

Original Article

# Quality of life of people with non communicable diseases

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## Abstract

Hypertension, Diabetes mellitus or both and asthma are very common chronic diseases among Indian rural population which needs continuous monitoring and treatment. Knowledge on disease management, lifestyle, and health care facilities are available which will have direct impact on their Quality of Life.

**Purpose:** Purpose of the study was to identify the quality of life of people living with non-communicable diseases. The study will be helpful to provide need based care and to develop strategies to improve quality of life of community.

**Methods:** A descriptive survey to assess the quality of life of people with non-communicable diseases measured by using WHO QOL BREF scale through interview method. Purposive sampling technique was used to select 200 subjects from selected villages of Udupi District.

**Result:** showed that majority of subjects felt their quality of life was good [Median=4, IQR=3-4]. Majority of subjects [median=3, IQR=3-4] were neither satisfied nor dissatisfied towards their health. Compare to other domains psychological domain has Median=20, IQR=19-21 represents low quality of life. Overall quality of life of subjects with median=93 and IQR= 89- 98 represents good quality of life. Analysis based on diseases showed that people with diabetes mellitus had good quality of life as compared with people with other diseases. There was significant association between quality of life of subjects and age, education, occupation and marital status ( $P<0.05$ ).

**Conclusion:** Study concluded that majority of the subjects were perceived their quality of life was good especially with those who have diagnosed as diabetes mellitus.

**Keywords:** Asthma, Diabetes mellitus, domains, Hypertension, quality of life

## Introduction

Knowledge on disease management, lifestyle, and health care facilities available will have direct impact on their Quality of Life. Quality of services provided will enhance quality of life of the people especially with chronic non-communicable diseases. A research on people's perception towards their quality of life becomes an essential tool to enhance quality of care.<sup>1</sup>

QOL BREF scale. Mean age of subjects were  $59.65 \pm 12.3$  years and majority were females. Overall Cronbach's alpha was 0.93, total mean score was 12.18. The lowest score was found in psychological domain [11.93] and highest in social domain [12.66]. Backward multiple regression model showed that education, marital status and household income were significantly associated with all domains of WHOQOL BREF [ $p<0.05$ ]. Study concluded that QOL of patients were moderate to low, so international programmes were necessary to improve QOL.<sup>2</sup>

By reviewing the literature and researcher's personal experience it was felt to assess the quality of life of people living with non-communicable diseases. The aim of the study is to determine the quality of life of people at selected villages. This descriptive survey will help to

Gholami A, Azini M, Borji A, Shirazi F, Sharafi Z, Zarei E conducted a cross sectional study to evaluate QOL in type 2 diabetic patients among 1847 people of Iran by using Iranian version of WHO

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enhance the quality of care and strengthen or develop new strategies; which will enhance the quality of life of the community.

Purpose of the study was to identify the quality of life of people living with non-communicable diseases. The study will be helpful to provide need based care and to develop strategies to improve quality of life of community.

Objectives of the study were to assess quality of life of people living with non-communicable diseases as measured by WHO QOL BREF scale and to find association between quality of life of people living with non-communicable diseases and selected variables.

In the present study subjects with asthma, hypertension, diabetes mellitus and both hypertension and diabetes mellitus are selected to assess quality of life.

Materials and Methods

A descriptive survey was done among 200 people with asthma, hypertension, diabetes mellitus and both hypertension and diabetes mellitus within 30-80 years of age.

Subjects were selected from Athrady and Hirebettu villages through purposive sampling technique.

A demographic proforma was used to identify the basic information regarding subjects, which includes 15 items such as age, gender, education, occupation, marital status, religion, monthly family income, preferable health centre, frequency of visits to clinic, type of clinic, diseases and type of health insurance.

WHO Quality of Life BREF scale is a standardized tool consists of 26 items comprised in 4 domains such as physical, psychological, social and environmental. This tool produces four domain scores and two items that examined separately: question 1 asks about an individual's overall perception of quality of life and question 2 asks about an individual's overall perception of his or her health and are scaled in a positive direction (i.e. higher scores denote higher quality of life)<sup>(3)</sup>. Reliability [Cronbach's alpha] was 0.94 on Kannada version of tool.

Data collection was started after obtaining administrative permission from institutional ethical committee Kasturba hospital Manipal, Dean Manipal College of Nursing Manipal, respective Panchayats and informed consent from each person by interviewing them.

Results

The gathered data was coded and summarized in a master data sheet and then both descriptive and inferential statistics were used to analyze by using SPSS 16.0 version based on objectives and hypothesis.

3.1 Sample characteristics

shows that that among 200 subjects, majority were in the age group of 60-69 years (31.5%), females (71%), illiterate (33.5%), Hindu (94.5%) by religion, unemployed (33%), having a monthly family income of `2936-`4893 (41%) and belongs to joint family (79.5%) All (100%) were visiting any one of the morbidity clinic and most of the subjects were interested to go to private practitioner/ clinic (65%). Majority (52.5%) of subjects were suffering from hypertension

Table 1: Frequency and percentage distribution of sample characteristics n=200

Sample Characteristics	f	%
Age in years:		
Below 50	27	13.5
50-59	39	19.5
60-69	63	31.5
70-79	56	28
80 and above	15	7.5
Gender:		
Male	58	29
Female	142	71
Educational status:		
Illiterate	67	33.5
Primary school	44	22
Higher primary	57	28.5
High school	22	11
PUC, Diploma, Degree	10	5
Religion:		
Hindu	189	98.5
Muslim	9	4.5
Christian	2	1
Marital status:		
Married	131	65.5
Widow/ widower	66	33
Separated / divorced	2	1
Unmarried	1	0.5

Sample Characteristics	f	%
Type of family:		
Nuclear	41	20.5
Joint	159	79.5
Monthly family income in rupees:		
2936- 4893	82	41
4894- 7322	41	20.5
7323- 9787	39	19.5
9788- 19574	27	13.5
> 19575	11	5.5
Visits to clinic:		
Yes	200	100
No	0	0
Type of clinic:		
Private practitioner/ clinic	130	65
MCON morbidity clinic	12	6
PHC	55	27.5
All the above	3	1.5
Frequency of visits:		
Once in a month	61	30.5
2-4 months	33	16.5
5-7 months	6	3
If any problem	100	50
Duration of illness (in years)		
1-5	138	69
6-10	34	17
11-15	11	5.5
16-20	10	5
21 & above	7	3.5
Medications getting from:		
MCON morbidity clinic	15	7.5
PHC	43	21.5
Medical shop	142	71
Others	0	0
Distance from house to clinic in km:		
0-5	142	71
6-10	38	19
11-15	20	10
Health insurance:		
Yes	114	57
No	86	43
If yes, specify the type of insurance:		
Manipal Arogya Card	37	32.45
Konkani Health Card	27	23.68
ESI , Medicare	40	35.08
Others	10	07.77

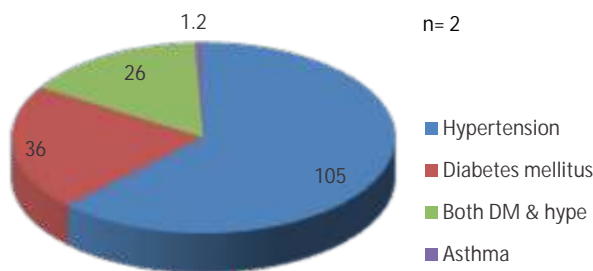


Fig.1 : frequency distribution of subjects based on disease condition

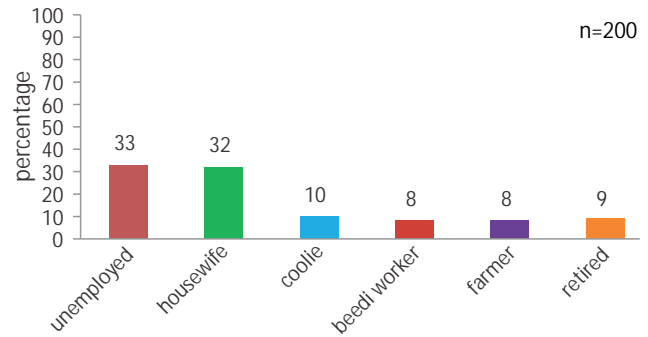


Fig.2 : percentage distribution of subjects with occupation

### 3.2 Description of quality of life of people living with non-communicable diseases

Quality of life of people living with non-communicable disease such as Asthma, Diabetes mellitus, Hypertension or both Diabetes mellitus and Hypertension assessed by using WHO QOL BREF tool. Maximum score obtained was 124 who were having good quality of life. The findings were depicted in a table 2

Table 2 : Description of scores of overall Quality of life of people living with non-communicable diseases n=200

Areas/ domains	Maximum possible score	Median	IQR	Minimum obtained score	Maximum obtained score
How would you rate your Quality of life?	5	4	3-4	2	5
How satisfied are you with your health?	5	3	3-4	2	4
Physical	35	24	23-26	17	33
Psychological	30	20	19-21	13	28
Social	15	12	9-12	7	15
Environmental	40	31	31-32	18	40
Total quality of life	130	93	89-98	64	124

It was inferred as majority of subjects felt their quality of life was good [Median=4, IQR=3-4]. Majority of subjects [median=3, IQR=3-4] were neither satisfied nor dissatisfied regarding their health. Compared to other domains psychological domain have low quality of life. Overall qualities of life of subjects was good.

Quality of life scores described based on diseases such as Asthma, Hypertension, Diabetes mellitus and both hypertension and diabetes mellitus were well depicted in table 3.

Table 3 : Disease wise description of scores of QOL of people with non-communicable diseases n=200

Diseases	Areas/ domains	Maximum possible score	Median	IQR	Minimum Obtained score	Maximum Obtained score
Hypertension n = 105	How would you rate your Quality of life?	5	4	3-4	2	4
	How satisfied are you with your health?	5	3	3-4	2	4
	Physical	35	24	23-26	19	32
	Psychological	30	19	18-21	15	28
	Social	15	12	9-12	7	15
	Environmental	40	31	31-32	23	37
	Total quality of life	130	93	89-97	77	111
Diabetes mellitus n= 36	How would you rate your Quality of life?	5	4	3-4	3	4
	How satisfied are you with your health?	5	3	3-4	2	4
	Physical	35	25	23-27	19	31
	Psychological	30	20	19-21	18	28
	Social	15	12	9-12	9	15
	Environmental	40	31	31-32	28	39
	Total quality of life	130	93.5	92-98	85	116
Both Hypertension and Diabetes mellitus n= 26	How would you rate your Quality of life?	5	4	3-4	3	4
	How satisfied are you with your health?	5	3	2-3	1	5
	Physical	35	24	22-27	18	33
	Psychological	30	20	18-22	13	28
	Social	15	12	9-12	9	15
	Environmental	40	31	29-33	18	40
	Total quality of life	130	93	88-101	64	124
Asthma n= 33	How would you rate your Quality of life?	5	4	3-4	3	4
	How satisfied are you with your health?	5	3	3-4	3	4
	Physical	35	24	22-25	17	33
	Psychological	30	19	19-20	17	28
	Social	15	12	9-12	8	15
	Environmental	40	31	30-32	27	36
	Total quality of life	130	93	89-95	79	118

Thus, while comparing each diseases it is inferred as people with diabetes mellitus have good quality of life [median=93.5, IQR=92-98] than other diseases such as hypertension, asthma or both DM & hypertension.

3.2 Association between quality of life of people living with non-communicable diseases and selected variables

This section deals with association between quality of life and

selected demographic variables such as age, gender, occupation, family monthly income, religion, type of clinic and diseases. In order to find out the association, following null hypothesis was stated.

H0: There will be no significant association between quality of life people living with non-communicable diseases and selected demographic variables.

Table4. Association between Total Quality of Life and selected demographic variables n=200

Variables	Below median	Above median	c <sup>2</sup>	df	p value
Age in years:					
Below 50	1	16			
50-59	15	24			
60-69	33	30	14.847	4	0.005*
70-79	40	16			
80 & above	11	4			

Variables	Below median	Above median	c <sup>2</sup>	df	p value
Gender:					
Male	29	29	0.825	1	0.364
Female	81	61			
Education:					
Illiterate	38	29	13.093	6	0.042*
Primary school	30	14			
Higher primary	22	35			
High school	14	8			
PUC & Diploma & Degree	6	4			
Occupation:					
Unemployed	47	19	15.590	5	0.008*
House wife	32	32			
farmer	10	6			
Coolie	6	10			
Beedi worker	5	13			
Retired	9	9			
Religion:					
Hindu	107	82	4.350	2	0.114
Muslim	3	6			
Christian	0	2			
Marital status:					
Married	57	74	23.318	3	0.001*
Widow /widower	52	14			
Separated/divorced	1	1			
Unmarried	0	1			
Type of family:					
Nuclear	22	19	0.037	1	0.846
Joint	88	71			
Monthly family income in rupees:					
2936-4893	46	36	2.267	4	0.687
4894-7322	21	20			
7323-9787	23	16			
9788-19574	16	11			
>19574	4	7			
Type of clinic:					
MCON clinic	7	5	3.953	3	0.267
Private clinic/practitioner	71	59			
PHC	32	23			
All the above	0	3			
Type of diseases:					
Hypertension	60	45	0.575	3	0.902
Diabetes mellitus	18	18			
Both DM & Hypertension	14	12			
Asthma	18	15			

\*p < 0.05

It was found that age [c<sup>2</sup> = 14.847, p=0.005], occupation [c<sup>2</sup> =15.590, p=0.008], educational status

[c<sup>2</sup> = 13.093, p=0.042] and marital status [c<sup>2</sup> =23.318, p=0.001] of the people have significant association with

their total quality of life. Hence the null hypothesis was rejected with regards to age, occupation, educational status and marital status. So it can be inferred as there is association with one's quality of life and the above said variables

## Discussion

Description of quality of life of people living with non-communicable diseases

Present study shows that compare to other domains psychological domain having median=20, IQR= 19- 21 which can be depicted as low quality of life and environmental domain having a Median =31 and IQR= 31- 32 with a maximum obtained score of 40 can be termed as good quality of life. Overall quality of life of subjects with median = 93, IQR= 89- 98 represents good quality of life.

The findings were supported by a study on morbidity profile and quality of life of inmates in old age homes in Udupi district, Md Asadullah et al revealed that most prevalent morbidities were hypertension (47.8%) and diabetes (43.5%). The mean score of physical, psychological, social and environmental domains were  $53.71 \pm 15.64$ ,  $58.16 \pm 13.57$ ,  $34.66 \pm 14.87$  and  $60.46 \pm 10.14$  respectively, where maximum score in environmental domain and minimum in social domain were observed.<sup>(4)</sup>

Association between quality of life of people living with non-communicable diseases and selected variables.

Present study shows that age [ $c^2 = 14.847$ ,  $p = 0.005$ ], occupation [ $c^2 = 15.590$ ,  $p = 0.008$ ], educational status [ $c^2 = 13.093$ ,  $p = 0.042$ ] and marital status [ $c^2 = 23.318$ ,  $p = 0.001$ ] of the people have significant association with their total Quality of life.

This was supported by B. S. Sathvik et al conducted a study to assess the quality of life in hemodialysis patients using the WHO QOL BREF questionnaire revealed that educational status and family income were associated with their QOL. There was no association between type of

co-morbidities and the type of primary kidney disease on the QOL of hemodialysis subjects.<sup>(5)</sup>

## Conclusion

It was found that majority of subjects felt their quality of life was good. Majority of subjects were neither satisfied nor dissatisfied towards their health. Compared to other domains psychological domain has Median=20, IQR=19- 21 which represent low quality of life while environmental domain have good quality of life. People with diabetes mellitus have good quality of life when compared to other diseases such as hypertension, asthma and both diabetes mellitus & hypertension.

Limitations of the study were The study used non probability purposive sampling, so generalizability of the study was limited and study was limited only to the people living with non-communicable diseases such as asthma, hypertension, diabetes mellitus and both hypertension and diabetes mellitus in adopted villages of Manipal College of Nursing Manipal.

Recommendations of the study are: A comparative study can be undertaken between urban and rural areas to identify the differences in their quality of life, a qualitative study can be done by including all non-communicable diseases present in the selected villages and study can be replicated by using stratified sampling method considering large sampling size.

## Acknowledgement

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