

A Descriptive Study to Assess the Knowledge on Prevention and Homecare Management of Lung Cancer Among Smokers in Selected Villages, Nellore

A.Latha¹, B.Sunitha², R. Sheela³, G.Bhavya Sree⁴, Telluru Aruna⁵

¹ Professor, Department of Medical & Surgical Nursing, Narayana Nursing College, Nellore, India.
manavalanlatha@gmail.com

² M.Sc Nursing, Department of Medical Surgical Nursing, Narayana Nursing College, Nellore, India.
Email: sunithavijaya757@gmail.com

³ M.Sc Nursing, Department of Pediatric Nursing, Narayana Nursing College, Nellore, India.
Email: rscool37@gmail.com

⁴ M.Sc Nursing, Department of Pediatric Nursing, Narayana Nursing College, Nellore, India.
Email: bhavyasree14396@gmail.com

⁵ M.Sc Nursing, Department of Obstetrics and gynecology, Narayana Nursing College, Nellore, India.
Email: arunasree25299@gmail.com

Abstract

The study has entirely focused on the lives of smokers of *Dhakilivari Palem Village* within Nellore district. It has been found that preventive measures have not been taken by them to get rid of lung cancer. This study has used different techniques, including correlation, standard deviation, and simple random method of sampling for conducting the survey authentically.

Keywords: Lung Cancer, Smoking, Risk Factors, And Preventive Measures

1. Introduction

Lungs are considered foundational organs that enable an exchange of gas amidst blood and the environment. Cancer refers to the situation in which cells of the body proliferate unchecked, and lung cancer occurs in the lungs. The Spread of this cancer can arise from different organs, and Lung cancer has commonly occurred due to smoking bidis and cigarettes in males of India [1]. However, the weak relation to smoking in Indian females indicates that other risk factors can be present besides smoking. The results of lung cancer have been poor in spite of several advancements in diagnostic methods, therapeutic interventions, as well as molecular transformations currently [2]. This study has focused on prevention along with homecare management possessed by lung cancer among smokers within some villages in Nellore. The study has been delimited to 100 smokers, "*Dhakilivari Palem Village*," and data from six weeks has been collected. This study will help improve the knowledge of the management of home care and prevention of cancer in the lungs among smokers.

2. Literature Review

Part I

P1. Commonness of Cancer in Lungs

[3] conducted a study on "*Small-cell lung cancers (SCLC)*" that accounted for approximately 15% of entire lung cancers. The risk of SCLC emerges due to the carcinogens

of cigarettes, and it has been found that 1/3rd of patients possess earlier-phase disease. Treatment can be done with "*curative multimodality therapy*," and most people keep metastatic disease. There has been an urgent necessity for delivering tailored drugs to those patients who have been likely to behave. A study was conducted by [4] on patients having 5% expression of PD-L1. No connection has been there between nivolumab with expanded *Progression-free survival (PFS)* and chemotherapy. It has been discovered from this study that Nivolumab increases PFS and "*Overall Response Rate (ORR)*" within patients. The patients in which these have been increased possess high *Tumor Mutation Burden (TMB)* as per outcomes of exploratory retrospective examination.

P2: Management of Home Care and Prevention of the Lung Cancer

There has been the utilization of the data from *the "American Cancer Society Cancer Prevention Study"* of follow-up of twelve years. This has been done on primary avoidance, smoking, and cessation of smoking in the study of [5]. Former smokers are more prone to lung cancer in the upcoming days, as per projected mortality rates. These smokers have paved the way for primary measures for prevention, including chemoprevention, and secondary measures for prevention, including screening.

Part II: Conceptual Framework

The model of health promotion refers to the positive and dynamic status of health that promotes health behavior. It results in advanced well-being, functional capability, and better life quality within all phases of development. The emphasis of this specific model is on three domains-

- Traits and experiences of individuals
- Affect and cognition specific to behavior
- Behavioral result

The basis of the conceptual framework is the theory of a general system having *input*, *throughput*, *output*, and *feedback*.

Input

The system is nursing students possess input after being within the system itself, as well as obtained from the surrounding. These variables of social demography are input age between 20 and 60 years, academic qualification, gender, income of family, and marital status. There has been the presence of residence and kind of family, as well as information sources are included within the input.

Throughput

The action necessitated accomplishing the delineated output that assessed the knowledge about the management of the home case and prevention of lung cancer. This has been done by the utilization of age within years, gender, academic qualification, and income of the

family. There has been an involvement of residence place, occupation, family type, and information source questionnaire.

Output

Output has been the feedback to the system and has assessed the knowledge about the management of homecare and prevention of lung cancer among smokers.

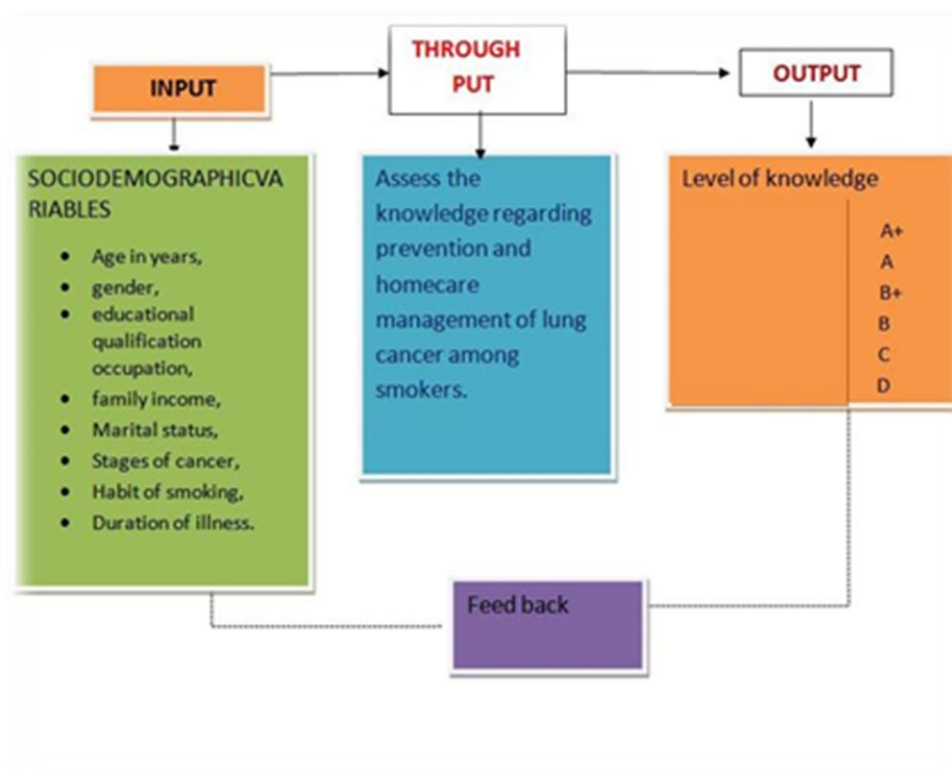


Figure 1: Conceptual Framework

3. Methodology

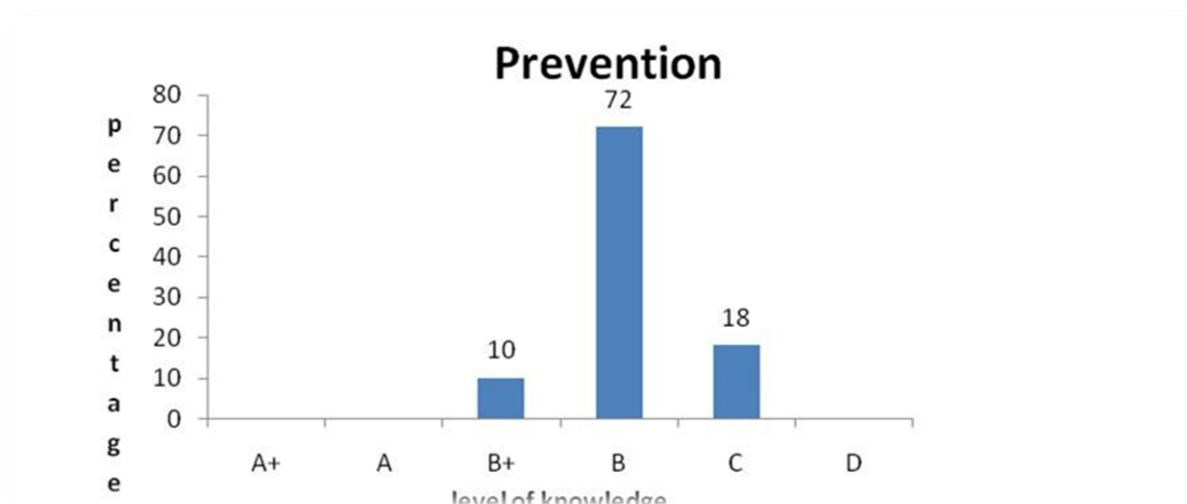
The approach of Quantitative Research has been utilized for assessing knowledge on the management of homecare and prevention of lung cancer among smokers. The adoption of a design of descriptive research that is cross-sectional has been used in this study. The study has been done within Dhakkilivari Palem in the Nellore District within AP. The net population has been 1095, and among them, 563 and 520 are males and females residing within 205 houses. All smokers are considered as the population for this study, and the accessible population has been 100 smokers in the middle age groups of 20 years to 50 years within Dhakkilivari Palem village. Smokers have been the sample by whom inclusion criteria have been fulfilled. 100 is the sample size, and the sampling technique of simple random has been adopted. Structured questionnaires have been used for assessing knowledge on the prevention and management of home care of lung cancer among smokers.

Data Analysis and Interpretation

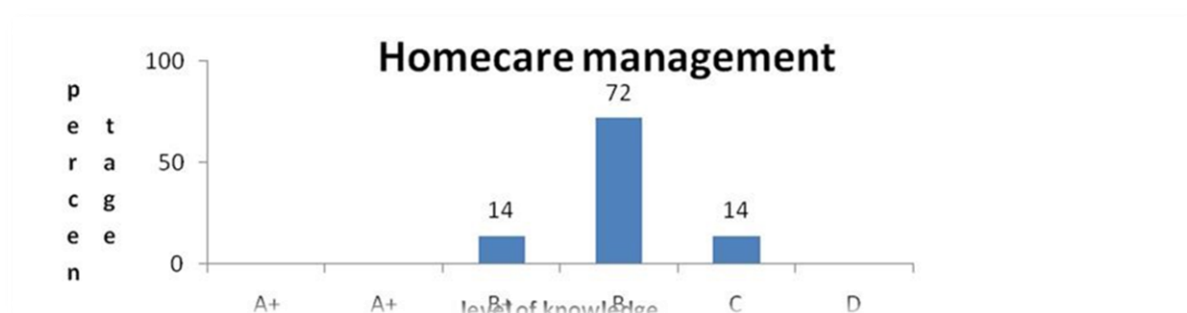
Table 1: Score Interpretation for Management of Homecare and Prevention
(Source: Self-made)

GRADE	SCORE
Grade A+	91-100%
Grade A	81-90%
Grade B+	71-80%
Grade B	61-70%
Grade C	51-60%
Grade D	=<50%

The score of every correct answer has been done as 1 and incorrect as 0. A selection of 10 respondents has been made for the Pilot Study utilizing a sampling technique of simple random. The data has been gathered within 20 to 30 minutes and has been analyzed, as well as tabulated utilizing inferential and descriptive statistics. It is discovered from the pilot study that there has been the feasibility of the tool for doing the survey.



Graph 1: Percentage Distribution of Lung Cancer Prevention



Graph 2: Percentage Distribution of Homecare Management

The above two graphs have demonstrated that B grade is 72 %, and hence, there has been a need of more knowledge in acquiring preventive measures and management of homecare.

Table 2: Mean and Standard Deviation of Prevention and Management of Homecare for Lung Cancer (Source: Self-Created)

CRITERIA	MEAN	STANDARD DEVIATION
Prevention	5.30	.969
Homecare Management	5.45	1.009

The mean score of prevention has 5.30 with Standard Deviation of 0.969, as well as, of homecare management has been 5.45 having Standard Deviation of 1.009.

Table 3: Correlation of Prevention and Management of Homecare for Lung Cancer (Source: Made by self)

CORRELATION	PREVENTION		HOMECARE MANAGEMENT		PEARSON CORRELATION & COEFFICIENT
	FREQUENCY (f)	PERCENTAGE (%)	FREQUENCY (f)	PERCENTAGE (%)	
A+	-	-	-	-	0.99
A	-	-	-	-	
B+	18	18	14	14	
B	72	72	72	72	
C	10	10	14	14	
D	-	-	-	-	

The correlation in the middle of management of homecare and prevention has been shown in the above table. 0.99 is Pearson Coefficient that depicts positive correlation amidst management of homecare and prevention of the lung cancer amidst Nellore district.

4. Discussion

It has been found that most people within rural areas in Nellore district are unaware of the adverse impact of smoking. It has been understood from the study that most of them are unconscious of the symptoms of lung cancer and its treatment.

5. Conclusion and Recommendation

It has been concluded from the study that there has been a need of making the people aware about the harmful impacts of smoking on lungs. The people in rural areas of Nellore district are not aware of preventive measures for lung cancers. This study can be conducted further with a big sample size.

References

- [1] Pt, S.C., Pt, N.I.C., Sheikh, M.K., Kahile, M. and Pande, S., 2023. Peak Expiratory Flow Rate In Bidi Smokers Of Rural Area Near Metro City: Observational Study. Journal of Survey in Fisheries Sciences, 10(4S), pp.3076-3081.
- [2] Rawal, S. and Patel, M., 2021. Bio-nanocarriers for lung cancer management: Befriending the barriers. Nano-Micro Letters, 13(1), p.142.

- [3] Wang, Y., Zou, S., Zhao, Z., Liu, P., Ke, C. and Xu, S., 2020. New insights into small-cell lung cancer development and therapy. *Cell Biology International*, 44(8), pp.1564-1576.
- [4] Zhou, Y., Zhang, Y., Guo, G., Cai, X., Yu, H., Cai, Y., Zhang, B., Hong, S. and Zhang, L., 2020. Nivolumab plus ipilimumab versus pembrolizumab as chemotherapy-free, first-line treatment for PD-L1-positive non-small cell lung cancer. *Clinical and Translational Medicine*, 10(1), pp.107-115.
- [5] McGeoch, L.J., Ross, S., Massa, M.S., Lewington, S. and Clarke, R., 2023. Cigarette smoking and risk of severe infectious respiratory diseases in UK adults: 12-year follow-up of UK biobank. *Journal of Public Health*, p.fdad090.