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RESEARCH ARTICLE

A PROSPECTIVE OBSERVATIONAL STUDY ON HEALTH RELATED QUALITY OF LIFE AND SOCIOECONOMIC STATUS AMONG CHRONIC DISEASE PATIENTS

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ABSTRACT

Background: Health Related Quality of Life is a multidimensional construct that consists of at least three broad domains − physical, psychological, and social functioning − that are affected by one's disease and/or treatment. HRQoL is usually measured in chronic conditions and is frequently impaired to a great extent. Associations with socioeconomic status (SES) and HRQoL seem to be vital criteria.
Objectives: To evaluate individual patient's health status and to monitor and compare disease burden.
Study Design: This is a prospective observational study conducted for 6 months in Multicenter, Hanamkonda, Telangana.
Methodology: The patients included in this study were Cerebrovascular accident, Cardiovascular disorders, Diabetes Mellitus, Thyroid disorders, Chronic kidney disease, Osteoarthritis. Patients >65yrs were excluded in this study.
Results: By comparison of HRQoL in included chronic diseases, it was much decreased in OA (52.16%) followed by CVA (54.50%). HRQoL according to SES was evaluated and found that the upper status people (64.145%) were showing good QoL and patients with low SES showing decreased medication adherence which results in poor QoL (54.369%).
Conclusion: The HRQoL was very poor in OA followed by CVA. According to SES the upper status people showing good HRQoL than low SES patients. The lower status people showing decreased medication adherence which results in poor HRQoL. The emotional health was highly impaired in all included chronic diseases except in Thyroid patients.

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INTRODUCTION

Life expectancy and causes of death have traditionally been used as key indicators of population health. While these indicators provide critical information about the health status of populations, they do not offer any information about the quality of the physical, mental, and social domains of life. Increasing life expectancy has also highlighted the need for other measures of health; especially those that capture the quality of the years lived. In 1995, the WHO recognized the importance of evaluating and improving people's quality of life. (World Health Organization, 2005) During the past decades there was an increasing predominance of chronic disorders, with a large number of people living with chronic diseases that can adversely affect their quality of life. Health Related Quality of Life is a multidimensional constructthatconsists of at least three broad domains− physical, psychological, and social functioning − that are affected by one's disease and/or treatment. Physical functioning is usually defined as the ability to perform a range of activities of daily living, as well as physical symptoms resulting from the disease itself or from treatment. Psychological functioning ranges from severe psychological distress to a positive sense of well-being and may also encompass cognitive functioning. Social functioning refers to quantitative and qualitative aspects of social relationships and interactions and societal integration. The estimation of the relative impact of chronic diseases on HRQoL is necessary in order to better plan and distribute health care resources aiming at a better HRQoL. (Quality of life in chronic disease patients, 2013)

Quality of life measures: Hundreds of HRQoL instruments are available. A primary distinction among HRQoL instruments is whether they are generic or specific. (Pharmacotherapy, Sixth edition)

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Taxonomy of quality of life instruments

Generic Instruments: Health profiles and Preference based measures

Specific Instruments: Disease specific (e.g., DM)**,** Population specific (e.g., Frail older adults), Function specific (e.g., Sexual functioning) and Condition or problem specific (e.g., pain)

A commonly used profile instrument is the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36). The SF-36 was devised by Dr John Ware Jr, in 1990, as a multipurpose, short health survey consisting of only 36 questions and requiring 5 to10 minutes to complete.

Uses of SF-36 scale:

- Evaluating individual patients health status
- Researching the cost-effectiveness of a treatment
- Monitoring and comparing disease burden (Pharmacotherapy Sixth edition)

Associations with socioeconomic status (SES) and HRQoL seems to be vital criteria, but they are rarely discussed in their own right. Socioeconomic status (SES) is an important determinant of the health, nutritional status, mortality, and morbidity of an individual. SES also influences the accessibility, affordability, acceptability, and actual utilization of available health facilities. (Health-related quality of life and socioeconomic status, 2014)

METHODOLOGY

The study was conducted for 6 months in outpatient department in Multicenter, Hanamkonda, Warangal, Telangana. The study design was a prospective observational study which involved interview surveys from patients and their caretakers. The patients included in this study were Cerebrovascular accident (CVA), Cardiovascular disorders (CVS), Diabetes Mellitus (DM), Thyroid disorders, Chronic kidney disease (CKD), Osteoarthritis (OA). Patients with acute infections, pediatrics, pregnant women, patients >65yrs were excluded in this study. All the relevant and necessary data was collected by interviewing patient and sometimes patient care takers. The data collected includes demographics (name, age, sex, and address), socioeconomic status of patient's family (educational status, occupation, income of the family per month) and SF-36 questionnaire. The above information collected was documented in the designed data collection form. Then the data entered into Microsoft Excel database and then analyzed.

RESULTS

During the study period 1000 patients were reviewed, among them 730 patients were enrolled in this study according to inclusion criteria. Among several chronic diseases we included 6 diseases based upon the availability of patients. The diseases included are Cerebrovascular accident (CVA), Cardiovascular diseases (CVS), Type-2 Diabetes mellitus (Type-2 DM), Chronic kidney disease (CKD), Thyroid disorders, Osteoarthritis (OA).

Age wise distribution was calculated by the following formula

$$i = L - S / C$$

$$C = 1 + 3.322 \log n$$

i= class interval
L= large value
S= small value
n= sample size

C= 10.51

i= 65-20/10.51 =45/10.51 = 4.28

i= 4

Among overall included study population, the patients were classified according to socioeconomic status by Kuppuswamy scale and were distributed as following 5 classes. Most of the patients were belonged to Upper middle status 308 (42.19%) and lower middle status 308 (42.19%) followed by upper lower class 107 (14.65%). Upper status patients were only 7 (0.9%) and lower status patients were completely nil in our study.

Table 1. Distribution of patients based on age and disease

Age group	CVA	CVS	CKD	DM	THY	OA
20-24	2	0	4	1	37	0
25-29	3	1	5	2	23	0
30-34	0	2	1	2	11	3
35-39	1	4	1	11	12	2
40-44	1	8	8	13	21	12
45-49	9	8	7	24	6	5
50-54	11	21	15	22	4	16
55-59	38	23	11	17	7	31
60-65	55	53	68	28	6	54

Table.1 shows that most of the patients were within the age ranging of 60-65 years and there was an exception in Thyroid disorders i.e., most of the thyroid patients were within the age ranging 20-24 years.

Table 2. Quality of life in chronic diseases

Disease	Mean QoL (%) ± Standard deviation
CVA	54.50 ± 8.02
CVS	54.73 ± 5.38
CKD	56.81 ± 5.33
DM	60.16 ± 6.32
THY	65.82 ± 8.92
OA	52.16 ± 6.92

From the evaluation of overall QoL in included study population the QoL was very much decreased in OA (52.16%) and then followed by CVA (54.50%), CVS (54.73%), CKD (56.81%). The QoL in DM and Thyroid disorders was good when compared to other diseases in included study population.

Table 3. Socioeconomic status wise QoL

Socioeconomic status	Mean QoL (%)
Upper	64.145
Upper middle	60.171
Lower middle	56.491
Upper lower	54.369
Lower	000

Table.4 shows that According to the socioeconomic status wise the QoL was low in upper lower (54.369%) and was followed by lower middle (56.491%). The QoL in upper status patients was better (64.145%) than other compared classes.

According to the disease and socioeconomic status wise QoL, in CVA and Thyroid disorders the upper lower status patients showing good QoL (54.029%) than other classes.

Table 4. Disease and socioeconomic status wise QoL

Disease	Upper QoL (%)	Upper middle QoL (%)	Lower middle QoL (%)	Upper lower QoL (%)	Lower QoL (%)
CVA	00	52.406	51.223	54.029	00
CVS	00	55.318	54.374	54.521	00
CKD	00	57.389	57.344	51.847	00
DM	00	59.989	60.539	59.486	00
THY	00	65.676	65.950	71.175	00
OA	64.145	58.586	55.177	53.098	00

- In CVS (55.318%) and CKD (57.389%) upper middle status patients having better QoL.
- In DM there was no significant difference of QoL based on socioeconomic status. Upper middle (59.989%), lower middle (60.539%), upper lower (59.486%).
- In OA the upper status patients showing good QoL (64.145%) than other classes.

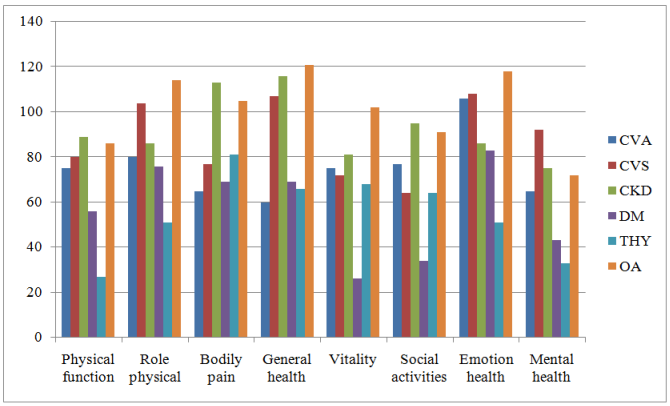

Fig.1. Comparison of 8 domains of SF-36 scale in included chronic diseases

Fig.3 shows that the Physical functioning impairment, bodily pain, social activities impairment was more in CKD and then followed by OA.

- Role physical was altered more in OA and then followed by CVS disorders.
- General health impairment, Vitality impairment, was high in OA and followed by CKD.
- Emotional health was highly impaired in OA and followed by CVS disorders.
- Mental health impairment was high in CVS disorders followed by CKD.

DISCUSSION

In this study we found that the prevalence of chronic diseases are mostly between the age group 50-65 years and there was an exception in thyroid disorders, most of the thyroid patients were found in the age group of 20-30 years. Female populations were more prone to Thyroid disorders and then followed by OA when compared to other chronic diseases. In this study among 730 patients most of them were of upper middle and lower middle status patients and followed by upper lower status. Lower status patients were completely nil in this study. Among different CVS disorders most of the patients were suffering with CAD followed by HTN, CHF and Corpulmonale. Among Thyroid disorders most of them were hypothyroidism patients. One of the most important finding of our study was HRQoL in 6 included chronic diseases. By comparison of QoL in included chronic diseases, it was much decreased in OA followed by CVA, CVS and CKD. The QoL in DM and Thyroid was good when compared to other diseases. The HRQoL for general practice patients with differing chronic diseases tended to show more physical than mental impairments.In our study QoL according to SES was evaluated and found that the upper status people were showing good QoL and patients with low SES showing decreased medication adherence which results in poor QoL more disease burden. Our study also found that the Physical functioning impairment, bodily pain, social activities impairment was more in CKD and then followed by OA. Role physical was altered more in OA and then followed by CVS disorders. General health impairment, Vitality impairment, was high in OA and followed by CKD. Emotional health was highly impaired in OA and followed by CVS disorders. Mental health impairment was high in CVS disorders followed by CKD. The emotional health was highly impaired in all included chronic diseases except Thyroid patients. Thyroid patients showing good QoL with little bodily pain but when compared to other diseases bodily pain was low.

Conclusion

Health Related Quality of Life is a multidimensional construct that consists of at least three broad domains − physical, psychological, and social functioning − that are affected by one's disease and/or treatment. HRQoL is usually measured in chronic conditions and is frequently impaired to a great extent. The estimation of the relative impact of chronic diseases on HRQoL is necessary in order to better plan and distribute health care resources aiming at a better HRQoL. Associations with socioeconomic status (SES) and HRQoL seem to be vital criteria. Socioeconomic status (SES) is an important determinant of the health, nutritional status, mortality, and morbidity of an individual. The HRQoL was very poor in OA followed by CVA, CVS then CKD. Type-2 DM and Thyroid patients showing good HRQoL. According to SES, the upper status people showing good HRQoL than low SES patients. The lower status people showing decreased medication adherence which results in poor HRQoL and more disease burden. Physical functioning impairment, bodily pain, social activities impairment was more in CKD and then followed by OA. Role physical was altered more in OA and then followed by CVS disorders. General health impairment, Vitality impairment, was high in OA and followed by CKD. Emotional health was highly impaired in OA and followed by CVS disorders. Mental health impairment was high in CVS disorders followed by CKD. The emotional health was highly impaired in all included chronic diseases except in Thyroid patients.

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