International Journal of Community Medicine and Public Health
Satish KBP et al. Int J Community Med Public Health. 2020 Oct;7(10):4071-4075
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20204378

Original Research Article

Knowledge and attitude of rural community towards the respiratory diseases

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Received: 23 July 2020
Revised: 04 September 2020
Accepted: 09 September 2020

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ABSTRACT

Background: Respiratory diseases are considered as one of the major public health problems in developing countries like India. Among all illness in adults, heart, cancer, diabetes and chronic lung diseases are the major cause of mortality and morbidity in India. Since majority of the Indian population resides in rural areas, assessment of knowledge and attitude in that region regarding respiratory diseases are essential.
Methods: A descriptive study was conducted using restructured and pretested questionnaire to assess the knowledge and attitude of the rural people. Descriptive statistics were used to represent the study characteristics. Chi-square test was used to assess the association among the study variables with p-value of <0.05 which was statistically significant.
Results: Total 467 participants enrolled in the study out of which 39.4% were male and 60.6% were female. The mean age of the participants was 44.7±16.1 years, where majority of participants belongs to the age group 38-47 years. Overall the knowledge of the participants was found to be poor 6%, average 49.5% and good (44.5%). Statistically significant association between the literacy level and the knowledge on respiratory diseases was found.
Conclusions: Although knowledge and attitude of the people towards the respiratory diseases are encouraging, there is a need for long term educational program. The findings of this study can guide the public health authorities in making and implementing decisions to reduce the health problems related to respiratory diseases.

Keywords: Attitude**,** Knowledge, Respiratory Disease, Village people

INTRODUCTION

Chronic respiratory diseases include Asthma, chronic obstructive pulmonary disease (COPD), pneumonitis, interstitial lung disease and pulmonary sarcodiasis. Out of all chronic non-communicable disease COPD and Asthma are most common in India.[1] Whereas in communicable respiratory disease Tuberculosis has the higher prevalence. The prevalence of smear-positive cases of Tuberculosis was estimated to be 333/100,000 population in the age group of ≥15 years.[2] India has a population of 1.34 billion spread across 28 states and 8 union territories. Many states has the populations similar to the larger countries.[3] The states and union territories in India often vary in terms of ecology, economy and demography, all of which found to affect respiratory health.[4] The studies have revealed that risk factors other than smoking also exist for respiratory diseases like COPD. The risk factors include exposure to indoor and outdoor air pollutants, workplace exposure to dust and fumes, tract infections during childhood, history of pulmonary tuberculosis, chronic asthma, history of repeated lower respiratory-intrauterine growth retardation, poor nourishment, and poor socioeconomic status.[5] Most of the rural population of India still relay on

biomass fuel for cooking and are more prone to respiratory diseases. It is reported that the incidence of the acute respiratory diseases in rural India is 11.3% and urban India 8.5%.[6]

Many studies have revealed that the prevalence of respiratory diseases is more in rural population. The delay in hospital visit in case of respiratory illness of rural people depends on factors like lack of knowledge, lack of awareness on significant symptoms and negative social attitudes or different combinations of these three factors.[7] The purpose of the study was to determine the knowledge and attitude of village people towards respiratory diseases.

The main objective of the study was to identify the Knowledge and attitude of village people towards the respiratory diseases.

METHODS

A descriptive study was conducted in the Bramhadevarahalli village, Nagamangala, Mandya district, India, to find out the knowledge and attitude of village people about respiratory diseases. The people above 18 years of both the sex were included in the study to access the extent of knowledge and attitude on respiratory diseases.

Development and content of Questionnaire

A restructured and pretested questionnaire was used for data collection process. Questionnaire was developed in three sections which include socio-demographic, knowledge and attitude. The knowledge part of the questionnaire includes 12 questions and the attitude part includes 10 questions respectively. The questionnaire was prepared in English and Kannada (vernacular language) to ensure proper understanding of the questions. The questionnaire was validated by the subject expert in the area of Community medicine before the study was conducted.

The correct answer was given a score of 1, wrong and uncertain answers as 0. The grading of knowledge was done as 0-3 poor, 4-7 Average, and 8-12 good.

Study duration: December 2019 to March 2020.

Sample size

The minimum of 467 sample size was calculated using Raosoft software at 95% confidence interval with 5% margin of error with the response rate of 70%.

The training of interviewer

One day training was conducted by the authors and supervisor to brief the interviewers about the research and technique of interview needed for the study and the questionnaire was used during the session.

Inclusion criteria: All the rural people above age 18 years.

Exclusion criteria: People below the age of 18 years and those who were not interested to enrol in the study were excluded.

Statistical analysis

Data were entered into Microsoft Excel spread sheets and cross checked for its accuracy. The statistical analysis was performed using IBM SPSS statistics software for windows, version 22 (Armonk, NY, USA). Descriptive statistical methods were used including means, standard deviation and frequency.

Variables included in the analysis include age, sex, education level, marital status, occupation and economic status. The chi-square test was used to assess the association among the study variables and p-value of <0.05 was considered as statistically significant.

RESULTS

Socio-demographic characteristics

A total of 467 respondents enrolled in the study. Of this, 184 (39.4%) were male and 283 (60.6%) female. The mean age of the respondents was 44.7±16.1 years, where more than half of the participants belong to the age category >40 years. For 237 (50.7%) participants enrolled in the study, farming was the means of livelihood. The majority of participants had no education (37.7%) while (31.7%) of them have completed their secondary education. All the socio-demographic characteristics are detailed in (Table 1).

Knowledge of people towards respiratory diseases

The knowledge of participants was graded as (0-3) poor, (4-7) average, and (8-12) good. Of 467 participants 28 (6%) of them had poor knowledge, 231 (49.5%) participants had average knowledge and 208 (44.5%) participants had good knowledge on the respiratory diseases.

Surprisingly, most of the participants (i.e., 57.8%) were unaware of TB symptoms and very few respondents (11.1%) said cough as a symptom of TB and other responses include symptoms like breathlessness, weight loss, fever and weakness.

About two-third of the people knew that Cancer can even happen to lung and one-fourth of them were unaware. The rest of the information about knowledge of respiratory diseases is detailed in (Table 2).

Table 1: Socio-demographic characteristics of the participants (n=467).

Variables	Participants (N)	Percentage (%)
Age in years		
Mean age±S.D: 44.7±16.1		
18-27	83	17.8
28-37	88	18.8
38-47	100	21.4
48-57	75	16.1
58-67	76	16.3
68-77	35	7.5
78-87	10	2.1
Sex		
Male	184	39.4
Female	283	60.6
Level of education		
No education	176	37.7
Primary education	97	20.8
Secondary education	148	31.7
Degree	41	8.8
Any higher education	5	1.1
Occupation		
Agriculture	237	50.7
Homemaker	134	28.6
Student	20	4.3
Govt. employee	15	3.1
Others	61	13.3
Marital status		
Married	412	88.2
Unmarried	55	11.8
Smoking status		
Smokers	48	10.3
Non- smokers	419	89.7

Table 2: Knowledge score of individual participants (n=467).

Grade	Frequency	Percentage
Poor	28	6.0
Average	231	49.5
Good	208	44.5

Attitude of people about the respiratory diseases

The majority of study participants believe to have good attitude toward the respiratory diseases. About 323 (69.2%) contestants really care about reducing the indoor smoke and dust.

Of 467 participants 316(67.7%) consider that respiratory diseases are curable. The rest of the information about the attitude of village people towards respiratory diseases is depicted in (Table 3).

Table 3: Attitude of village people towards respiratory disease (n=467).

Questions	Yes (%)	No (%)
1. Do you care about reducing indoor smoke and dust?	323 (69.2)	144 (30.8)
2. Do you cover your face while sneezing?	378 (80.9)	89 (19.1)
3. Do you think respiratory diseases are curable?	316 (67.7)	151 (32.3)
4. Does using snuffs reduce the problems like breathlessness?	171 (36.6)	296 (63.4)
5. When you experience only nose drainage, would you prefer going to Doctor?	259 (55.5)	208 (44.5)
6. Do you think home remedies are enough to manage cold and cough?	255 (54.6)	212 (45.4)
7. Do you really care about your immune system to reduce the health problems?	104 (22.3)	363 (77.7)
8. Do you wear masks when applying any fertilizers on the farm?	171 (36.6)	144 (30.8)

Association of literacy level and knowledge on respiratory diseases

The study tells that there is a significant association between the literacy level of participants and knowledge score. All the responses were statistically significant with p-value less than 0.05.

Table 4: Association of literacy level and knowledge on respiratory diseases (n=467).

			Knowledge score			Total
			Poor	Average	Good	
Education	No education	Count	14	118	44	176
	Primary education	Count	7	52	38	97
	Secondary education	Count	7	55	86	148
	Degree	Count	0	5	36	41
	Any higher education	Count	0	1	4	5
Total		Count	28	231	208	467

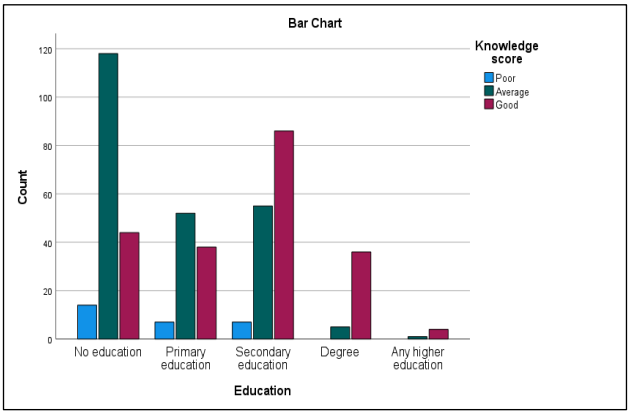

Figure 1: Association of literacy level and knowledge.

Figure 1 summarize that, there is a significant association between literacy level and knowledge with the p-value <0.05.

DISCUSSION

This current study is believed to be the first of its kind in south Karnataka region to assess the knowledge and attitude of village people towards respiratory diseases. Our study results noticed that the knowledge of most people towards the respiratory diseases was average (49.5%). Although the knowledge of the people was found to be average but their attitude towards the diseases was respectable because of various reasons which include the educational programs conducted in the village and various advertisements in Medias (television, radio and newspapers) to promote wellness. Participant's knowledge on the symptoms of TB was minimal and the common responses include cough, fever, weakness, and breathlessness.

The knowledge on the respiratory diseases is average among the respondents and literacy level was found to be one of the major factors contributing to knowledge. Generally, educating the public with an emphasis on respiratory health would take a lot of time and effort, especially in the developing countries such as India.

The study focused on respiratory diseases because four diseases namely heart, cancer, diabetes and chronic pulmonary diseases contribute to 80% of all deaths due to non-communicable disease and they share four common risk factors such as tobacco use, harmful use of alcohol, unhealthy diet and lack of physical activity.[8]

Although the people in the village have active life style but they tend to have respiratory diseases due to the reasons like use of biomass fuel, agarbattis, and smoking. Surprisingly only 48 (10.3%) participants found to be smokers in entire village.

Knowledge regarding respiratory disease

Similar studies conducted on the knowledge of the people towards respiratory disease showed variable results. The study conducted by Goni et al on the Hajj pilgrim's in Malaysia showed that out of 225 participants 56.0% showed satisfactory and 44.0% showed unsatisfactory knowledge on respiratory disease which is close to the finding of our studies.[9] Another study conducted on school going children's and their mothers in rural Maharashtra by Mutalik et al revealed that 51% of children had poor, 39.1% average and only 9.5% had good knowledge score whereas mothers had 68.9% poor, 6.8% average and 24.3% of knowledge score respectively.[6] Better response in our study could be due to enough educational qualification and more awareness on the respiratory disease.

Attitude towards respiratory disease

The study conducted in Tamil Nadu, India on rural population by Grace et al showed about 14.7% of participants had positive attitude and 85.3 % had negative attitude towards pulmonary tuberculosis.[10] The Mutalik et al concluded that most of the mothers in rural people had satisfactory attitude on the respiratory disease.[6] According to Gupta et al 28.57% participants suggested dust and allergy as the main reason for respiratory disease. The study also suggested that 42.85% of the patients used home remedies as preventive measures for respiratory disease, which is close to the results obtained from our studies.[11]

Association between literacy level and knowledge on respiratory disease

Our study showed that there is a significant association between literacy level and the knowledge on respiratory disease. Similarly, the study conducted by Luba TR et al also concludes that there is a significant associating of literacy level and knowledge which support our study.[12] The findings of our study are consistent with the studies conducted in Ethiopia, Nigeria, Uganda and shows the similar association.[13-15]

The limitation of the study was the poor response of the people during the process of data collection. However, the educational study might have been very useful and to educate the people on respiratory disease.

CONCLUSION

Although knowledge and attitude of the people towards the respiratory diseases is satisfactory, there is a need for long term educational programme to educate the people about respiratory diseases. The finding of this study can guide the public health authorities in making and implementing decisions to reduce the health problems related to respiratory diseases.

ACKNOWLEDGEMENTS

We would like to thank Principal Dr. B Ramesh, Sri Adichunchanagiri College of Pharmacy for his support throughout the study. Our gratitude to Dr. Shashikiran M, Associate Professor, Department of community medicine, AIMS for guidance and advice throughout the preparation of this study. We are very grateful for the cooperation provided by Dr. Rajesh V, Professor and Head, Department of pharmacy practice, Sri Adichunchanagiri College of Pharmacy.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee of Adichunchanagiri Institute of Medical sciences, BG Nagara, Mandya, Karnataka, India. IEC number: AIMS/IEC/191/2019-20

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Cite this article as: Satish KBP, Zuber M, Johns A, Vinod Kumar V. Knowledge and attitude of rural community towards the respiratory diseases. Int J Community Med Public Health 2020;7:4071-5.