



Determinants of smoking behavior of older women (Ethnic Kaili) in Palu city[☆]



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Abstract

Objective: The purpose of this study was to determine the determinants of smoking behavior of elderly women (Ethnic Kaili) in the city of Palu.

Method: This type of research is quantitative with an observational study using a cross sectional study design. A sample of 90 respondents with purposive sampling technique and analyzed using the chi square test. The data collection tool uses a questionnaire.

Results: The result showed that age ($p=0.010$), education ($p=0.013$), and employment ($p=0.004$), and socio-culture ($p=0.001$), were determinants of smoking behavior of elderly women in Palu City.

Conclusion: Culture, economic status, education, and employment are determinants of smoking behavior of elderly women (Ethnic Kaili) in Palu City. It is recommended to the relevant agencies to increase the frequency of health education about the dangers of cigarettes, and maximize health promotion media about the dangers of smoking, especially for the elderly.

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Introduction

Smoking is a behavior that is harmful to health, but there are still many people who do it both in adolescents and in the elderly.¹ Smoking behavior is an activity carried out by individuals in the form of burning and sucking and can cause smoke that can be sucked by people around them. Accord-

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ing to Lavalenthal and Clearly there are four stages in smoking behavior, namely preparatory stage, intimation stage, becoming a smoker stage, maintaining of smoking stage. Cigarette content makes a person not easy to quit smoking for two reasons, namely factors of dependence or addiction to nicotine and psychological factors that feel a loss of a particular activity if you stop smoking.²

WHO data estimates that there are 1.26 billion smokers, more than 200 million of whom are women. WHO says in developing countries there are 800 million smokers, almost three times more than developed countries. Its cigarette consumption reaches 1370 cigarettes per year, with an increase of 12% per year. In 2017 it is estimated that the number of elderly people in Indonesia, amounting to 24 million people or 9.77% of the total population. According to WHO in 2011, Indonesia ranked 5th with the highest number of smokers in the world.³

Health is an important aspect that must be considered in the life of the elderly. Increasing age is unavoidable in decreasing physical conditions, both in the form of reduced physical strength which causes the elderly to become tired and decrease the speed of reaction which causes their movements to become sluggish. In addition, the emergence of a disease that is usually not only one type but multiple, causes the elderly to need help, care and medication for the healing process or just to keep the disease from getting worse.⁴

Based on Central Sulawesi BPS data, the number of elderly is 18,176 people. The screening results obtained through posbindu were 827 elderly women who smoked. The results of preliminary observations indicate that smoking habits carried out by the elderly in various places, both in public places and in the home environment. In Lewa's study, it was found that the elderly who were exposed to smoking would increase the risk of systolic hypertension spending 2.80 times greater than the elderly who were not exposed to the habit of smoking.⁵ Indications of the existence of elderly people who smoke become very important to study, considering that the elderly are smokers who are very vulnerable to the risk of serious health problems. So that this study aims to determine of smoking behavior of Older Women (Ethnic Kaili) in Palu City.

Method

Design

This study was an observational study using a cross sectional study design, to find the closeness of the relationship between independent variables and dependent variables by taking measurements simultaneously at the time of the study in a certain time period.

Population and study setting

The research was conducted in the city of Palu. The population in this study were all elderly smoking women aged 60–65 years who lived in the city of Palu. The technique used in sampling is purposive sampling. The sample size in this study was 90 respondents.

Table 1 Characteristics of elderly women in Palu City.

Variable	Frequency	%
<i>Age</i>		
60–65 years	69	62.1
>65 years old	21	18.9
<i>Education</i>		
Low (\leq middle school)	64	71.1
High (\geq SMA)	26	28.8
<i>Work</i>		
Work	54	60.0
Not work	36	40.0
<i>Socio-cultural</i>		
Believe	61	67.7
Not believe	29	32.2
<i>Smoking behavior</i>		
Light	41	45.5
Weight	49	54.4

Variables

The variables in this study are age, education, work, and social-cultural. These four variables are independent variables that are measured based on a questionnaire. The dependent variable is smoking behavior of elderly women in Palu City.

Data collection

The data collection tool uses a questionnaire given by the research team to respondents.

Data analysis

Bivariable analysis on the dependent variable and the independent variable uses the chi-square statistical test to see the relationship between each variable and calculate the significance level of p -value <0.05 at the 95% confidence level.

Results

The results of research conducted on elderly female respondents who smoke in the city of Palu. The results of this study explain the respondent characteristics of smoking behavior of elderly women (Table 1).

There were 62.1% of respondents in the age of 60–65 years. High educated respondents were 71.1%. In terms of employment, more respondents who did not work were equal to 57.7%. Most of the respondents with sufficient status were 60%. For socio-culture, the majority of respondents believed 78.8%. Elderly women in Palu city were more heavily smokers, namely 54.4%, while light smokers were made by 45.4% of elderly women.

Table 2 shows that there is a relationship between age, education, occupation and social culture with the smoking behavior of elderly women. From the table it

Table 2 Analysis of the determinants of smoking behavior of elderly women in Palu City.

Variable	Smoking behavior			<i>p</i>
	Light <i>n</i> (%)	Weight <i>n</i> (%)	Total	
<i>Age</i>				
60–65 years	35 (50.7)	34 (49.2)	69	0.010
>65 years old	4 (19.0)	17 (80.9)	21	
<i>Education</i>				
Low (\leq middle school)	33 (51.5)	31 (48.4)	64	0.013
High (\geq SMA)	6 (23.0)	20 (76.9)	26	
<i>Work</i>				
Work	30 (55.5)	24 (44.4)	54	0.004
Not work	9 (25.0)	27 (75.0)	36	
<i>Socio-cultural</i>				
Believe	34 (55.7)	27 (44.2)	61	0.001
Not believe	5 (17.2)	24 (82.7)	29	

can be concluded that from the table it can be concluded that Age shows that there is a significant relationship with smoking behavior ($p=0.010$). Smoking behavior education has a significant relationship ($p=0.013$). There is a significant relationship between work and smoking behavior ($p=0.004$). Socio-culture showed a significant relationship with coping with primigravidian mothers ($p=0.001$).

Discussion

Smoking is a behavior that cannot be separated from the health risks posed to individuals who smoke. But for smokers themselves they benefit from smoking. Nicotine found in the contents of cigarettes will tend to improve one's cognitive performance. This effect caused by nicotine makes smokers, especially the elderly, use cigarettes to get good cognitive performance and then become a habit.⁶

In addition, the social view of smoking and the lack of awareness of the benefits of stopping smoking are also important factors related to smoking behavior in the elderly. Typical enjoyment obtained from cigarettes, the relaxation effects obtained by smoking also have an important role in elderly smoking behavior.⁷

Research shows that age is related to smoking behavior in elderly women. This is in line with the research conducted by Kim et al. (2013) that the average elderly smoker has a age of 60 years and over.⁸ The earlier a person smokes, the harder it is to stop smoking. Cigarettes also have a dose-response effect, meaning that the younger the age of smoking, the greater the effect.⁹ In general, the physical condition of someone who has entered the elderly has decreased. This can be seen from several changes. Changes in appearance on the face, hands and skin. Changes in the inside of the body such as the nervous system. The five senses of vision, hearing, smell, taste, and motor changes include reduced strength, speed and learning new skills.¹⁰ These changes generally lead to the decline of physical and psychological health which will ultimately affect their economic and social

activities. So that in general will affect the activities of daily life.^{9,10}

The level of education is one factor in the smoking behavior of elderly women. Education is obtained from formal education taken by respondents during their education in formal education.¹¹ With education owned by the respondent, respondents will form knowledge that forms the behavior of the respondent. This study is in line with Sutrisno et al. (2018) that the education level of the elderly is also one of the efforts to control smoking behavior such as knowing the signs and dangers of smoking.¹²

The higher a person's education, the knowledge of smoking behavior and the dangers that arise, the higher one's participation in controlling smoking behavior.¹² However, the level of education alone is not enough to be able to exercise complete control, without being accompanied by an attitude with an awareness of the importance of controlling smoking behavior which will be accompanied by concrete actions in daily life. because if the individual just knows but does not have the desire to change the pattern of his daily habits everything will be in vain and there is no point.¹³

Work is one of the things that affects smoking behavior in elderly women. There is a decrease in the function of various organs of the body due to damage to cells due to the aging process in the elderly, so that the production of hormones, enzymes and substances needed for immunity becomes reduced. Thus the elderly will be more susceptible to further diseases, causing loss of work days and affecting work productivity.¹⁴ This study is in line with Oshio and Shimizutani (2019) stating that at the age of 50 years, work capacity is reduced to 80% and at the age of 60 years only has 60% capacity compared to the capacity of those aged 25 years.¹⁴ human life. Humans entering this stage are characterized by a decrease in the ability of the body to work due to changes or decreases in the function of the organs of the body.

Socio-culture is one of the factors influencing smoking behavior in elderly women. The culture of smoking in the elderly can occur because they believe that smoking gets inspiration.¹⁰ Confidence is an important predictor in determining behavior specifically smoking behavior. This research is in line with Jo et al. (2019), namely for the elderly who smoke cigarette function as a social tool is so important. Elderly even say if they don't smoke in these situations they will feel uncomfortable.¹⁵ This is because the beliefs held by a person toward cigarettes coupled with the normative beliefs they have will affect the intention to smoke which in turn affects behavior. Elderly people who smoke in social situations develop feelings of security and maturity. Owned social anxiety will decrease. When the elderly stops his behavior, the anxiety will reappear. Therefore the elderly will continue to choose this behavior.

Elderly is one of the active smokers who lives in two periods who have different opinions on cigarettes. Cigarettes in the past functioned as drugs and were considered natural behavior to do, while smoking is now considered a behavior that should not be done because it is harmful to health.¹⁵ This positive belief about smoking is in stark contrast to the issue of the dangers of cigarettes that are so intensively carried out by the government. Elderly responds to this by refusing that the elderly still think that cigarettes are more beneficial for them. The view that smoking is harmless may

be found in elderly smokers in Indonesia. This is supported by a history of smoking in Indonesia which says that cigarettes at that time were considered part of culture, medicine and not harmful to health.¹⁶

Conclusion

Based on the results of the research conducted it can be concluded that age, education, employment, and socio-culture are determinants of smoking behavior for elderly women in the city of Palu. It is recommended to the relevant agencies to increase the frequency of health education about the dangers of cigarettes, and maximize health promotion media about the dangers of smoking, especially for the elderly.

Conflict of interest

The authors declare no conflict of interest.

References

- Hernawily YA. Relationship between attitudes and subjective norms with the intention to stop employee employees at the polytechnic of Tanjungkarang. *J Nursing*. 2015;9:293–8.
- Fikriyah S, Febrijanto Y. Factors that influence smoking behavior in male students in male dormitories. *J Stikes*. 2012;5:99–109.
- Retnaningsih D, Kustriyani M, Sanjaya BT. Hypertension in the elderly. *J Health Andalas*. 2016;27:122–30.
- Hs I. Elderly physical health who smoked in Piyeung Mon Ara Village in Aceh. *Idea Nurs J*. 2012;3:263–8.
- Lewa AF. Isolated risk factors for systolic hypertension. *Berokt Masy*. 2010;26:171–8.
- Hsu C-L, Hsueh K-C, Chou M-Y, Yu H-C, Mar G-Y, Chen H-J, et al. Long-term smoking cessation rates in elderly versus other adult smokers: A 3-year follow-up study in Taiwan. *Addict Behav Rep*. 2018;8:62–5.
- Arif D, Hartinah D. Factors relating to the incident of hypertension in elderly in Klumpit village mobile community health center of Gribig Community Health Center. *District Kudus Jikk*. 2013;4:18–34.
- Júnior EPN, Ribeiro IJS, Freire IV, da Silva Passos R, Casotti CA, Pereira R. The smoking habit negatively influences autonomic heart control in community-dwelling elderly adults. *Hell J Cardiol*. 2017;58:283–8.
- Kim SK, Park JH, Lee JJ, Lee SB, Kim TH, Han JW, et al. Smoking in elderly Koreans: prevalence and factors associated with smoking cessation. *Arch Gerontol Geriatr*. 2013;56:214–9.
- Masyudi M. Factors related to elderly behavior in controlling hypertension. *Actions Aceh Nutr J*. 2018;3:57.
- Cheng HG, Chen S, McBride O, Phillips MR. Prospective relationship of depressive symptoms, drinking, and tobacco smoking among middle-aged and elderly community-dwelling adults: results from the China Health and Retirement Longitudinal Study (CHARLS). *J Affect Disord*. 2016;195:136–43.
- Sutrisno S, Widayati CN, Radate R. Relationship between education levels and attitudes toward hypertension control behavior in the elderly in Jono Village, Tawangharjo District, Grobogan Regency. *Shine Cahaya Dunia Ners*. 2018;3.
- Vrdoljak D, Marković BB, Puljak L, Lalić DI, Kranjčević K, Vučak J. Lifestyle intervention in general practice for physical activity, smoking, alcohol consumption and diet in elderly: a randomized controlled trial. *Arch Gerontol Geriatr*. 2014;58:160–9.
- Oshio T, Shimizutani S. Health capacity to work and its long-term trend among the Japanese elderly. *J Jpn Int Econ*. 2019;51:76–86.
- Jo Y, Linton JA, Choi J, Moon J, Kim J, Lee J, et al. Association between cigarette smoking and sarcopenia according to obesity in the middle-aged and elderly Korean Population: The Korea National Health and Nutrition Examination Survey (2008–2011). *Korean J Fam Med*. 2019;40:87.
- Hotta R, Shimada H, Makizako H, Yoshida D, Anan Y, Tsutsumimoto K, et al. Cigarette smoking and cognitive health in elderly Japanese. *Am J Health Behav*. 2015;39:294–300.