

## **Health Condition of Elderly People at Dhurkot Rural Municipality in Gulmi District, Nepal**

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### **Abstract**

Ageing is a gradual, continuous process of natural change that begins in early adulthood. The objective of the study was to analyse the health condition of elderly people at Dhurkot Rural Municipality in Gulmi district. Purposively three wards were chosen for sample population. There were 930 elderly people aged 60 years and above who had received Old Age Allowance provided by the government of Nepal. A total of 280 elderly were interviewed. Finding shows that hill Dalit elderly people have better health condition than hill Brahmin elderly people [OR=.46(.26-.81)]. Elderly people who depended on agriculture labour were found to have better health condition than elderly who depended on their own agriculture [OR=.38(.19-.81)]. Elderly belonging to the age of 65-69 years had more good health condition than that of elderly people above 75 years and above [OR= .35(.15-.79)]. Elderly people work as a household work are two times more better health condition than who do agriculture work [OR= 2.13(.95-4.47)]. Elderly people living with family without spouse are better health condition than elderly live alone [OR=.22(.07-.69)]. Likewise, elderly people living with spouse and family are better health condition than elderly people living alone [OR= .33(.1-1.03)]. Various health schemes, policies and programmes can be designed in the research area and similar settings based on the study findings.

*Keywords:* ageing, elderly people, health condition

### **Introduction**

Ageing is a universal phenomenon; old age is not a disease, but a normal part of the human span (Patali, 2018). Ageing is normal, universal, progressive and irreversible process. It is an inevitable physiological phenomenon (Saini & Jaswal, 2009).

A human's life is normally divided into five main stages, namely infancy, childhood, adolescence, adulthood and old age. In each of these stages, an individual has to find himself in different situations and face different problems, and the old age is not exceptional. Old age is accompanied with several physical and psychological

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problems. Old age is also considered as a social problem, since there is a change in socioeconomic status which adversely affects the individual's way of life. In old age, physical strength deteriorates, mental stability diminishes; money power becomes bleak coupled with negligence from the children and relatives. Physical changes in an individual cause decline in the normal functioning of the body. The elderly also feel low self-esteem due to loss of earning power and social recognition (Mao, et al, 2019).

Today's society is facing a situation which has never been known before along with the increasing insecurities of life. Therefore, to safeguard the individual and the society for these uncertainties and insecurities there is in need of social security. "The state shall make itself responsible for ensuring a minimum standard of material welfare to its entire citizen on a basis wide enough to cover all contingencies of life from womb to the tomb (ILO, 1942).

The Government of Nepal has been implementing various social security programs for decades. In case of Nepal, the government provides non-contributory pension, provident fund, limited care facilities, maternity leave and work injury as well as accident compensation for the employees. Provident fund is the main security component in Nepal (NPC, 2012).

In the fiscal year 1994/95, the government of Nepal has introduced the Social Security Program as a part of its social security arrangement which is a non-contributory benefit of an income maintenance type of social security program in which the government provides cash transfers to eligible beneficiaries. The scheme covers disabled, widows, endangered races and elderly people who have completed 75 years of age in general which was later revised to 60 plus in the case of Dalit and 70 plus for others. Similarly, the people living in the Karnali zone's age threshold was fixed at 60 years considering the longevity (Singh, 2013).

With the notion of expanding the social security right of citizens and to honouring it, the Social Security Program Operation Procedure 2008 has been formulated and implemented under the Local Self-Governance Act 1998, Section 236(2). The three categories under this modality were: those completing 70 years; those over 60 years (Karnali areas) and above 60 years (Dalits), endangered races as stated by the state (Endangered races are Kusunda, Bankariya, Raute, Surel, Hayu, Raji, Kishan, Lepche, Meche, Kusawadiya), single woman such as widow, single unmarried and divorced woman. Disable one such as fully disabled and partially disabled as defined by the state. Proof to determining eligibility requires citizenship certificate, identity card is valid only from forthcoming year. Last date of month is taken if date is not mentioned and last month of the year is taken if only year is mentioned and final decision on age is taken by the District Administration Office if there is controversy. Rural and Urban

municipalities must notify the candidates to renew their ID cards within the first week of February month. Eligible candidates must produce two passport size photographs and a citizenship card for their ID card and an application must be submitted in standard format for renewal. It was also provisional that VDCs and municipalities must facilitate those beneficiaries belonging to the endangered race in getting their ID card (NPC, 2012).

A study carried out in Illam district in 2015 which was a mini research among 60 senior citizens, found that majority of them (86%) were using allowance for health service, 73 percent food and 71 percent clothes. Also, the problems faced in the same study were insufficiency of the allowance money reported by 63 percent, irregular distribution of allowance (not fixed time) by 56 percent and other problems were similar like in the researcher's study (Kharel, 2015).

Ageing in individual is affected to a great extent by genetic factors, social conditions and the occurrences of age-related diseases. In addition, there is good evidence that ageing induced alternation in cells is an important component of ageing of the organism. Similarly, in collective sense ageing population means an increase in the share of the elderly peoples in the total population. It is closely related with the dynamic process of demographic and socio-economic transformation, whether a population is young or old or getting older or getting younger. It depends on the proportion of people at different age groups. In general, a population with more than 35 percent under age of 15 years is considered young and population with more 10 percent aged 65 years and above is considered old. In the most of the countries, person with age of 65 years old and above is taken as an elderly but there is no universal definition of elderly around the world. Some accept elderly above 60 years and other some accept elderly above 65 years. Countries have their own basis for defining ageing, sometimes it is defined by the countries on the basis of their social or economic structure such as some use retirement age or age at which people are eligible for social security benefits. Several age limits have been prescribed for the specific purpose. For example, 58 years is specified for compulsory retirement from civil services, 62 years for UN employees (UN, 1999), and 65 years for constitution bodies (Bisht, 2006).

The beginning of old age is characterized by the time for which the capacity to do work beings to affected by physical, mental and biological conditions of old age (NEPAN, 2003: 11).

There are various factors that make a person old. Decrease in physical strength, increase in mental tension, decrease in immunity power and getting sick to a large extent are the major features that make a person aged. Elderly people also experience many physical changes. There is gradual dryness and wrinkling of skin, decrease in touch feeling and taste sensation, extensive food indigestion, decrease in range of color

and intensity of vision, failure of ability to distinguish color, loss of hearing power and weakening immune system with the increase in age people lose their creativity level, problem solving ability and learning skills as well as short term memory (Singh, 2009, p. 2). The objective of the study was to analyse the health condition of elderly people at Dhurkot Rural Municipality in Gulmi district of Lumbini Province of Nepal.

## **Method**

### **Data Source**

The study is basically descriptive and analytical in nature. The study focuses on “Health condition of elderly people at Dhurkot Rural Municipality in Gulmi”. Primary data collected from field survey and secondary data used from different published, unpublished and reliable sources.

Before restructuring the local level wards like Jaisithok VDC, Bastu VDC, and Rajasthal VDC were separate and independent. After restructuring the local level, VDC converted into wards and formed a Dhurkot Rural Municipality. Three wards were chosen purposively for sample population. There were 930 elderly people aged 60 years and above who had received Old Age Allowance. A total of 280 samples were determined by using Yamene equation,  $n = \frac{N}{1 + Ne^2}$  Where,  $n$ = Sample size,  $N$ =Population size,  $e$ =margin of error. The margin of error is 5 percent. List of the eligible elderly people was obtained from respective ward office. Respondents were selected for interview by using systematic random sampling technique. The sampling interval was 3 ( $N/n = 930/280 = 3.32$ ). First of all one number selected randomly and followed systematic sampling technique to select other numbers. A structured interview schedule was developed to conduct household survey and collected information.

### **Data Analysis**

Field questionnaires collected and checked carefully. Then data were carefully edited, analyzed and processed by using computer. Simple statistical tools such as frequency distribution, average and percentage have used analyzing and interpreting data. Software like Excel, Microsoft Word and SPSS version 21.0 used to analyse the data.

### **Regression Models**

The SPSS computer software was used to run the bi-variate as well as multivariate analysis. With the help of SPSS software, the study generated cross tabulation, chi-square test and logistic regression analysis for analyzing net effect on health status and caring practice of elderly people.

Logistic regression is an appropriate technique for analyzing the dichotomous dependent variables. The study reports parameters from logistic regression equation in the form of odds ratio:

$\text{Log} = A + (B_k, X_k)$ , Where P is the probability of exposure to the risk behaviors, the ratio is the odds for exposure,  $X_k$  represents the explanatory variables, and A is the constant term. In order to facilitate the interpretation of results the antilogarithms of these coefficients ( $B_k$ ) have been discussed in the text. These transformed coefficients can be interpreted as the amount by which odds are multiplied for each unit change in the explanatory variables. As depicted below one regression equations is fitted and analyzed to establish the relationship among various health status and related caring practices variables. Only those variables are selected for regression analysis which are found to have significant association with chi- square test.

The effect of independent variables on the dependent variables is most likely to be confounded by other factors. It is very important to analyze what is the net association or effect of the selected autonomy variables on each of the dependent variables. Bi-variate analysis cannot answer such questions; so a multivariate approach has been used.

In this study logistic regression analysis is used as the multivariate analysis tool. As all the dependent variables were measured in binary scale (yes or no) and most of the independent variables are categorical variables, logistic regression analysis is the best method to analyze the data (Anwar, et al, 2005). Moreover, logistic regression does not assume linearity of the relationship between each independent and dependent variables and it does not required normally distributed variables. It has a logit link function which is the logit transformation of  $\theta$ , i.e. probability of an event. Logistic regression computes the log odds for a particular outcome and the odds of an outcome are given by the ratio of probability of it happening and not happening as  $\theta/1-\theta$  (Gaur and Gaur, 2008).

Logistic regression equation is:

$$\text{logit}[\theta(x)] = \log [\theta(x)/1-\theta(x)] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n$$

Where  $\text{logit}[\theta(x)] = \text{logit}$  of dependent variable;

$\alpha$  = constant of the equation; and

$\beta$  = coefficient of the predictor (independent) variables

$x_1, x_2$  and  $x_n$  = predictor (independent) variables

The logistic regression analysis results are presented in terms of the odds ratios (ORs) which are much easier parameter to interpret the results. Odds ratios are calculated with respect to the reference category. For example: If OR for one category is 2, it indicates that chances of happening that particular event in that category are two times higher compared to the reference category.

## **Dependent and Independent Variables Used for Logistic Regression Models**

**Dependent Variable:** Health condition of elderly people

**Independent Variables:** Age, occupation, a living arrangement, ethnicity, past occupation and feeling of any difficulty to receive allowance after restructuring the local government.

### **Results**

#### **Bivariate Analysis**

The dependent variable is health condition of elderly people and independent variables are occupation, living arrangement, ethnicity, past occupation, feel any difficulty to receive the allowance and age has been summarized in Table 1. Following table describes the association of the health condition of the elderly people and background characteristics.

Table 1 reveals that there is association between health condition of elderly people and different characteristics. There is 80.4 percent elderly working as a household work during the time of survey have said their health condition is good which is significant at .045 percent level. The elderly people whose health condition is good have engaged in different profession like as 68.6 percent elderly have engaged in tilling and sewing, 66.7 percent elderly have worked in foreign employment, 65.8 percent of elderly have engaged in agriculture and 28.6 percent have engaged in daily wages which is significant at .045 percent level.

The elderly people whose health condition is good have said different views about living arrangement. There are 86.7 percent elderly people have lived alone, 70.7 percent elderly people have lived with the spouse, 63.2 percent elderly people have lived with spouse and family and 59.3 percent elderly people have lived with family without spouse which is significant at .004 percent level.

There are 100 percent Hill Janajati, 78.7 percent Hill Chhetri, 73.8 percent Hill Brahmin and 56.7 percent Hill Dalit have said their health condition is good which is significant at .007 percent level. The elderly people whose health condition is good among them 75 percent elderly people have engaged in foreign employment in their past life, 72.3 percent elderly people have engaged in their own agriculture in past and 60 percent elderly people have engaged in different jobs in past lives which is significant at .014 percent level.

**Table 1**

*Percentage Distribution of Health Condition of Elderly People by Characteristics, 2020.*

Background characteristics	%	N
<b>Occupation**</b>		
Agriculture	65.8	98
Service	28.6	2
Daily wages	28.6	2
Foreign employment	66.7	4
House hold work	80.4	37
Tilling land and sewing	68.6	35
Stay home and unable to work	83.3	10
<b>Living arrangement*</b>		
Living alone	86.7	26
Living with spouse	70.7	41
Living with family without spouse	59.3	54
Living with spouse and family	63.2	55
Other	100	14
<b>Ethnicity*</b>		
Hill Brahmin	73.8	79
Hill Chhetri	78.7	37
Hill Janajati	100	3
Hill Dalit	56.7	68
Other	100	3
<b>Past occupation*</b>		
Own agriculture	72.3	154
Agriculture labour	50	22
Job holder	60	3
Foreign employment	75	9
Other	50	1
<b>Difficulty to receive the allowance after restructuring the local government*</b>	14.3	1
<b>Age***</b>		
60-64	61.1	22
65-69	48.5	14
70-74	69.9	58

\*=Significant at 0.01, \*\*=Significant at 0.05, and \*\*\*= Significant at 0.10

*Source: Field Survey, 2020*

There are 72.7 percent elderly of age group 75+ years, 69.9 percent elderly of age group 70-74 years, 61.1 percent elderly of age group 60-64 years and 48.5 percent elderly of age group 65-69 years have said their health condition is good which is significant at .059 percent level. There is 14.3 percent elderly of age group 65-69 years, 17.4 percent elderly of age group 75+ years and 14.5 percent elderly of age group 70-74 have said social pension sufficient to fulfill the need of the elderly which is significant at .045 percent level. The elderly whose health condition is good among them 14.3 percent have said no difficulty to receive elderly allowance after restructuring the local government which is significant at .002 percent level.

In this model occupation, living arrangement, ethnicity, past occupation, age and feel any difficulty to receive elderly allowance after restructuring the local government are selected as independent variables for logistic regression on health condition of elderly people.

### **Multivariate Analysis**

In this model different independent variables are like occupational status, living arrangement, ethnicity, past occupation, age and feeling difficulty after restructuring local level government selected for regression analysis. Table 2 shows that among the total 6 variables “Did you feel any difficulty after the restructuring the local level government?” has strongest effect on health condition of elderly people [OR= 13.5 (1.6-113.8)]. This table clearly shows that elderly people who did not feel any difficulty to take the elderly allowance after the restructuring the local level government has more than fourteen times good health than who had. Hill schedule caste elderly people have better health condition than hill Brahmin elderly people [OR=.46(.26-.81)] which is significant at .01 percent level. By past occupation, elderly people who depended on agriculture labour have better health condition than elderly who depended on their own agriculture [OR=.38(.19-.81)]. Similarly, by age, elderly belongs to the age of 65-69 years have more good health condition than elderly people above 75 year [OR= .35(.15-.79)] which is significant at .05 percent level. By current occupation, elderly people work as a household work are two times more better health condition than who do agriculture work [OR= 2.13(.95-4.47)] which is significant at .10 percent level. By living arrangement, elderly people live with family without spouse are better health condition than elderly live alone [OR=.22(.07-.69)] which is significant at .01 percent level. Similarly, elderly people live with spouse and family are better health condition than elderly people live alone [OR= .33(.1-1.03)] which is significant at .10 percent level.



**Table 2**

*Logistic Regression on Health Condition of Elderly People, 2020*

Explanatory Variable	Odds ratio	95% CI	
		Lower	Upper
<b>Occupational status</b>			
Agriculture	1		
Household work	***2.13	0.95	4.47
Tilling and sewing	1.13	0.57	2.25
Other	0.743	0.34	1.59
<b>Living arrangement</b>			
Living alone	1		
Living with spouse only	0.37	0.11	1.22
Living with family without spouse	*0.22	0.07	0.69
Living with spouse and family	***0.33	0.1	1.03
<b>Ethnicity</b>			
Hill Brahmin	1		
Hill Chhetri	1.52	0.67	3.43
Hill Schedule caste	*0.46	0.26	0.81
<b>Past occupation</b>			
Agriculture (own)	1		
Agriculture (Labour)	*0.38	0.19	0.74
Others	0.59	0.24	1.45
<b>Age</b>			
60-64	0.58	0.27	1.27
65-69	**0.35	0.15	0.79
70-74	0.87	0.47	1.59
75+	1		
<b>Did you feel any difficulty after the restructuring of the local level government?</b>			
Yes	1		
No	*13.5	1.6	113.8

\* = Significant at 0.01, \*\* = Significant at 0.05, and \*\*\* = Significant at 0.10

*Source: Field Survey, 2020*

## Conclusion

Health condition of the elderly people is a growing concern in the world. Elderly people who depended on agriculture labour have better health condition than elderly who depended on their own agriculture. Elderly people who belong to the age of 65-69 years have more good health condition than elderly people above 75 years. Elderly people living with family without spouse and living with spouse and family have better health condition than elderly living alone. To improve the health condition of the elderly in the study area or similar settings various health schemes, policy and programmes can be designed based on the study findings.

## References

- Bisht, P.S. (2006). The condition of the elderly people in Kathmandu city. An Unpublished PhD Dissertation Submitted to the Faculty of Humanities and Social Science, Central Department of Population Studies, Kirtipur, Kathmandu.
- ILO. (1942). *Approaches to social security: An international survey*. ILO
- Kharel, S. (2015). The effectiveness of social security allowance program: A case of Illam district. An Unpublished Mini Research Report, Rector's Office, Research Centre, Tribhuvan University, Kirtipur.
- Mao, L., Mondal, K., & Manna, M. (2019). A comparative study on quality of life of older adults in India. *Indian Journal of Nursing Education*, 20(1), 73-77.
- National Planning Commission. (2012). *Assessment of social security allowance programmes in Nepal*. National Planning Commission.
- NEPAN (Nepal Participatory Action Network). (2003). *Voice of The Elderly*, NEPAN & Help Age International.
- Patali, C. (2018). A study of evaluation the effectiveness of planned teaching programme regarding knowledge on care of old age health problems among family members of Simikeri village (Tal & Dist) Bagalkot. *Lupine Online Journal of Nursing and Health Care*, 1.
- Saini, S & Jaswal, S. (2009). A comparative appraisal of quality of life of aged living with sons and with daughters. *Anthropologist*, 11(2), 139-46.
- Singh, S. (2013). Social security status of senior citizens in Nepal: A case study of Pashupati elderly people's home. An Unpublished Thesis Central Department of Sociology Tribhuvan University.