KNOWLEDGE REGARDING LUNG CANCER RISK FACTORS
AMONG PEOPLE IN SOUTH INDIA: A COMMUNITY BASED STUDY
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Abstract: Worldwide, lung cancer and lung cancer deaths have been increasing in epidemic proportions, largely reflecting rates of smoking. Lung cancer is highly preventable if pre-cancer is diagnosed early through screening and cured treatment. In many rural community areas, people knowledge of lung cancer risk factors is limited and knew nothing about cancer screening. The knowledge of the people about risk factors of lung cancer plays a crucial role in safeguard the health and preventing diseases. A descriptive survey approach with non-experimental descriptive survey design was used for the study. The aim of the study was to assess the knowledge regarding lung cancer risk factors among community people. A structured knowledge questionnaire was used to collect the data. The data were collected by questionnaire method from 100 community people, who were selected using non-probability purposive sampling technique at Kinya rural community area Mangalore, India. Data collected from the subjects were analyzed using descriptive and inferential statistics. The results showed that the majority of the subjects (58%) had average knowledge, 20% had good knowledge, 20% had poor knowledge and only 2% of subjects had excellent knowledge and the findings of the study highlighted the significance of incorporating educational programmes to safeguard the health of the people and to reduce the risk of lung cancer.

Key Words: Knowledge; Lung cancer; South India; Information booklet.

I. INTRODUCTION
Air is essential for organisms to live; organisms do not produce energy in the absence of air. So organisms cannot live. Air contains about 20% of oxygen and 78% nitrogen. It also contains water vapour, hydrogen, carbon dioxide and inert gases. There is a chance to get lung diseases as well as cancer if we breathe polluted air.¹ According to recent World Health Organization report, more women in India are diagnosed with cancer. 4.77 lakhs men, 5.37 lakhs women were diagnose with cancer in 2012. In terms of cancer deaths the mortality rate among the men and women in India is almost the same while 3.5 lakhs men died of cancer in India, the corresponding number of women was 3.26 lakhs. The most commonly diagnosed cancer worldwide is lung cancer that is (1.8 million, 13% of total) breast (1.7 million, 11.9%) and colorectal (1.4 million, 9.7%). The most common causes of cancer death were cancers of the lung (1.6 million, 19.6 of the total) liver (0.8 million, 9.1%) and stomach (0.7 million 8.8%). In Karnataka there would be about 1.5 lakhs cancer cases at given time. In cases 35,000 new cancer cases are added to this pool each year. Cancer is reported in every year and two people die every year due to tobacco related diseases in Bangalore.² Cigarette smoking is the number one cause of lung cancer. Lung cancer also can be caused by using other types of tobacco (such as pipes or cigars), breathing second hand smoke, being exposed to substances such as asbestos or radon at home or work, and having a family history of lung cancer.³ Every year more than thirty thousand people lose their lives to lung cancer. Although some progress has been made, we urgently need to do more to change this grim statistic and are committed to increasing our efforts to improve lung cancer survival over the coming years. Smoking causes more than eight out of ten cases of lung cancer, and many thousands of lives could be saved if more smokers kicked the habit.⁴ A study conducted on use of cigarettes prevalence and knowledge of health effects in Bangladeshi patients by using Bilingual postal questionnaires among 360 adults. The findings showed that prevalence of smoking is 82% men were more likely to smoke than women and 80% of both male and female respondents were identified with the health risk of smoking. The study concluded that majority of Bangladeshi respondents were unaware of health risks of a common social habits.⁵ A study was conducted to examine the effects of different tobacco consumptions forms including smoking on lung cancer risk of men in southern India with objective to compare the effect of beedi smoking to cigarette smoking on lung carcinogenesis among 778 lung cancer cases and 3430 control groups and also 1503 cancer
control and 1927 healthy control groups were taken under study. The study revealed that beedi smoking had a stronger carcinogenesis effect than cigarette smoking in the incidence of Lung cancer. A case control study was conducted on Environment risk factors for lung cancer in Iran on 2002-2005 October. The samples were 242 patients (178 males and 64 females) with histologically confirmed lung cancer. Among the samples, in experimental 85.4 percentage males and 14.1% females (overall 66.5%) were smokers. The study revealed that 76.3% lung cancer patients were females exposed to passive smoking. The result revealed that exposure to inorganic dust (P<0.001), chemical compounds (P<0.0001) and heavy metals (P=0.003) were significantly associated with lung cancer and among non smoker lung cancer patients, exposure to inorganic dusts (P=0.01) and chemical compounds (P=0.01) remained risk factors. The study concluded that smoking and preventable behavioural and environmental factors are responsible for most lung cancer. A study conducted in 2006 included the multiple risk factors possibly associated with lung cancer as part of a large-scale residential radon case–control in Iowa between 1994-97. The samples included 413 female lung cancer cases and 614 controls aged 40–84, who were residents of their current home for at least 20 years. Multiple logistic regression analysis was conducted after adjusting for age, education, and cumulative radon exposure. The results showed that active cigarette smoking was the major risk factor for lung cancer. While cessation of smoking was significantly associated with a reduced risk for lung cancer the risk. Among all cases, asbestos exposure was a significant risk. Among ex-smokers, pack-year history predominated as the major risk. Among never smokers, a family history of kidney or bladder cancer were significant risk factors (OR = 7.34, 95% CI = 1.91–28.18; and OR = 5.02, 95% CI = 1.64–15.39, respectively), as was a history of previous lung disease (OR = 2.28, 95% CI = 1.24–4.18) and asbestos exposure. The study concluded that smoking prevention activities are urgently needed in rural areas of the United States. A study was conducted to assess knowledge above smoking related risk for diseases among publics including smokers in Japan. Objective was to determine whether ordinary citizen in Japan understand the risk of diseases caused by smoking. The sample size was 436, in that 243 never smokers 119 former smokers 74 current smokers. The study result shows that 89% has answered that smoking is harmful to the health and 95% had mentioned that is causally related to lung cancer. Although many people partly understand risk of smoking but they do not have a clear knowledge of the risk of lung cancer along with other associated diseases. The study concluded that education about the risks of smoking and about smoking cessation is strongly recommended to prevent the incidence. A study conducted to assess the awareness level on smoking habits as risk factors for cancer among lung cancer patients in Kolkata among 270 patients with lung cancer and 200 health visiting male control group and standardized questionnaire was used. The findings showed that smokers were at high risk of disease than non smokers with a direct relation between duration and number of smoking. The study concluded that awareness level towards tobacco smoking reveals poor response among the subjects.

II. MATERIALS AND METHODS
A descriptive approach with non-experimental descriptive survey design found to be appropriate and selected for this study. After obtaining ethical committee approval and formal permission from the concerned authority, the data were collected from 100 community people. A non-probability purposive sampling technique was used to select the subjects and written informed consent was obtained from them. The data were collected using Demographic Proforma and The Structured Knowledge Questionnaire at Kinya rural community area Mangalore, India.

III. RESULTS
Section I: Demographic data
About 28% of the study subjects belonged to the age group of 26-37 years, 62% were of female gender, 42% were unmarried, 60% were had high school education, 80% were not having the habit of smoking and 82% of subjects were not having the previous knowledge about lung cancer.

Section II: Distribution of subjects according to their level of knowledge on lung cancer risk factors.
Majority of the subjects (58%) had average knowledge, followed by good and poor knowledge for 20% each and 2% of the subjects had excellent knowledge on lung cancer risk factors.

Table 1: Area-wise mean, standard deviation and mean percentage of the knowledge scores

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Knowledge aspects</th>
<th>Mean</th>
<th>SD</th>
<th>Mean (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Basic information of lung cancer</td>
<td>1.59</td>
<td>1.413</td>
<td>53.00</td>
</tr>
<tr>
<td>2.</td>
<td>Risk factors of lung cancer</td>
<td>10.23</td>
<td>3.037</td>
<td>4.92</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>11.82</td>
<td>4.450</td>
<td>42.14</td>
</tr>
</tbody>
</table>

The data presented in the table 1 shows that the mean percentage of knowledge scores was 42.14%, which indicates, that there was an average level of knowledge on lung cancer risk factors among community people.

Section III: Association between Knowledge and selected demographic variables

There is no significant association between the knowledge scores and selected demographic variables. Thus it is interpreted that level of knowledge is not influenced by demographic variables.

IV. DISCUSSION

In this study majority of the subjects (58%) had average knowledge, 20% had good and poor knowledge respectively and only 2% subjects had excellent knowledge on lung cancer risk factors. The mean percentage of knowledge score was 42.14%. The findings were consistent with the study of Chien-Hunge Lee, Ying-Chin KO et al. which was conducted in Taiwan to investigate the effects of cumulative environmental exposure to tobacco smoke during childhood, adult life on lung cancer risk among non-smoking women among 268 eligible cases and 445 controlled cases. The results showed that highest exposure occurred during adult life (≥19 years) 62.5% to 62.7% was 2.2 fold (95% CI: 1.4-3.7) higher among the women being never exposed to ETS. 11

V. CONCLUSION

The following conclusions were drawn on the basis of the findings of the study:

- Majority of the subjects (58%) had average knowledge, followed by good and poor knowledge for 20% each and 2% of the subjects had excellent knowledge on lung cancer risk factors.
- There is no significant association between the knowledge scores and demographic variables. Thus it is interpreted that level of knowledge is not influenced by demographic variables.

VI. REFERENCE


VII. ACKNOWLEDGEMENT

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Conflict of Interest

The authors declare that they have no competing interest.