



Lung Cancer Counseling and Education Among the Elderly, Ledug Village, Kembaran, Banyumas

Andika Juwita Plorentina^{1*}, Elisabeth Gelu Huar¹, Hikmal Faris Ramadhan¹, M. Irhamnur Bagusya¹, Mario Fransisco Putra Tjiku¹, Revalina Aulia Rahma¹, Satria Nugraha Setya Kusuma¹, Indah Susanti², Asmat Burhan¹

¹DIV Nursing Anesthesiology, Faculty of Health Sciences, Universitas Harapan Bangsa

²School of Nursing, Faculty of Health Sciences, Universitas Harapan Bangsa

LUNG CANCER

Article History

Received: 4 June 2024

Revised: 19 June 2024

Accepted: 2 August 2024

*Corresponding author:

Asmat Burhan, S.Kep., Ns., S.Tr.Kes., M.Kep

Anesthesiology Nursing Study Program Undergraduate Program Faculty of Health Harapan Bangsa University, Indonesia Jl. Raden Patah No.100, Ledug, Kembaran, Purwokerto, Banyumas, Central Java, Indonesia.

Email: asmatburhan@uhb.ac.id



This work is licensed under a Creative Commons Attribution 4.0 International License.

Abstract

Background: In the two years leading up to GLOBACON 2020, the number of lung cancer fatalities in Indonesia jumped 18% to 30,843 persons, with the number of new cases reaching 34,783.

Purpose: This community service, as part of a health promotion initiative targeting the elderly, aims to prevent the transmission of lung cancer. **Methods:** This community duty involves seeking for permits, distributing material, and now licensing. After the program, participants' community service projects will be evaluated. The ledug village hall in kembaran, banyumas 29, will host this health education program on July 16, 2023. Health education methods can be presented through lectures, conversations, demonstrations, and re-demonstrations using handouts, PowerPoint presentations, notebooks, LCDs, projectors, pointers, and speakers. **Results:** An assortment of sixty senior citizens, comprising both men and women, engaged in a variety of community activities. The mean age of the subjects was 69.2+4.23, with a minimum age of 61 and a maximum age of 81. The proportion of women is 53.3%, whereas males make up 46.7%. Elementary school comprises 8.4% of the respondents' educational background, followed by college at 6.7%, high school at 43.3%, and middle school at 41.7%. Participants exhibited the practice of reducing both active and passive smoking during the public examination. **Conclusion:** On that particular day, the general population has the opportunity to engage with the content and decrease their cigarette intake as a means of preventing lung cancer.

Keywords: community service, education, elderly, lung cancer

Introduction

Malignant tumors of the lung, such as lung cancer, develop when normal tissue cells are destroyed and abnormal, uncontrolled cell proliferation occurs in the airway or bronchial epithelium. Worldwide, lung cancer is the most common cancer diagnosis, making up as much as one-fifth of all cancer cases. Furthermore, one-third of all cancer fatalities in males are attributed to lung cancer (Parris et al., 2019).

According to data from the World Health Organization (WHO), cancer was responsible

for 8.8 million deaths in 2015. The biggest number of deaths was attributed to lung cancer, with 1.69 million fatalities. Liver cancer followed with 788,000 deaths, colon cancer with 774,000 deaths, stomach cancer with 754,000 deaths, and breast cancer with 571,000 deaths. (Sung et al., 2021). The International Agency for Research on Cancer (IARC) collected statistics indicating that there were at least 1.8 million instances of lung cancer, accounting for 12.9% of all cancer cases worldwide. This makes lung cancer the most prevalent form of cancer globally. The majority of lung cancer cases (58%) are actually detected in underdeveloped nations (Chaitanya Thandra et al., 2021).

According to the Cancer Mortality Profile data published by WHO, the total number of cancer-related deaths in Indonesia was 195,300 individuals. Lung cancer accounted for 21.8% of these deaths. This data from the Global Burden Cancer report in 2012 highlights the significant impact of lung cancer on both men and women worldwide, particularly men. Lung cancer is the primary cause of mortality among men in Indonesia, with over 70% of cancer cases being detected only in advanced stages (Puspitaningtyas et al., 2021). Cigarette smoke is the primary factor behind lung cancer due to its composition of over 4,000 chemicals, including 63 types that are both carcinogenic and poisonous (Permitasari & Satibi, 2018).

Smoking is responsible for 80% of lung cancer cases among active smokers, whereas passive smokers face a 20% to 30% chance of developing lung cancer. Additional factors contributing to the development of lung cancer include exposure to radiation and the presence of air pollution (Kim et al., 2023). Lung-cancer is categorized into two distinct groups: primary lung cancer and secondary lung cancer. Primary lung cancer refers to cancer cells that originate specifically in the lung, whereas secondary lung cancer refers to cancer cells that have migrated from other parts of the body, such as breast cancer or colorectal cancer. There are two main forms of primary lung cancer: Small Cell Lung Cancer (SCLC) and Non-Small Cell Lung Cancer (NSCLC) (Romeo & Barreiro Arcos, 2023).

Metode

The approaches used in this community service research are a mix of integrated IT systems and Community-Based Research (CBR). At the Ledug Village Hall, an act of community service was performed. The senior citizens who attend these gatherings are the intended recipients of the educational materials distributed. Pengabdian uses Laptop LCDs and leaflets as their medium. It is necessary to educate the elderly about lung cancer through community anesthesia nurse intervention strategies that promote activities that effectively disseminate information and educate. The primary goal of this endeavor is to influence behavioral changes that will avert the development of lung cancer. Assisting a person in providing an activity or learning how to stimulate himself in a way that triggers to improve his consciousness will lead to an increase in his knowledge, attitudes, and abilities. As a result, individuals with lung cancer require nurse intervention in the healthcare system to help control the disease through promotion and prevention. The execution of educational services, as outlined below: Session 1 focused on educating about lung cancer through the use of educational videos, discussions, and evaluations. The session took place on July 16, 2023. The intervention media used included educational videos, leaflets, and flip sheets. Health cadres were trained in the application of the 7-table system posbindu PTM, with 3 training sessions

and 3 supervision sessions. Session 3: Health Screening involves the identification of risk factors for Pulmonary Tuberculosis utilizing the support group technique by health cadres within the community. Additionally, there will be a demonstration and re-demonstration of education on how to properly fill out google forms within the community. Session 4 will include the delivery of comprehensive information on lung cancer, including its knowledge, causes, underlying mechanisms, signs and symptoms, as well as preventive measures.

Results

Table 1. Age characteristics of lung cancer community service in the elderly

Variable	N	Missing	Mean	Median	SD	Minimum	Maximum
Age	60	0	69.2	69.0	4.23	61	81

Based on table 1. Shows that the average age of patients is 69.2 years with a standard deviation of 4.23, with the lowest age of 61 years and the oldest age of 81 years. With this it is confirmed that the average age of the elderly is 69.2 years old.

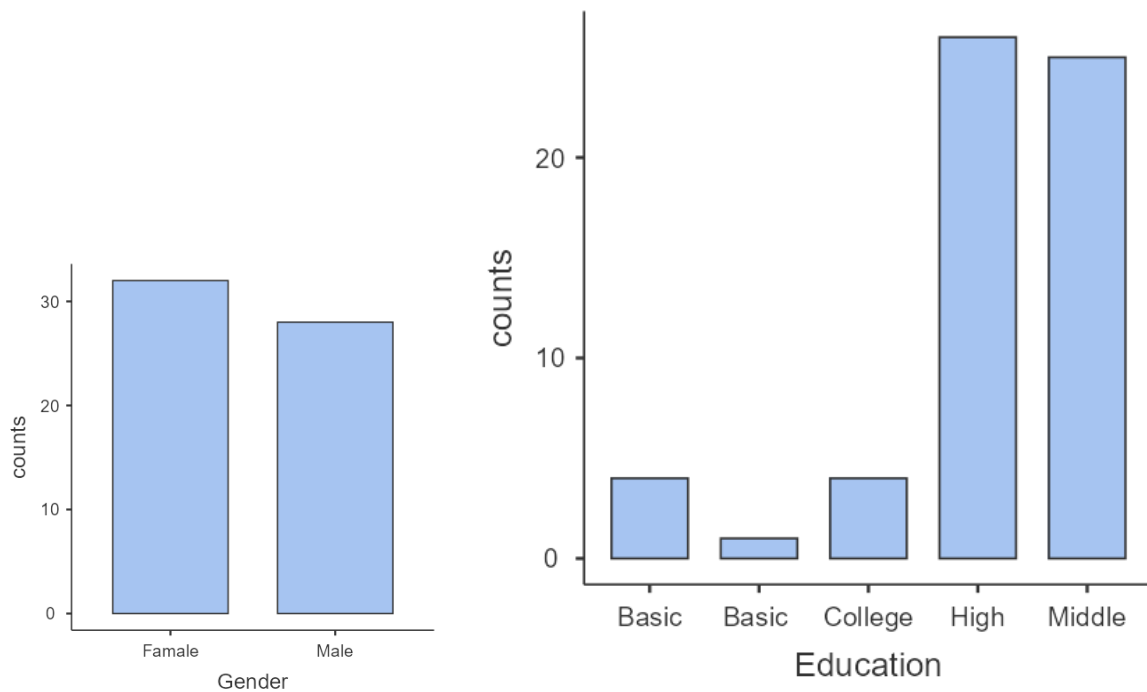


Figure 1. Gender characteristics and education level of respondents

Based on Figure 1. Shows that female gender is more likely to fulfill community service by 53.3% while men are 46.7%. In the education of respondents, elementary school data shows 8.4%, College 6.7%, High school 43.3% and Middle School 41.7%.



Figure 2. Presentation and discussion on lung cancer

Discussions

The findings of this counseling activity revealed that all 60 older individuals who participated comprehended the offered material. This is evident as the older individuals are actively engaging with and absorbing the information presented by the counseling speaker. The older individuals express enthusiasm and gratitude for the information shared, as it enhances their understanding of the risks associated with lung cancer. A significant number of lung cancer patients are diagnosed at an advanced stage. A significant number of individuals diagnosed with lung cancer experience pain. The presence of pain in individuals might significantly diminish their overall quality of life (Zigman Suchsland et al., 2022).

When someone receives a cancer diagnosis, they typically assume that the cancer they have is a chronic medical condition that has a highly unpleasant and even terrifying impact. This can range from a decline in physical well-being to the potential for mortality caused by the disease (Vrinten et al., 2017). There is a strong correlation between smoking and the occurrence of lung cancer. Tobacco consumption is a significant contributing factor to the development of lung cancer. Cigarettes contain carcinogens and carcinogenic chemicals. Smokers have a 20-fold higher chance of developing lung cancer compared to non-smokers (Hussain et al., 2019). The prevalence of lung cancer in individuals who smoke is impacted by the age at which they initiated smoking, the daily cigarette consumption, the duration of smoking, and the smoking technique employed. When a smoker quits smoking, it takes around 10-13 years for their risk of health issues to become equivalent to that of individuals who have never smoked (Yoo et al., 2022). Factor analysis aims to identify correlations among a set of initially independent variables, with the goal of creating a smaller number of variable sets. For instance, in the case when there are 10 variables that are not influenced by each other, factor analysis has the potential to condense them into just 3 distinct sets of variables. The collection of variables is referred to as a factor, which retains the characteristics of the original variables (Kyriazos & Poga, 2023).

Conclusions

The outcome of this service activity is that health counseling can assist the aged in understanding the onset and prevention of lung cancer, as well as providing a comprehensive overview of the hazards associated with lung cancer. It is expected that the elderly will refrain

from engaging in risk factors, such as smoking, which is commonly practiced among older individuals, in order to prevent the development of lung cancer.

Acknowledgements

Anyone who has offered advice or helped with this study, as well as everyone who has taken part in it, should be thanked by the researcher. The researcher is also grateful to the health science professors and staff at Bina Bangsa University who helped direct and support the research.

References

- Chaitanya Thandra, K., Barsouk, A., Saginala, K., Sukumar Aluru, J., & Barsouk, A. (2021). Epidemiology of lung cancer. *Współczesna Onkologia*, 25(1), 45–52. <https://doi.org/10.5114/wo.2021.103829>
- Hussain, A., Dulay, P., Rivera, M. N., Aramouni, C., & Saxena, V. (2019). Neoplastic Pathogenesis Associated with Cigarette Carcinogens. *Cureus*. <https://doi.org/10.7759/cureus.3955>
- Kim, J., Song, H., Lee, J., Kim, Y. J., Chung, H. S., Yu, J. M., Jang, G., Park, R., Chung, W., Oh, C.-M., & Moon, S. (2023). Smoking and passive smoking increases mortality through mediation effect of cadmium exposure in the United States. *Scientific Reports*, 13(1), 3878. <https://doi.org/10.1038/s41598-023-30988-z>
- Kyriazos, T., & Poga, M. (2023). Dealing with Multicollinearity in Factor Analysis: The Problem, Detections, and Solutions. *Open Journal of Statistics*, 13(03), 404–424. <https://doi.org/10.4236/ojs.2023.133020>
- Parris, B. A., O'Farrell, H. E., Fong, K. M., & Yang, I. A. (2019). Chronic obstructive pulmonary disease (COPD) and lung cancer: Common pathways for pathogenesis. *Journal of Thoracic Disease*, 11(S17), S2155–S2172. <https://doi.org/10.21037/jtd.2019.10.54>
- Permitasari, N. P. A. L., & Satibi, S. (2018). National Burden of Cancers Attributable to Secondhand Smoking in Indonesia. *Asian Pacific Journal of Cancer Prevention*, 19, 1951–1955. <https://doi.org/10.22034/APJCP.2018.19.7.1951>
- Puspitaningtyas, H., Espresso, A., Hutajulu, S. H., Fuad, A., & Allsop, M. J. (2021). Mapping and Visualization of Cancer Research in Indonesia: A Scientometric Analysis. *Cancer Control*, 28, 107327482110534. <https://doi.org/10.1177/10732748211053464>
- Romeo, H. E., & Barreiro Arcos, M. L. (2023). Clinical relevance of stem cells in lung cancer. *World Journal of Stem Cells*, 15(6), 576–588. <https://doi.org/10.4252/wjsc.v15.i6.576>
- Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209–249. <https://doi.org/10.3322/caac.21660>
- Vrinten, C., McGregor, L. M., Heinrich, M., Von Wagner, C., Waller, J., Wardle, J., & Black, G. B. (2017). What do people fear about cancer? A systematic review and meta-synthesis of cancer fears in the general population. *Psycho-Oncology*, 26(8), 1070–1079. <https://doi.org/10.1002/pon.4287>
- Yoo, J. E., Han, K., Shin, D. W., Jung, W., Kim, D., Lee, C. M., Kwon, H., Jung, K., & Song, Y. (2022). Effect of smoking reduction, cessation, and resumption on cancer risk: A



nationwide cohort study. *Cancer*, 128(11), 2126–2137.
<https://doi.org/10.1002/cncr.34172>

Zigman Suchsland, M., Kowalski, L., Burkhardt, H. A., Prado, M. G., Kessler, L. G., Yetisgen, M., Au, M. A., Stephens, K. A., Farjah, F., Schleyer, A. M., Walter, F. M., Neal, R. D., Lybarger, K., Thompson, C. A., Achkar, M. A., Sarma, E. A., Turner, G., & Thompson, M. (2022). How Timely Is Diagnosis of Lung Cancer? Cohort Study of Individuals with Lung Cancer Presenting in Ambulatory Care in the United States. *Cancers*, 14(23), 5756. <https://doi.org/10.3390/cancers14235756>