

Investigation Factors Affecting Elderly Awareness of Smoking Stopping

Helprida Sihite¹, Sari Siregar², Nova Sontry Node Siregar³, Debora N Simamora⁴, Fransiska Debataraja⁵

^{1,2,3,4,5} Sekolah Tinggi Ilmu Kesehatan Kesehatan Baru, Doloksanggul, Sumatera Utara, Indonesia

ARTICLE INFO

ABSTRACT

Keywords:

elderly, family support, knowledge, Smoking, source of information

Smoking behavior remains a global health issue due to its connection to various diseases and even death. Understanding the factors influencing elderly awareness to quit smoking is crucial for public health interventions. A study conducted in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency, aimed to analyze factors affecting the elderly's awareness to quit smoking. The factors explored included knowledge, sources of information, age, work, and family support. The study used a cross-sectional design with an analytic descriptive quantitative approach and involved 41 elderly men in the village. The results showed that 85.4% of the participants had good knowledge, 87.8% had a good source of information, 87.8% had good family support, and 90.2% were aged between 60 and 79 years. The Chi-Square test revealed no significant relationship between knowledge factors, sources of information, family support, age, occupation, and elderly awareness to stop smoking ($P > 0.05$). Based on these findings, the study concluded that factors such as knowledge, sources of information, family support, age, and work do not significantly affect the awareness of the elderly to stop smoking in the village of Bonan Dolok I. It is recommended for further research to consider other factors such as personal motivation, mental health, and social influence in designing interventions to increase awareness of stopping smoking in the elderly population

Email :

Helprida.sihite@stikeskb.ac.id
nova.siregar@stikeskb.ac.id

Copyright © 2023 Journal Eduhealth. All rights reserved is Licensed under a Creative Commons Attribution- Non Commercial 4.0 International License (CC BY-NC 4.0)

1. INTRODUCTION

Health is a very important thing to be the main concern for parents or elderly age. In other words the elderly need to pay enough attention to their health (David Royyifi Arifin et al., 2019). An increase in age decreases physical condition and causes vulnerability to disease. One of the factors that can affect health, especially in the elderly because of unhealthy lifestyles such as smoking Akbarzadeh et al., 2016. Elderly people who smoke have a higher risk of malnutrition compared to those who do not smoke. Weight loss in the elderly has a very significant impact, and this can be the main cause of the emergence of nutritional lack problems (Maeda et al., 2020). Some studies have shown a correlation between smoking and food consumption patterns, which indicate that smoking can reduce hunger and inhibit appetite, causing a decrease in health in the elderly. Epidemiological evidence shows that health problems associated with the elderly affect the majority of global populations. One of the main epidemiological trends in this era is an increase in chronic diseases that are more common in the elderly than in the younger generation. The process of weakness, as an indicator of decreased multi-system function, changes the cumulative relationship between air pollution and lung health. In addition, the condition of existing diseases can be a determinant of the level of vulnerability. In the elderly population, the impact of accompanying diseases can make exposure to air pollutants fatal potential. Rapid and irregular urbanization is related to high levels of air pollution, especially those caused by motor vehicle gas emissions. In general, there is several evidence that shows the negative impact of exposure to air pollution in the short term, although research that pays attention to the long-term impact on health is still limited. Increased levels of exposure to air pollution have been associated with increased mortality, hospitalization, and visits to emergency units, especially related to chronic disease exacerbations or respiratory infections such as pneumonia (Simoni et al., 2015).

In 2020, approximately 22.3% of the global population used tobacco. In more specific figures, 36.7% of the male population worldwide uses tobacco, while only 7.8% of the female population uses tobacco. The number of smokers will continue to decline until it reaches 35 million people in 2025 even though the world population continues to increase (World Health Organization, 2020). The World Health Organization (WHO) 2022 recorded the number of active smokers in Indonesia at 72,723,300 people and this number is expected to increase in 2025 to 96,776,800 smokers. Tobacco is a slow-acting, hidden, but most dangerous poison. Each cigarette contains an average of 600 different chemicals and more than 7,000 chemical compounds are produced from cigarette smoke. The World Health Organization (WHO) estimates that in the 2020-2030 period, smoking will cause 10 million deaths per year, with 70% of this percentage occurring in developing countries. Indonesia has 60.8 million adult male smokers and 3.7 million adult female smokers. The prevalence of smoking behavior in Indonesia shows an increase. Based on Basic Health Research (Riskesmas), the national prevalence of smokers is 34.7% of men who engage in smoking behavior. This can endanger the health of smokers and can also damage the health of the surrounding environment (Misbakhul, 2019). The prevalence of smokers over 15 years old nationally is 62.9%, but in North Sumatra Province the prevalence of smokers is 68.0%, with the national smoker prevalence being 4.8% and North Sumatra Province being 11.5%. Based on the data above, it is known that there is a high number of smokers in North Sumatra, both men and women, in the youth and adult groups. More specifically, based on the latest BPS update, the prevalence of smokers in Humbang Hasundutan in 2020 with an age range of 15-24 years was 13.80%, 25-34 years 44.32%, an age range of 35-44 years was 43.70%, between 45 - 54 years is 37.79%, 55-64 years is 34.54% and over 65+ is 13.37 (Badan Pusat Statistik, 2021). So exposure to cigarette smoke is increasingly experienced by at-risk population groups, resulting in health problems. The government is trying to formulate various regulations and policies that can be implemented to overcome the dangerous impacts of smoking (Abidah, 2020).

Because of the significant surge in elderly growth and the prevalence of chronic diseases that continue to increase, there is an urgent need for research to overcome the limited information about health literacy and behavior related to the current elderly health Djamhari et al., 2020. Therefore, when healthy aging gets momentum as an important principle in the aging policy it is very important for policymakers to understand the best way to encourage, support, and maintain positive behavior related to health and health status among the elderly whose numbers are increasing. adults (Liu et al 2015). In addition, education, which is generally determined in adolescence and the beginning of adulthood, maybe a strong predictor of tobacco exposure and smoking behavior. Various measures of smoking behavior In addition to the level of smoking prevalence, several studies use information about smoking initiation, smoking stopping rates, and the level of consumption to investigate smoking disparities (Wang et al., 2018). At present, there is much research on health knowledge and health education that has been presented, but the research is only focused on certain knowledge about the situation. The study of comprehensive health knowledge in the entire population is still limited. This study aims to examine the factors that affect the low awareness of the elderly to stop smoking. So an analysis of the relationship between reasonable evaluations is carried out on health improvement, increasing health promotion activities, and the level of health of the population.

The elderly and chronic diseases are the focus of research because they both have a significant impact on public health. Elderly people tend to be susceptible to various chronic diseases, and the two are often interrelated. Studies on factors that influence older people's awareness of quitting smoking are important because smoking can worsen chronic diseases and increase the risk of death. In Humbang Hasundutan Regency, Bonan Dolok I village, this issue becomes relevant considering the population and health conditions that need attention. This district is faced with population quality problems, including health and welfare, as well as a low Human Development Index (HDI) when compared with other regions in North Sumatra. Therefore, understanding the factors that influence older people's awareness of quitting smoking can help in designing intervention programs that suit the needs of local communities.

2. METHOD

This research is a quantitative study with an analytical descriptive type of research using a cross-sectional design, which aims to investigate the relationship between independent and dependent

variables simultaneously (Sugyono., 2013). The factors under study include knowledge, sources of information, family support, age, and work with low awareness of the elderly to quit smoking in Bonan Dolok I Village, Humbang Hasundutan Regency in 2023. The study was conducted in Bonan Dolok I Village, Sijamapolang District, Humbang Regency Hasundutan, from March to May 2023.

The sampling method used is total sampling, where the entire elderly population of 41 people in Bonan Dolok I village became the research sample. The data analysis techniques applied include univariate and bivariate analysis using SPSS software. The research stage begins with an initial survey to identify respondents, then followed by data collection involving established variables. Furthermore, research was conducted by analyzing data that had been collected using univariate analysis techniques to describe the sample characteristics and bivariate analysis techniques to determine the relationship between variables. The research process involves data processing which includes identification of patterns and relationships between variables. All stages of research, ranging from initial surveys, data collection, and analysis, to the preparation of the final report, are carried out carefully and structured. By using this approach, it is hoped that this study can contribute to understanding the factors that influence the elderly awareness to stop smoking in the Bonan Dolok I Village community, Humbang Hasundutan Regency in 2023.

3. RESULTS AND DISCUSSION

Univariate Analysis

Univariate analysis in this study aims to provide a comprehensive picture of the frequency distribution of several variables. In this case, the presentation of respondents' characteristics data, such as age and work, as well as the distribution of respondents' frequency based on the variable knowledge, sources of information, family support, and the level of awareness to quit smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency in 2023. Distribution of age and work frequency of respondents provides a comprehensive view related to demographic structures and professions in research samples. In addition, this analysis also includes the frequency distribution of respondents based on the level of knowledge, sources of information, and family support for awareness to stop smoking. This can provide an overview of the extent of understanding, sources of information, and family support that affect elderly awareness in stopping smoking in the region.

Table 1. Distribution of Respondent Frequency in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency in 2023.

Variable	Total	Percentage %
Knowledge Good	35	85,4
Not Good	6	14,6
Total	41	100
Resources Print Media	36	87,8
Electronic Media	5	12,2
Total	41	100
Family Support Good	36	87,8
Not Good	5	12,2
Total	41	100
Age 60-79 Years	37	90,2
> 80 Years	4	9,8
Total	41	100
Work Civil Servants (PNS)	2	4,9
Entrepreneur	3	7,3
Farmers	36	87,8
Total	41	100
Awareness to stop smoking Good	19	46,3
Not Good	22	53,7
Total	41	100

Based on the results of the univariate analysis documented in Table 4.2, it can be concluded that the distribution of respondents according to the level of knowledge shows that most of the

respondents have good knowledge, which is as many as 35 people (85.4%), while 6 people (14.6%) have poor knowledge. Furthermore, the distribution of respondents based on information sources shows that the majority of respondents received good information, namely as many as 36 people (87.8%), while 5 people (12.2%) received poor sources of information. In terms of family support, the distribution of respondents showed that 36 people (87.8%) received good family support, while 5 people (12.2%) experienced a lack of family support. The distribution of respondents based on the age range shows that the majority of respondents are within the age range of 60-79 years, which is 37 people (90.2%), while those aged more than 80 years are 4 people (9.8%). Meanwhile, the distribution of respondents based on work illustrates that 2 people (4.88%) are Civil Servants (PNS), 3 people (7.32%) work as entrepreneurs, and as many as 36 people (87.80%) work as farmers. Finally, the distribution of respondents based on the level of awareness to quit smoking shows that 19 people (46.3%) have good awareness to stop smoking, while 22 people (53.7%) have poor awareness. This conclusion provides a comprehensive picture of the characteristics of respondents and related factors in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency in 2023.

Bivariate Analysis

After completing univariate analysis, the next step involves bivariate analysis. Data obtained from the two variables are categorical, and to test the relationship between the two, the Chi-Square statistical test is used. The purpose of this analysis is to determine whether there is a significant relationship between these variables, with an evaluation carried out based on the ratio of the p-value value and the level of significance α that has been predetermined, namely $\alpha < 0.05$ (Kurniawan., 2016). Factors that affect the low awareness of the elderly stopping smoking based on knowledge.

Table 2. Cross-tabulation Factors that influence the low awareness of the elderly quitter based on knowledge

Knowledge	Awareness to stop smoking						α	P-value
	Good		Not Good		Total			
	n	%	n	%	n	%		
Good	16	39	19	46,4	35	85,3	0.005	0.846
Not Good	3	7,3	3	7,3	6	14,7		

Based on table.2, it can be concluded that of 35 respondents who have good knowledge, as many as 16 people (39%) show good awareness of stopping smoking, while 19 people (54,346.4%) show poor awareness. Meanwhile, of the 6 respondents with poor knowledge, 3 people (7.3%) showed good awareness to stop smoking, and 3 people (7.3%) showed poor awareness. The results of the bivariate analysis using the Chi-Square test showed a p-value value of 0.846, which was greater than the level of significance that had been predetermined, which was 0.05. Therefore, the null hypothesis (H_0) is accepted, while the alternative hypothesis (H_a) is rejected. These results indicate that there is no significant influence on the knowledge of awareness to stop smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency. There is no significant relationship between the level of knowledge of respondents and their awareness to stop smoking indicating that, although most respondents have good knowledge, it does not directly correlate with their level of awareness to stop smoking. Other factors, such as psychological aspects, personal motivation, or environmental influences, may play a role in shaping individual awareness of the need to stop smoking. These results are different from research conducted by (Maulidah, 2022; Iriyanti, & Mandagi, 2022), which states the relationship between knowledge of smoking behavior. Factors that affect the low awareness of the elderly stopping smoking based on the source of information

Table 3 Cross-tabulation Factors that influence the low awareness of the elderly stop smoking based on information sources

Source of information	Awareness to stop smoking						α	P-value
	Good		Not Good		Total			
	n	%	n	%	n	%		
Print Media	16	39	20	48,7	36	87,8	0.005	0.513
Electronic Media	3	7,3	2	4,9	5	12,2		

Based on the information contained in Table 3, it can be concluded that of 36 respondents who obtained information from print media, as many as 16 people (39%) showed a good level of awareness to stop smoking, while 20 people (48.7%) showed a level of awareness not good. On the

other hand, of the 5 respondents who received information from electronic media, 3 people (7.3%) showed a good level of awareness to stop smoking, and 2 people (4.9%) showed a bad level of awareness. The results of the bivariate analysis with the Chi-Square test showed a p-value value of 0.513, which was greater than the α significance level of 0.05. Therefore, the null hypothesis (H_0) is accepted, while the alternative hypothesis (H_a) is rejected. This indicates that there is no significant influence on the source of information on the level of awareness to quit smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency.

These results indicate that there is no significant relationship between the types of information sources used by respondents (be it print media or electronic media) and their level of awareness to stop smoking. In other words, the use of print media or electronic media as a source of information does not have a significant impact on respondents' awareness to stop smoking. Other factors outside the type of source of information, such as personal experience, motivation, or environmental factors, may play a role in shaping individual awareness related to the desire to stop smoking. Factors that affect the low awareness of the elderly stopping smoking based on family support

Table 4. Cross-tabulation Factors that affect the low awareness of the elderly quitting age of smoking based on family support

		Awareness to stop smoking				α	P-value
		Good		Not Good			
Family Support	n	%	n	%	n	%	
Good	17	41,5	19	46,3	36	80,0	0.0050
Not Good	2	4,9	3	7,3	5	12,2	

Referring to table 4 it can be concluded that of 36 respondents who received good family support, as many as 17 people (41.5%) showed a good level of awareness to stop smoking, while 19 people (46.3%) showed a bad level of awareness. Meanwhile, of the 5 respondents who experience poor family support, 2 people (4.9%) showed a good level of awareness to stop smoking, and 3 people (7.3%) showed a bad level of awareness. The results of the bivariate analysis using the Chi-Square test showed the p-value value of 0.762, which was greater than the α significance level of 0.05. Thus, the null hypothesis (H_0) is accepted, while the alternative hypothesis (H_a) is rejected. These results indicate that there is no significant influence on family support on the level of awareness to stop smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency. The level of family support that does not significantly affect the level of respondent's awareness related to the desire to stop smoking indicates that, although respondents might get support from family members, this does not play a significant role in shaping their awareness to stop smoking. Other factors such as personal motivation, health conditions, or personal experience may have a greater influence in shaping individual awareness related to the need to stop smoking. This opposes research conducted by Widiyaningsih & Setyowati, (2021). Those who state the better the role of health workers and family support, the controlling of smoking behavior will be better. Factors that affect the low awareness of the elderly stopping smoking based age

Table 5. Cross Tabulation Factors that affect the low awareness of the elderly quittance based on age

Age	Awareness to stop smoking				Total	α	P-value
	Good		Not Good				
	n	%	n	%			
60-79 Years	19	46,3	18	43,9	37	90,2	0.00
>80 Years	0	0	4	9,8	4	9,8	5

Based on Table 5, it can be concluded that of 37 respondents aged 60-79 years, as many as 19 people (46.3%) showed a good level of awareness to stop smoking, while 18 people (43.9%) showed a bad level of awareness. On the other hand, of the 4 respondents who were more than 80 years old, no one showed a good level of awareness to stop smoking, and 4 people (9.8%) showed a bad level of awareness. Bivariate analysis using the Chi-Square test shows a p-value value of 0.050, which means the same as the level of significance that has been predetermined, which is 0.05. Thus, the null hypothesis (H_0) is accepted, while the alternative hypothesis (H_a) is rejected. That is, this result shows that there is no significant influence of the age factor on the level of elderly awareness to stop smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency. Based on

the results of the analysis conducted, it can be concluded that there is no significant effect of the age factor on the level of elderly awareness to stop smoking. That is, the age variable is not a determining factor that significantly affects the level of awareness of elderly respondents related to the desire to stop smoking. Although there are differences in the distribution of good and poor awareness among different age groups Factors that affect the low awareness of the elderly stopping smoking based on work.

Table 6. Cross-tabulation Factors that affect the low awareness of the elderly quitting age of smoking based on work

Work	Awareness to stop smoking						α	P-value
	Good		Not Good		Total			
	n	%	n	%	n	%		
Civil Servants (PNS)	0	0	2	43,9	2	4,9	0.005	0.037
Entrepreneur	2	4,9	1	4,9	3	7,3		
Farmers	17	41,5	19	22	36	87,8		

Based on Table 6, it can be concluded that of 2 respondents with work as civil servants who have good awareness to stop smoking, no one shows unfavorable awareness. Meanwhile, of the 3 respondents who worked as entrepreneurs, 2 people (66.7%) showed good awareness, and 1 person (33.3%) showed bad awareness. Of the 36 respondents who work as farmers, 17 people (47.2%) showed good awareness, and 19 people (52.8%) showed poor awareness. The results of the bivariate analysis with the Chi-Square test showed a p-value value of 0.327, which was greater than the α significance level of 0.05. Thus, the null hypothesis (H_0) is accepted, while the alternative hypothesis (H_a) is rejected. This indicates that there is no significant influence on the work factor on the level of elderly awareness to stop smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency. Indicates that, based on the results of the analysis conducted, work does not play a significant role in influencing the level of elderly awareness related to the desire to stop smoking. Although there are differences in the distribution of good and poor awareness among different work groups, statistical test results show that these differences are not considered statistically significant.

4. CONCLUSION

Based on the results of data analysis conducted on the level of elderly awareness related to the desire to stop smoking in Bonan Dolok I Village, Sijamapolang District, Humbang Hasundutan Regency, it can be concluded that factors such as knowledge, sources of information, family support, age, and work, Overall, has no significant influence on that awareness. Chi-Square statistical test results show that these variables do not have significant differences in forming the level of respondent's awareness. However, this study provides insight that aspects of work, age, and other factors may have a more complex role and are closely related to the decision to stop smoking in the elderly population. Therefore, it is recommended to involve other factors that may be relevant, such as personal motivation, specific health conditions, and environmental influences. In addition, the intervention strategy and the smoking prevention approach in the elderly population should be designed by considering these factors holistically. More intensive health education and social support may also be a valuable component to increase awareness and motivate the elderly to stop their smoking habits.

REFERENCE

- Simoni, M., Baldacci, S., Maio, S., Cerrai, S., Sarno, G., & Viegi, G. (2015). Adverse effects of outdoor pollution in the elderly. *Journal of thoracic disease*, 7(1), 34.
- Akbarzadeh, M., Almasi-Hashiani, A., & Farahmand, M. (2016). The Prevalence of Risk Factors of Non-communicable diseases in Fars Province. *International Journal of Nutrition Sciences*, 1(1), 23-29.
- Maeda, K., Ishida, Y., Nonogaki, T., & Mori, N. (2020). Reference body mass index values and the prevalence of malnutrition according to the Global Leadership Initiative on Malnutrition criteria. *Clinical nutrition*, 39(1), 180-184.

- David Royyifi Arifin, A., Suradi, S., & Hanim, D. (2019). Correlation between appetite disorders, nutritional status and smoking habits in elderly. *International Journal of Nutrition Sciences*, 4(4), 192-196..
- Liu, Y. B., Liu, L., Li, Y. F., & Chen, Y. L. (2015). Relationship between health literacy, health-related behaviors and health status: A survey of elderly Chinese. *International journal of environmental research and public health*, 12(8), 9714-9725.
- Yuan, F., Qian, D., Huang, C., Tian, M., Xiang, Y., He, Z., & Feng, Z. (2015). Analysis of awareness of health knowledge among rural residents in Western China. *BMC public health*, 15(1), 1-8.
- Wang, Q., Shen, J. J., Sotero, M., Li, C. A., & Hou, Z. (2018). Income, occupation and education: Are they related to smoking behaviors in China?. *PloS one*, 13(2), e0192571.7.
- Maulidah, K. (2022). Hubungan Pengetahuan, Sikap Dan Dukungan Keluarga Dengan Upaya Pengendalian Hipertensi Pada Lansia Di Wilayah Kerja Puskesmas Cikampek Kabupaten Karawang (Doctoral dissertation, Universitas Siliwangi).
- Iriyanti, Y. N., & Mandagi, A. M. (2022). Pengetahuan Mengenai Bahaya Merokok dengan Keinginan Berhenti Merokok Masyarakat Desa Pakel. *Preventif: Jurnal Kesehatan Masyarakat*, 13(1), 15-24.
- Widiyaningsih, D., & Setyowati, R. (2021). Peran Tenaga Kesehatan Dan Dukungan Keluarga Terhadap Pengendalian Perilaku Merokok Pada Lansia Perempuan Di Dataran Tinggi Dieng. *Jurnal Manajemen Kesehatan Yayasan RS. Dr. Soetomo*, 7(1), 20-29.
- World Health Organization (2021). Tobacco use falling: WHO urges countries to invest in helping more people to quit tobacco. Diakses dari: <https://www.who.int/news/item/16-11-2021-tobacco-use-falling-who-urges-countries-to-invest-in-helping-more-people-to-quit-tobacco>
- Badan Pusat Statistik (2021). Persentase Penduduk Usia 15 Tahun Ke Atas yang Merokok dalam Sebulan Terakhir Menurut Kabupaten/Kota dan Kelompok Umur di Provinsi Sumatera Utara, 2020. Diakses dari <https://sumut.bps.go.id/statictable/2021/04/21/2223/persentase-penduduk-usia-15-tahun-ke-atas-yang-merokok-dalam-sebulan-terakhir-menurut-kabupaten-kota-dan-kelompok-umur-di-provinsi-sumatera-utara-2020.html>
- Djamhari, E. A., Ramdlaningrum, H., Layyindah, A., Chrisnahutama, A., Prasetya, D., (2020). Kondisi Kesejahteraan Lansia dan Perlindungan Sosial Lansia di Indonesia. *Perkumpulan PRAKARSA*. Jakarta
- Sugiyono 2013, *Metode Penelitian Kuantitatif Kualitatif dan R & D*. Alfabeta, Bandung, Indonesia.
- Kurniawan, R. (2016). *Analisis regresi*. Prenada Media.