20.0	0	0.0

Table 2b shows that habit of health check-up and leisure time activities were improved after the intervention. Only 10.0% of the elderly had habit of regular check-up which increased and seen among 90.0%. After the

intervention, cent percent of elderly had no self-medication without prescription habit and had habit of leisure time activities. The elderly had no physical disability, so no use of supportive device.

Table No. 3: Impact of Community Interventions on Quality of Life (WHOQOL-BREF) as shown by Paired t-test

Domains of Quality of Life (QOL)		Mean	SE (\bar{x})	P-value
Physical Domain of QOL	Pre-test	54.64	3.15	0.000*
	Post-test	80.35	2.08	
Psychological Domain of QOL	Pre-test	54.17	2.97	0.000*
	Post-test	75.00	3.97	
Social Relationship Domain of QOL	Pre-test	55.00	4.15	0.000*
	Post-test	55.00	4.15	
Environmental Domain of QOL	Pre-test	53.75	3.51	0.000*
	Post-test	78.44	3.37	
Overall quality of life	Pre-test	45.00	5.95	0.000*
	Post-test	78.75	3.25	

Table 3 reveals the remarkable impact of the community interventions on quality of life of the elderly in rural community. The quality of life of elderly was significantly improved together with all four domains of QOL individually as shown by paired t test ($p < 0.001$).

DISCUSSION

Older people may have altered quality of life and they are prone to be affected by various physical, psychological, social and environmental factors there by presenting poor quality of life. The present pilot study revealed that the quality of life of elderly was significantly improved after six weeks interventions in the community ($p < 0.001$). The positive impact of the interventions have not been found only on overall quality of life but also all four domains of the QOL were significantly improved ($p < 0.001$). The finding of this study is supported by various studies; a randomized controlled trial among 90 asthma patients over 65 years showed improvement in asthma quality of life of the patients as reported by Coulson E et al., 2022. Similarly, two minutes of diaphragmatic breathing found to be effective to improve quality of life of older patients as documented by Shahriari M et al., 2017.^{10, 11}

Similar to the finding of nursing intervention, Rayroth P. (2015) documented the improved quality of life of the senior people of old age homes after structured intervention such as group interaction, muscle relaxation and breathing exercises. The domain wise effect of this study is also supported by the Rayroth's study.¹²

Regarding health-related personal habits of the older people, eight hours of average sleeping duration have been found among 40% before intervention and after the intervention, it was seen among 90% of the seniors. Ashris S et al. (2024) also revealed average 7.5 hours of night sleep among Israeli adults' population.¹³

CONCLUSIONS

Community nursing intervention was found to be effective in improving quality of life of elderly including each four domains of the quality of life. It also helps to improve health related personal habits of the elderly such as daily food and water intake, regular exercise, sleeping hour, health check-up and leisure time activities.

The community intervention may be taken as a participatory approach of the promotion of the quality of life and it is cost effective too. So, the impact of the intervention on quality of life was found to be more

encouraging to conduct the main study as well as other similar community interventional study and to develop health promotion program for the older people.

Declaration by Authors

Ethical Approval: Approved

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