



Research Paper

## A Study to Assess the Effectiveness of Structured Teaching Program on Warning Signs of Lung Cancer among General Public at Selected Community Area Puducherry

M. Yamunambigai<sup>1</sup>, V. Subash Raj<sup>2</sup> & Dr. G. Muthamilselvi<sup>3</sup>

<sup>1</sup>Assistant Professor in Department of Community Health Nursing, SMVNC, Puducherry

<sup>2</sup>B.Sc.(Nursing) IV year, Sri Manakula Vinayagar Nursing College, Puducherry

<sup>3</sup>Principal, Department of Obstetrics and Gynecological Nursing, Sri Manakula Vinayagar Nursing College, Puducherry – 605 107

**Abstract:** Lung cancer is a type of cancer that starts when abnormal cells grow in an uncontrolled way in the lungs. It is a serious health issue that can cause severe harm and death. Symptoms of lung cancer include a cough that does not go away, chest pain and shortness of breath. The main objective of the study assess the effectiveness of structured teaching program regarding warning signs of lung cancer among general public. The research approach used for this study was quantitative research approach. A pre-experimental one group pre-test and post-test research design was adopted for this present study. By using purposive sampling technique, 50 general public were selected for the present study. The present study reveals Out of 50 samples, 24(48%) of them have inadequate knowledge, 26(52%) of them have moderate knowledge out of 50 samples, 4(8%) of them have inadequate knowledge, 45(90%) of them have moderate knowledge and 1(2%) of them only had adequate knowledge The findings reveal that mean (11.5) and standard deviation (2.45) of effectiveness structured teaching program on warning signs of cancer among general public. The study findings concluded that that the Structured Teaching Program was e effectiveness structured teaching program on warning signs of lung cancer among general public at selected community area

**Keywords:** Lung cancer, warning signs, structured teaching program.

Received 14 June, 2024; Revised 25 June, 2024 Accepted 28 June, 2024 © The author(s) 2024.  
Published with open access at [www.questjournals.org](http://www.questjournals.org)

### I. Introduction:

Lung cancer is the world's leading cause of cancer-related death and it is estimated that 10– 25% of all diagnoses are made in individuals who have never smoked. Lung cancer in never smokers (LCINS) is the 7th leading cause of cancer death for men and women worldwide. The widely accepted definition of a 'never-smoker' (NS) is an individual who has smoked less than 100 cigarettes in their lifetime. In the UK, LCINS is responsible for an estimated 6000 deaths per year making LCINS the 8th most common cancer in the UK if considered as a distinct disease entity. The demographic of LCINS differs significantly from lung cancer occurring in the smoking population; the majority of cases occurring in women, presenting at a younger age commonly adenocarcinomas with significantly higher frequencies of driver mutations. For the majority of LCINS symptoms are non-specific, often dismissed by patients and primary healthcare providers, meaning patients have advanced disease at presentation with a significant proportion diagnosed at emergency presentation. Although, survival for LCINS appears better than for the smoking population in prospective studies, it remains disappointingly low.

There are few robust studies specific to the LCINS population making data surrounding the incidence and mortality of LCINS incomplete, leaving many gaps in our understanding of the needs of this population. A review of the UK Lung Cancer trial portfolio (January 2023) showed that of 150 'open' studies none are exclusively focused on the LCINS population. Having identified the paucity of specific research focused on LCINS the Steering Committee of the National Cancer Research Institute's Lung Group (NCRI-LG) recognised that specific needs of this population are likely to be different to the smoking lung cancer populations and set out to understand those needs through a survey and research strategy day. Recognising that they may be specific needs at all stages of the patient journey we elected to take an open approach using responses to the on-line

survey taking specific needs highlighted by multiple responders forward for a more detailed review on the strategy day. We have structured this report around 4 key themes identified through this process.

### **Treatment and care**

Treatments for lung cancer are based on the type of cancer, how much it has spread, and the person's medical history. Early detection of lung cancer can lead to better treatments and outcomes. Treatments include: surgery radiotherapy (radiation) chemotherapy targeted therapy immunotherapy. Surgery is often used in the early stages of lung cancer if the tumour has not spread to other areas of the body. Chemotherapy and radiation therapy can help shrink the tumour. Doctors from several disciplines often work together to provide treatment and care of people with lung cancer. Supportive care is important for people with lung cancer. It aims to manage symptoms, provide pain relief, and give emotional support. It can help to increase quality of life for people with lung cancer and their families.

### **Stages of care**

**Early stage disease:** The primary treatment for early stage lung cancer (i.e. tumour limited to the lung, with no metastatic dissemination to distant organs or lymph nodes) is surgical removal of the tumour through procedures such as lobectomy, segmentectomy, or wedge resection. Neoadjuvant therapy (chemotherapy and/or radiation therapy before surgery) can help reduce tumour size, making it more manageable for surgical removal. Adjuvant treatment (chemotherapy and/or radiation therapy) is very often recommended after surgery to reduce the risk of cancer recurrence. In cases where surgery is not feasible, radiation therapy or stereotactic body radiation therapy (SBRT) may be used as the primary treatment. Targeted therapy and immunotherapy may also be considered based on specific tumour characteristics. Individualized treatment plans should be discussed with healthcare professionals.

**Advanced disease:** The treatment for metastatic stage lung cancer, where the cancer has spread to distant organs or lymph nodes, is based on various factors, including the patient's overall health, the extent and location of metastases, histology, genetic profile, and individual preferences. The primary goal is to prolong survival, alleviate symptoms, and improve quality of life. Systemic therapies, such as chemotherapy, targeted therapy, and immunotherapy, play a crucial role in the treatment of metastatic lung cancer.

Chemotherapy is often the first-line treatment for the majority of patients around the world and involves the use of drugs that circulate throughout the body to kill cancer cells. Combination chemotherapy regimens are commonly used, and the choice of drugs depends on factors such as the histological type of the cancer and the patient's general health conditions. Targeted therapy, designed to block the signalling pathways that drive the growth of cancer cells, is an important option for patients with specific genetic mutations or biomarkers identified in their tumour. Immunotherapy, specifically immune checkpoint inhibitors, has revolutionized the treatment of metastatic lung cancer. These drugs help to stimulate the immune system to recognize and attack cancer cells. Local treatments, such as radiation therapy and surgery, may be used to manage specific metastatic sites or alleviate symptoms caused by tumour growth.

### **NEED FOR THE STUDY**

Lung cancer is the most frequent malignant disease and most common cause of cancer death in the world with 1.18 million deaths. Almost half (49.9%) of the cases occur in the developing countries, a big change since 1980, when it was estimated that 69% were in developed countries. Worldwide, it is the most common cancer in men, with highest rates observed in North America and Europe (especially Eastern Europe). In women, incidence rates are lower with a global rate of 12.1 per 100,000 compared to 35.5 per 100,000 in men. Mortality from lung cancer remains very high in the world. The average survival at five years in the united states is 15% , in Europe is 10% and in developing countries is 8.9% .

Lung cancer has been well co-related with smoking but high frequency of lung cancers cases (25%) are non-smokers. Development of malignancy of lung is a multifactorial interacting process. Many suspect factors are contributory cause for development of lung cancer in non- smokers. Humans are exposed to organic and inorganic pollutant through environmental and occupational sources. Epidemiological evidences shows link between exposure to occupational and non-occupational pollutants and risks of cancer. The main occupational exposures occur in workers who are engaged in smelting and refining of metals, production of pesticides, pigments, dyes, glass, semiconductors, wood/ cotton products and various pharmaceutical substances. Non-occupational exposures mostly occur due to outdoor air pollution including residence near major industrial emission sources, asbestos, in-door air pollution, arsenic in drinking water, chlorinated by-products in drinking water, dioxins and electromagnetic fields

India has the population of 366.58 million women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 1, 32,082 women are diagnosed with cervical cancer and 74,118 die from the disease. Cervical cancer ranks as the first most frequent cancer among

women in India, and the first most frequent cancer among women between 15 and 44 years of age. About 7.9 % of women in general population are estimated to harbour cervical cancer is attributed to HPV s 16 or 18. Early detection of cancer of cervix by Pap smear at the age of 20 years is useful as regular screening by Pap smear having brought down the incidence of invasive disease and their problem in younger women.

#### **STATEMENT OF THE PROBLEM**

#### **A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON WARNING SIGNS OF LUNG CANCER AMONG GENERAL PUBLIC AT SELECTED COMMUNITY AREA PUDUCHERRY**

#### **OBJECTIVES OF THE STUDY**

To assess the effectiveness of structured teaching program regarding warning signs of lung cancer among general public.

- To evaluate the effectiveness of structured teaching program on warning signs of lung cancer among general public
- To associate the effectiveness of structured teaching program as warning signs of lung cancer among general public with their selected demographic variables.

#### **RESEARCH METHODOLOGY:**

##### **RESEARCH APPROACH:**

A quantitative research approach was selected for this study.

##### **RESEARCH DESIGN:**

The pre-experimental one group pre-test and post-test research design was adapted for this study.

##### **POPULATION:**

The population of the study was general public at selected community area Puducherry.

##### **SAMPLE:**

The sample of the study was general public at selected community area Puducherry.

##### **SAMPLE SIZE**

The sample size of the study consists of 50 general public.

##### **SAMPLING TECHNIQUE:**

The purposive sampling technique was used for this study.

##### **RESEARCH VARIABLES:**

- Dependent variable:** warning signs of lung cancer among general public.
- Independent variable:** structured teaching program.

##### **CRITERIA FOR SAMPLE SELECTION: Inclusion criteria:**

- General public at selected community area Puducherry
- Those who are willing to participate in the study.
- Both gender male and female

##### **Exclusion criteria:**

- Those who have absent on the day of data collection.

##### **SETTING OF THE STUDY:**

The study was conducted at Kalitheerthalkuppam, Puducherry.

##### **DEVELOPMENT AND DESCRIPTION OF THE DATA COLLECTION TOOLS: Section A:**

Demographic variables such as age, gender, religion, educational status, occupational status, marital status, family income, dietary pattern source of information.

##### **Section B:**

Knowledge questionnaires to assess the effectiveness structured teaching program on warning signs of lung cancer among general public at selected community area Puducherry

All questionnaires will have one correct response each correct response was avoided one mark.

**SCORE INTERPRETATION:**

Level of knowledge was categorized as follows:

S.NO	LEVEL	SCORE
1	Inadequate	<-50%
2	Moderately adequate	50-75%
3	Adequate	>75%

**II. Major Finding**

The study result shows that out of the People who were interviewed, Majority of the People 18(36%) were in the age group above 30-40 years. Most of the People 34(68%) were females. .Most of the people 50 (100%) belongs to Hindu religion. Most of them, 19 (38%) are school. Majority of them working and private employee and took agriculture as their occupation 20 (40%). Majority of patient dietary pattern non vegetarian35 (70%). Most of the patient had knowledge about cancer 26 (52%). Majority of them married 42(84%) and belongs to joint family 43 (86%). Out of 50 samples, 24(48%) of them have inadequate knowledge, 26(52%) of them have moderate knowledge out of 50 samples, 4(8%) of them have inadequate knowledge, 45(90%) of them have moderate knowledge and 1(2%) of them only had adequate knowledge

**III. Results And Discussion**

Table 1 Shows that Frequency and percentage wise distribution of structured teaching program on warning signs of cancer among general public. Structured teaching program on warning signs of lung cancer among general public Out of 50 samples, 24(48%) of them have inadequate knowledge, 26(52%) of them have moderate knowledge now of them (0) have adequate knowledge. Structured teaching program on warning signs of lung cancer among general public out of 50 samples, 4(8%) of them have inadequate knowledge, 45(90%) of them have moderate knowledge and 1(2%) of them only had adequate knowledge

**Table 1: Frequency and percentage wise distribution of structured teaching program on warning signs of lung cancer among general public [N= 50]**

SCORING INTERPRETATION	SCORING			
	Pre test		Post test	
	F	%	F	%
Inadequate knowledge	24	48	4	8
Moderate knowledge	26	52	45	90
Adequate knowledge	0	0	1	2

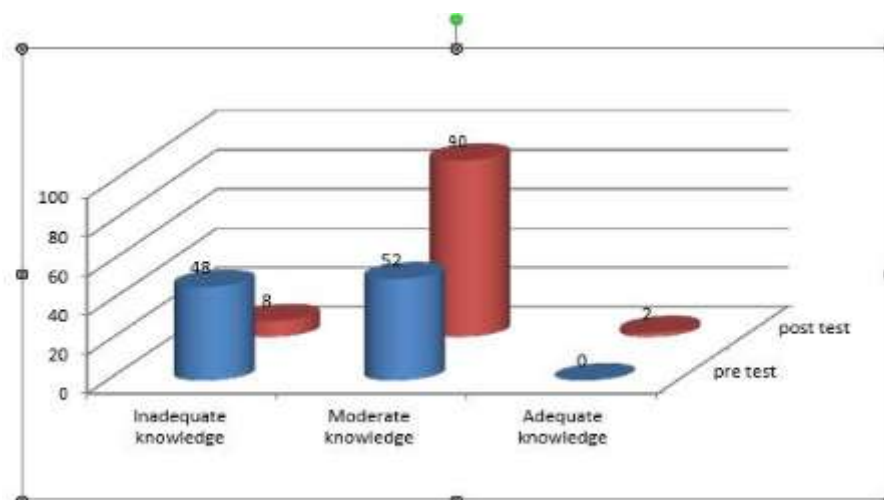


Figure 1: Frequency and percentage wise distribution of warning signs of lung cancer among general public

Table 2: Mean and Standard deviation of the warning signs of lung cancer among general public at selected community area [N = 50]

Variables	MEAN	STANDARD DEVIATION	Mean difference
Pre test	8.82	3.089	2.680
Post test	11.5	2.45	

Table 2 Shows that area wise mean and Standard deviation of the warning signs of lung cancer among general public at selected community area. The findings reveal that mean (8.82) and standard deviation (3.089) warning signs of lung cancer among general public. The findings reveal that mean (11.5) and standard deviation (2.45) of effectiveness structured teaching program on warning signs of cancer among general public.

Association on assess the effectiveness structured teaching program on warning signs of lung cancer among general public demographic variables. The chi square reveals that it is statistically association with Dietary plan belongs to significant  $*-p < 0.05$ , others are belongs to non-significance. It is functional demographic variables has non-significance the association at the level of  $p < 0.05$ .

#### IV. Conclusion:

From the study findings it is concluded that the Structured Teaching Program was e effectiveness structured teaching program on warning signs of lung cancer among general public at selected community area.

#### V. Recommendations:

- A similar study can be done using self-instructional module, information booklet and awareness campaign.
- This study can be replicated on larger sample to generalize the findings.
- A study can be conducted to compare the knowledge level among general public at selected community area.
- A similar study can be conducted on various general public to improve knowledge about warning signs of lung cancer.

#### Reference:

- [1]. Brunner and Suddarth. (2008), "Text book of medical and surgical nursing", 11<sup>th</sup> edition, 317-324, Philadelphia; Lippincott publishers.
- [2]. Pramelaj. Haylock., (2007), Cancer survivors prescription for living, cancer nursing 107 (4), 58-59, Philadelphia; Lippincott publishers.

- [3]. Lewis Sharon; Heitkempler et al., (2007) "Medical and Surgical nursing-Assessment and Management of Clinical problems, 7th Ed; Missouri: mosby Inc publishers; Pg-620-629.
- [4]. Meghan Shayhorn., (2008), Eliminating Cancer with the mind. Centre for the Advancement of Health. Retrieved Dec 9, 2009 from [http:// Serendip, Brynmawx, ed.](http://Serendip, Brynmawx, ed.)
- [5]. Park K., (2005), "preventive and social medicine", 18th Ed, Jabalpur, Bararsidas, Bhanot publishers.
- [6]. Pout. Denise F., (2004), "Nursing research principles and methods, Philadelphia; Lippincott publishers Williams and Wikings.
- [7]. Ahlberg, K., EKman, T., Gastoon., (2005), Fatigue, Psychological Distress, Coping resources and Functional status during radiation therapy for uterine cancer., *Oncology nursing forum*, 32(3), 633-40.
- [8]. Wendy H. Vogel et al. (2002), *Advanced Practice Oncology palliative care Guidelines*; Lippincott publishers Williams and Wikins., New York, pg 339-340.
- [9]. Nelson R. (2018). "Cancer Incidence Continues to Rise, Medscape". Pan, Y., Chieng, C. Y., Haris, A. A. H., & Ang, S. Y. (2017). Assessment of the level of knowledge of colorectal cancer among public at outpatient clinics in serdang hospital : A survey based study, 72(6), 338–344. 10.1186/1471-2407-13-376
- [10]. Polit DF & Hungler BP (1999). *Nursing Research Principles and Methods*", 6th Ed, Philadelphia: lippincot
- [11]. Ravichandran K., Mohamed G., Al-Hamdan N. A. (2010). Public knowledge on cancer and Its determinants among Saudis in the Riyadh region of Saudi Arabia. *Asian Pacific Journal of Cancer Prevention*, 11(5), 1175–1180. 10.7314/APJCP.2013.14.12.7045

### Journal Reference

- [1]. [https://www.nccn.org/patients/guidelines/content/PDF/lung\\_screening-patient.pdf](https://www.nccn.org/patients/guidelines/content/PDF/lung_screening-patient.pdf)
- [2]. <https://www.health.gov.au/sites/default/files/documents/2019/09/lung-cancer-screening-position-statement.pdf>
- [3]. : <https://www.nice.org.uk/process/pmg9>
- [4]. <https://www.cancer.gov/types/lung/patient/lung-screening-pdq>
- [5]. <https://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=274>
- [6]. U.S. Preventive Services Task Force. Lung Cancer: Screening. Recommendation Summary. USPSTF. Available online: <https://www.uspreventiveservicestaskforce.org/>
- [7]. Italian Ministry of Health. Piano Oncologico Nazionale 2023–2027. Available online: [https://www.salute.gov.it/imgs/C\\_17\\_pubblicazioni\\_3291\\_allegato.pdf](https://www.salute.gov.it/imgs/C_17_pubblicazioni_3291_allegato.pdf)
- [8]. National Cancer Institute. Lung Cancer Screening (PDQ)—Health Professional Version. Available online: <https://www.cancer.gov/types/lung/hp/lung-screening-pdq>
- [9]. American Cancer Society. What Causes Lung Cancer? Available online: <https://www.cancer.org/cancer/lung-cancer/causes-risks-prevention/what-causes.html>
- [10]. Ferlay, J.; Ervik, M.; Lam, F.; Colombet, M.; Mery, L.; Piñeros, M. Global Cancer Observatory: Cancer Today. [Updated 1 December 2020]. Available online: <https://gco.iarc.fr/today>