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ORIGINAL RESEARCH ARTICLE

KNOWLEDGE ON SELF CARE AMONG COPD PATIENTS ATTENDING AT CHITWAN MEDICAL COLLEGE, TEACHING HOSPITAL, BHARATPUR.

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ABSTRACT

Chronic obstructive pulmonary disease is a major cause of morbidity and mortality worldwide and global health concern. COPD self care knowledge is a cornerstone for self-management of chronic illness. The objective of this study was to find out the level of knowledge on self care among COPD patients. A descriptive, cross sectional design and purposive sampling was applied in which 182 patients were interviewed by using semi-structure interviews schedule at Chitwan Medical College, Teaching Hospital, Bharatpur. Data was analyzed by using SPSS and descriptive and inferential test was applied. The study findings revealed that 36.8% of the respondents were between age group 61-70 years, 54.4% respondents were male, 59.9% were from Chitwan district, majority of the respondents (62.1%) were outpatient, 48.4% had a history of COPD more than 5 years, 83.2% were hospitalized 1-2 times in last year, 63.2% had no history of COPD in family members and all respondents got information from health personnel. Highest percentage (75) of mean score on smoking cessation and lowest (10) on weight monitoring. Most of all respondents (90.7%) had poor level of knowledge on self care of COPD. The respondents' level of knowledge on self care is statistically significant with family history (p=0.048), educational status (p=0.000), and types of patient (p=0.017). So, there should be need of health education program for COPD patients about self care to improve knowledge.

Key Words: *COPD, Knowledge, Self-care*

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is preventable and treatable disease state characterized by airflow limitation that is not fully reversible. The airflow limitation that is usually progressive and associated with an abnormal inflammatory response of the lungs to noxious particles or gases, primarily caused by cigarette smoking.[1] Prevalence is directly related to the prevalence of tobacco smoking and in low and middle income countries, the use of biomass fuels. Current estimates suggest that 65 million people have moderate to severe COPD. In 2005, COPD contributes to more than 3 million death (5% of all deaths globally), but by 2020 it is forecast to represent the third most important cause of death worldwide.t[2]

In Nepal, the morbidity associated with COPD is higher among females with increase age over 40 years, reaching a peak in those aged 60–69 years and study identified a significant proportion of the COPD burden as being borne by women (six female sufferers for every ten cases of COPD) due to extensive use of biomass fuel living in rural communities puts women at increased risk of exposure to indoor air pollution for comparatively long periods of time.[3] COPD accounts for 43% of the non communicable disease burden, and 2.56% of hospitalizations.[4] Although COPD is considered as a chronic, debilitating and fatal disease, but it can be managed, controlled and slowed down and can lead good and long lives with a great deal of quality and joy with proper treatment and care.[5] Globally, major lungs diseases such as lung cancer and asthma are more aware by primary-care physicians and patients in compare to COPD.[6] No significant effects were found either in number of exacerbations, emergency department visits, lung function, exercise capacity, and days lost from work even after education programme of COPD.[7] The National Emphysema/COPD Association published the results of surveys indicated that activity limitation was prevalent among patients with COPD, and that, although most physicians believed that effective therapy could slow the progression of COPD, their inadequate knowledge and poor adherence to practice guidelines had a negative impact on the care of patients with COPD.[8]

In studies of professional caregivers such as nurses, additional education for COPD patients improved their disease knowledge and self-care behavior. This improvement can lead to a reduction in COPD-related events and hospitalizations.[9] Therefore knowledge among the COPD subjects about their condition is important as it makes them aware of the disease process and the characteristic features of the problem thereby making the patient to cope up with it fully and create a better outlook towards the future by participating in self care activities.

METHODS

A descriptive, cross sectional design was carried out by collecting data from 2069/06/24 to 2069/7/24. A hospital based

study was conducted in inpatient and outpatient department (OPD) of medicine in Chitwan Medical College, Teaching Hospital, Bharatpur. Total samples were 182 COPD patients, selected by using sample size calculation. COPD patients who were diagnosed with COPD since last 6 months and willing to participate were included in the study. COPD patients with critically ill, who admitted in ICU were excluded from the study. From COPD patients, quantitative data were collected using structured questionnaires by interview method.

Ethical approval was taken from Chitwan Medical College Institutional Review Committee. Prior to data collection verbal permission was obtained from the respondent. The content validity of the instrument was established by extensive literature review and reliability was maintained by pre testing the questionnaire and modified tools as necessary. The tools were translated into Nepali language for clear, simple and consistency of instrument.

Data was reviewed and checked daily for its completeness, consistency and accuracy. The collected data was coded and entered in SPSS version 17. The data was analyzed by using both descriptive and inferential statistics. The Chi-squared test was used to examine the association between different demographic variables and self care knowledge.

RESULTS

Table 1: Socio Demographic Characteristics (n = 182)

Characteristics	Frequency	Percent
Age group in years		
≤ 50	5	2.7
51-60	32	17.6
61-70	67	36.8
71-80	50	27.5
≥81	28	15.4
Mean±SD age: (69.8 ± 10.3)years, min= 40yrs, max= 94yrs		
Sex		
Male	99	54.4
Female	83	45.6
Types of patient		
Inpatient	69	37.9
Outpatient	113	62.1
Educational status		
Illiterate	119	65.4
Literate	63	34.6
Working presently		
Yes	45	24.7
No	137	75.3
If yes, present occupation(n=45)		
Business	7	15.5
Farmer	23	51.1
Housewife	15	33.3
Previous occupation(n=137)		
Business	4	2.9
Farmer	89	64.9
Housewife	30	21.8
Service	14	10.2

The analysis of the demographic variables revealed that 36.8% of the respondents belonged to the age group between 61-70 years and 54.4% respondents were male. Majority of the respondents (62.1%) were from outpatient department and 65.4% were illiterate. Regarding past and present occupations, more than half of the respondents were farmers in each period 51.1% and 64.9% respectively.

Table 2: Respondents' History of COPD

Characteristics	Frequency	Percent
History of COPD (n=182)		
<1 year	25	13.7
1-5 years	69	37.9
>5 years	88	48.4
Mean and SD:(6.9 ± 6.7) years, Range: 0.58-35 years		
Number of hospitalization in last year (n=182)		
0 (no hospitalization)	39	21.4
1	80	44.0
2	39	21.4
3	10	5.5
4	9	4.9
≥ 5	5	2.7
Mean and SD :(1.4 ± 1.2) Range: 0 - 8		
Family history of COPD(n=182)		
Yes	67	36.8
No	115	63.2
If yes, relationship with patient (n=67)		
Brother	5	7.5
Father	26	38.8
Grand father	5	7.4
Husband	5	7.4
Mother	26	38.8

Less than half of the respondents (48.4%) had a history of COPD since more than 5 years and 44% were hospitalized 1 times in last year. Majority of respondents (63.2%) had no history of COPD in family members; only 36.8% had family history and among them 38.8% each had relation to those members as father and mother. Regarding the sources of information, cent percent respondents got information from health personnel.

Majority (90.7%) of the respondents have poor level of knowledge on self care of COPD whereas 9.3% have fair level

of knowledge and no respondents have good level of knowledge. Out of 182 respondents, 18.6% respondents said that high calorie diet can be taken, among them 93.9% said that whole milk contain high calorie and 59.4% said important of high calorie diet is to maintain a healthy body weight. Similarly, only 0.54% respondent said that high fiber diet and 80.8% said no idea about diet. Regarding avoiding foods, 92.9% said cold foods whereas 23.1% said gas forming foods. Majority of the respondents (67.0%) said smaller and frequent feeding is necessary. More than half of respondents (65.9%) said that adequate fluids cannot drink; only 34.1% said can drink and 76.9% answered caffeinated beverages cannot take.

Regarding weight monitoring, 24.2% said maintain healthy body weight is necessary and among them 79.5% respondents had no idea about frequency of weight monitoring. Only 17% respondents said regular exercise is necessary, among them cent percent said walking type of exercise can be done and 36.3% said deep breathing and coughing exercise is necessary. Almost all respondents (99.5%) said that stop cigarette smoking is necessary, 99.5% said it is important to keep COPD medicine, 87.4% said that it is important to keep inhaler and among them, most of all (98.1%) said that indication of inhaler use is when difficulty in breathing.

More than half of the respondents (58.2%) said follow up visit is necessary and among them, most of all (86.8%) said frequency of follow-up visit as prescribed. Most of respondents (98.9%) said prevention from respiratory infection and allergy is necessary. Regarding oxygen supplement is important, 92.3% said yes and cent percent respondents said when feeling shortness of breath is indication to take oxygen supplement.

Table 3: Association between Respondents' level of Self Care Knowledge and Selected Socio Demographic Characteristics(n=182)

Demographic Characteristics	Level of Knowledge		p- value
	Poor (%)	Fair (%)	
Age			0.843
≤60 years	34(91.9)	3(8.1)	
61-80 years	105(89.7)	12(10.3)	
≥81 years	26(92.9)	2(7.1)	
Sex			0.899
Female	75(90.4)	8(9.6)	
Male	90(90.9)	9(9.1)	
Educational status [a]			0.000
Illiterate	115(96.6)	4(3.4)	
Literate	50(79.4)	13(20.6)	
Occupational status			0.638
Present occupation	40(88.9)	5(11.1)	
Past occupation	125(91.2)	12(8.8)	
History of COPD			0.101
Up to 5 years	82(87.2)	12(12.8)	
>5 years	83(94.3)	5(5.7)	
Types of patient			0.017
Inpatient	58 (84.1)	11 (15.9)	
Outpatient0	107 (94.7)	6 (5.3)	
Number of hospitalization [a]			0.425
Up to 1 time	106(89.1)	13(10.9)	
>1 time	59(93.7)	4(6.3)	
Family history of COPD			0.048
Yes	57(85.1)	10(14.9)	
No	108(93.9)	7(6.1)	

Significance level at 0.05 a =fisher exact test x^2is computed for p-value

The level of knowledge regarding self care knowledge of COPD is statistically not significant with age group (p=0.843), sex (p=0.899), occupational status (p=0.638), history of COPD (p= 0.091), number of hospitalization (p=0.243). The level of knowledge regarding self care knowledge of COPD is statistically significant with history of family members (p=0.048), educational status (p=0.000), types of patient (p=0.017) of the respondents.

DISCUSSION

Socio-demographic findings of this study revealed that 36.8% of respondents were between age group 61-70 years. More than half of the respondents (65.4%) were illiterate and 34.6% were literate and findings from another study that 43.0% subjects were from the age group between 61-70 years and 80% were illiterate and 20% were literate.[10] Regarding past and present occupations, more than half of the respondents were farmers 51.1% and 64.9% respectively and 57% were farmers by Shrestha and Shakya.[11] In this study 54.4% were male whereas 45.6% were female and Jun et.al. reported that 55.2% male and 44.8% were female.[12]

This study showed that 48.4% of respondents were history of COPD more than 5 years and consistent finding by P. Hernandez et al. (50%).[13] Regarding exercise, 17% respondents said regular exercise is needed and 36.3% respondents said breathing exercise is necessary which were inconsistent to findings that 74% said regular exercise and 70% said breathing exercise.[14] This low knowledge might be due to lack of awareness of benefits and how to perform exercise and respondents also may had misconception about exercise; they feel exercise may exaggerate dyspnea.

Nearly all respondents (99.5%) said COPD medicine should kept regularly. Contradictory findings reported by Beniwal, Sharma & Singh and Graham Barr R. et al. revealed that COPD patients thought medicine should be taken regularly which were 79.3% and 72% respectively.[15,16] In this study, 87.4% of respondents said that it is important to keep inhaler and quite similar finding by Hernandez et al. revealed that 68% said they always carry their inhaler with them.[17] Nearly all respondents (99.5%) said that stop cigarette smoking is necessary whereas

inconsistent finding by Thomas et al. revealed that 70% answered stop smoking is necessary.[18]

There was no significant in the knowledge of COPD between male and female and consistent finding by Miravitlles et al.[19] The overall self care knowledge is poor (90.7%) in this study and similar findings presented by Graham Barr R. et al. and Hernandez et.al. stated that COPD knowledge was also poor.[16, 17]

CONCLUSION

The level of overall knowledge on self care among COPD is poor. The level of overall knowledge is statistically significant with educational status of the respondents, types of patient and family history of COPD.

Based on study findings, it is concluded that knowledge on self care among COPD is poor in several domains; diet, weight monitoring, exercise and oxygen supplement. It might be due to chronic illness, disease occurring often in older age, illiteracy, long duration of illness. Therefore, the health care personnel should have provided the health education for COPD patients on self care to improve knowledge which helps to prevent complications and maintaining quality of life.

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