Research Paper

Quality of life among the patients with non-communicable diseases

Sharath Vishwaraj[1], Sharanabasappa Algoodkar[2]*

ABSTRACT

Background: Non-communicable diseases (NCDs) are a group of disorders, which are non-infectious and non-transmissible among people. NCDs are fast replacing communicable diseases as the major cause of death and disability world-wide. Of 56.9 million global deaths in 2016, 40.5 million, or 71 p.c, were due to noncommunicable diseases (NCDs). Quality of life (QOL) is an important indicator to evaluate treatment outcome in non-communicable diseases. *Aim & Objectives:* To study the quality of life and sociodemographic profile of the in-patients with non-communicable diseases. *Material and Methods:* A hospital based, analytical cross-sectional study was conducted at Rajarajeswari Medical College and Hospital, Bangalore, Karnataka, for a period of 3 months from 1st September 2019 to 30 November 2019. Prior to the initiation of the study, ethical clearance was obtained from the Institutional Ethics Committee and written consent was taken from the patients. The study subjects included patients with NCD aged equal to or above 18 years to 60 years admitted for >3 days in the department of general medicine during the study period. *Results:* In the present study, out of 200 patients with NCDs, 50 (25%) reported poor QOL and 6 (3%) reported very poor QOL, among them 37(18.5%) had DM, 29(14.5%) had HTN and 21(10.5%) had both DM and HTN. *Conclusion:* With an increase in NCD prevalence the QOL decreases.

Keywords: Non-Communicable Diseases (NCDs), Quality of life (QOL).

Non-communicable diseases (NCDs) are a group of disorders, which are non-infectious and non-transmissible. There are four main types of NCDs which include cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.[1] Of 56.9 million global deaths in 2016, 40.5 million, or 71 p.c, were due to noncommunicable diseases (NCDs).[2] The burden of these diseases is rising disproportionately among lower income countries and populations. In 2016, over three quarters of NCD deaths 31.5 million occurred in low- and middle-income countries with about 46 p.c of deaths occurring before the age of 70 in these countries.[2] NCD

[1] Assistant Professor, Department of Psychiatry, Rajarajeswari Medical College and Hospital, Bangalore, Karnataka, India
[2] Associate Professor, Department of Psychiatry, Sapthagiri Institute of Medical Sciences & Research Centre, Chikkabanavara, Bengaluru, Karnataka, India
*Corresponding Author

deaths are projected to increase by 15 p.c globally between 2010 and 2020. The greatest increases will be in the WHO regions of Africa, South-East Asia, India and the Eastern Mediterranean, where they will increase by over 20 p.c approximately. In 2016, the overall NCD age-standardized death rates in India were 672.5 per 100000 for males and 524.9 per 100000 for females respectively.[3] The leading causes of NCD deaths in 2016 were cardiovascular diseases (17.9 million deaths, or 44% of all NCD deaths), cancers (9.0 million, or 22% of all NCD deaths), respiratory diseases, including asthma and chronic obstructive pulmonary disease (3.8 million of 9% of all NCD deaths) and diabetes caused another 1.6 million deaths. The leading NCD risk factor globally is raised blood pressure (to which 13% of global deaths are attributed), followed by tobacco use (9%), raised blood glucose (6%), physical inactivity (6%), and overweight and obesity (5%).[4] In 2017, NCDs comprised 46.6 p.c of DALYs overall, which increased to 55 p.c in urban areas in India.[5] Quality Of Life (QOL) is defined by World Health Organization (WHO) as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.[6] Cardiovascular diseases mainly HTN, stroke and myocardial infraction (MI) have negative impact on QOL.

Aim & Objectives
1. To study the quality of life among the in-patients with non-communicable diseases.
2. To study their socio-demographic profile and its relation with non-communicable diseases.

MATERIAL AND METHODS

A hospital based, analytical cross-sectional study was conducted at Rajarajeswari Medical College and Hospital, Bangalore, Karnataka, for a period of 3 months from 1st September 2019 to 30 November 2019. Prior to the initiation of the study, an ethical clearance was obtained from the Institutional Ethics Committee. The study subjects included patients who gave written consent to participate in the study and aged equal to greater than 18 years to less than or equal to 60 years of age with NCD admitted for ≥ 3 days in the department of general medicine during the study period. Patients who have co-morbid infectious disease conditions and who were with severe medical illness requiring an intensive care admission were excluded from the study. A study sample of two hundred adult patients were included in the study. Data about socio-demographic profile of these patients was collected in a semi-structured proforma. Patients quality of life was assessed using WHO Quality of life-BREF (WHOQOL-BREF). The collected data was entered in Microsoft excel-2013 and analyzed using SPSS version-22 (trial). Data was presented in percentages, proportions and figures etc.

RESULTS

In the present study a total number of 200 patients with NCDs were admitted in the Department of General Medicine ward. About 59.5 p.c (119) were males and 40.5 p.c (81) were females. Majority 52 p.c (104) were residing in rural area followed by 48 p.c (96) residing in urban areas. In figure-1 the distribution of patients based on NCDs reports that majority 31.5 p.c (63) of the patients had Diabetes Mellitus (DM) followed by 26.5 p.c (53) of the patients had cardiovascular diseases like hypertension (HTN) and stroke, 27 p.c (54) had both DM and HTN, 8.5 p.c (17) had Chronic Obstructive Pulmonary Disease (COPD) and 6.5 p.c (13) had other NCD's like thyroid disorders, chronic kidney disease, rheumatoid arthritis & other endocrine disorders. In figure-2 the distribution of patients based on overall QOL, majority 56 p.c (113) of patients had neither poor nor good QOL followed by 25 p.c (50) of patients had poor QOL, 14 p.c (28) of patients had good QOL and 5 p.c (9) of patients

had very poor QOL. Table-1 reports the association between NCDs & QOL, there exists a statistically significant association between overall QOL and NCDs. Of the 200 patients, 50 (25%) reported poor QOL and 6 (3%) reported very poor QOL, among them 37(18.5%) had DM, 29(14.5%) had HTN and 21(10.5%) had both DM and HTN. Table-2 reports the association between sociodemographic factors of patients and NCDs, age of the patients had a statistically significant association with NCDs. About 56 p.c of the patients in the age group of 51-60 years had NCDs. In the same age group 20.5 p.c had both DM and HTN, 14.5 p.c had CVDs, 12.5 p.c had DM and 8 p.c had COPD respectively. Educational status & family income had a significant association with NCDs.

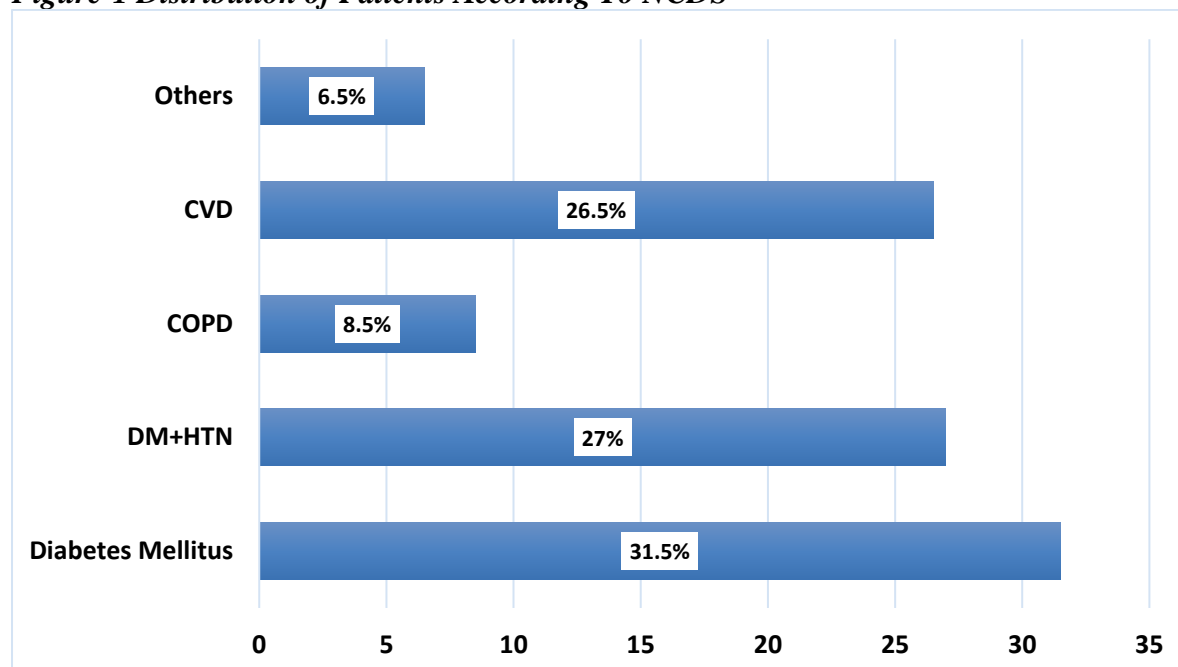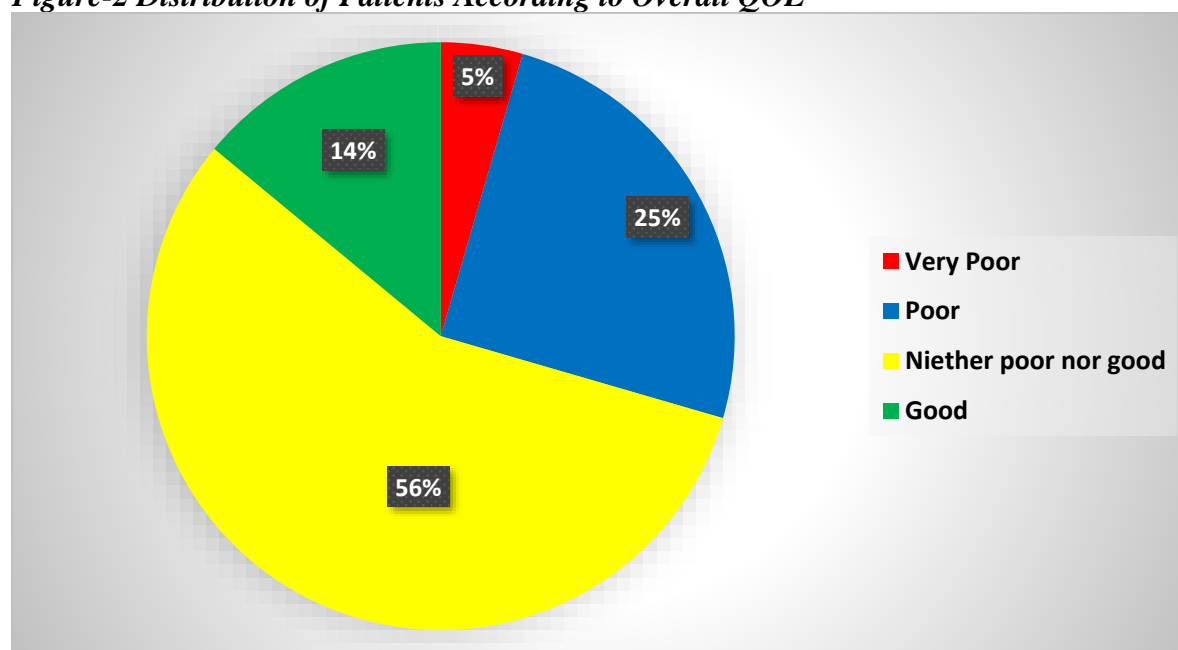*Figure-1 Distribution of Patients According To NCDS*

Figure-2 Distribution of Patients According to Overall QOL

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Table-1 Association Between NCDS & Quality of Life (QOL)

NCD	QOL				Total	χ^2	p-value
	Good	Neither poor nor good	Poor	Very poor			
DM	20	26	14	2	62		
DM+HTN	5	13	19	2	56	33.929	0.001
COPD	0	10	5	1	16		
CVD	4	41	8	0	53		

Table-2 Association Between Socio-Demographic Factors & NCDS

SOCIO-DEMOGRAPHIC FACTORS		DM	DM + HTN	COPD	CVD	Others	Total	χ^2	p-value
Age(in years)	18-30	7	0	0	3	4	14	56.639	**0.001**
	31-40	13	3	0	9	5	30		
	41-50	18	10	1	12	3	44		
	51-60	25	41	16	29	1	112		
Gender	Male	37	26	15	34	7	119	7.646	0.105
	Female	26	28	2	19	6	81		
Marital Status	Single	3	1	0	3	2	9	0.1846	1
	Married	58	43	15	46	11	173		
	Separated	0	1	0	0	0	1		
	Widow/Widower	2	9	2	4	0	17		
Education Status	Illiterate	10	25	4	11	1	51	86.348	**0.001**
	Primary	10	10	6	9	0	35		
	Secondary	14	12	6	20	1	53		
	High School	18	5	1	13	7	44		
	Pre-University	9	2	0	0	2	13		
	Graduation	2	0	0	0	2	4		
Occupation	Unemployed	7	5	2	6	3	23	0.2748	1
	Farmer	11	14	7	10	2	44		
	Unskilled	7	13	3	13	0	36		
	Skilled	7	1	2	6	1	17		
	Semi-skilled	10	4	0	6	3	23		
	Business	6	4	1	3	2	16		
	Clerical	4	1	0	1	0	6		
	Housewife	10	12	2	8	1	33		
	Student	1	0	0	0	1	2		
Family Income (INR)	Up to 5000	9	21	4	13	1	48	45.187	**0.001**
	5001-10000	31	30	11	30	5	107		
	10001-20001	20	3	2	10	5	40		
	Above 20000	3	0	0	0	2	5		

DISCUSSION

Non-communicable diseases (NCDs) are the leading causes of death globally, killing more people each year than all other causes combined. In the present study out of 200 patients with NCDs, 119 (59.5%) were males and 81 (40.5%) females. This is comparable to the study done by Kulkarni *et al*[7] who reported 56 p.c males and 44 p.c females. The current study was done with a view to study the QOL using WHOQOL-BREF in NCD patients admitted in tertiary care hospital. Among 118 patients with DM, 37 (31.3%) patients reported poor overall QOL. This is comparable with Ali Gholami *et al*[8] who reported moderate to low QOL among patients with DM. Among 109 patients with HTN, stroke and CVD, 29 (26.6%) patients reported poor overall QOL, which is comparable to cross sectional survey conducted by Ninh Thi Ha *et al*[9] who reported low score in psychological domain and moderate score in other domains of QOL among patients with HTN. Among 17 patients with COPD, 5 (29.4%) patients reported poor overall QOL, which is comparable to cross sectional study conducted by Cully *et al*[10].

CONCLUSION

About quarter of the patients with non-communicable disease reported poor or very poor overall quality of life about half of patients reported poor or very poor overall health. Prevalence of NCDs increased with age. QOL appeared poor among patients with both DM & HTN. With an increase in NCD prevalence the QOL decreases.

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