

Article

The Effect of Health Warning Images on Cigarette Packs on Cigarette Consumption Levels for Ages 35 Years and Over in East Java Province

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Abstract: The health warning image on cigarette packs can be called a pictorial health warning (PHW). PHW is an image warning of the dangers of smoking for health that must be included on cigarette packs in accordance with Minister of Health Regulation Number 28 of 2013 concerning the inclusion of health warnings and health information on tobacco product packaging. The aim of enacting this policy is to remind the public of the terrible impacts of smoking, and with this information, it can reduce the amount of cigarette consumption in Indonesia, especially for older people, such as those aged 35 and older. This study is a type of secondary data research obtained from a survey conducted by the Central Statistics Agency (BPS), the Ministry of Health of the Republic of Indonesia, and the East Java Provincial Communication and Information Service regarding the percentage of population aged 15 years and over who smoked in the last month by regency or group age in East Java Province in each of the last months of 2018–2022. From the research results, it can be concluded that the inclusion of health warning images on cigarette packs on the level of cigarette consumption aged 25 years and over does not have a significant influence. The level of cigarette consumption among those aged 35 and over in East Java Province fluctuates every year. This proves that health warning images on cigarette packs cannot change smoking habits among the people of East Java Province, especially cigarette consumers aged 35 years and over.

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1. Introduction

Smoking is no longer something foreign to Indonesian people. Smoking is a habit that is often considered dangerous. Even though it is known that smoking will have a bad impact on health, this habit is still carried out by the Indonesian population. At any time, in every place, it is very visible that many people consume cigarettes, from various circles and even ages. The number of smokers in Indonesia is increasing day by day, which is worrying. According to the results of the 2021 Global Adult Tobacco Survey (GATS) conveyed by the Ministry of Health, the number of adult smokers is 8.8 million, an increase from 60.3 million in 2011 to 69.1 million smokers in 2021. An official report from the World

Bank (2023) stated that Indonesia is the country with the largest number of cigarette smokers in the world. In this report, the number of smokers in Indonesia was 70.5 percent. Consuming cigarettes has been proven to have a bad impact on health. The more often someone consumes cigarettes, the greater the impact they will have in the future. Apart from cancer, there are many other negative health impacts that smokers will experience, including chronic lung disease, heart attacks, and even a small example, which we can realize is that it can damage teeth and cause bad breath. Therefore, the government issued regulations to overcome this problem.

The Government of the Republic of Indonesia issued the latest regulations, namely PP No. 109 of 2012, which regulates and requires the inclusion of health warning images on cigarette packages. Apart from reducing high cigarette consumption, this policy also provides education, protection, and information for non-smokers. Complete information is contained in Minister of Health Regulation Number 28 of 2013 concerning the inclusion of health warnings and health information on tobacco product packaging. This regulation has been updated in Minister of Health Regulation Number 56 of 2017. The health warning includes pictures and writing on cigarette packs, which consist of five different types of images, including images of mouth cancer, images of blackened lungs, images of throat cancer, images of people holding children while smoking, images of people suffering from lung cancer and laryngeal cancer, and images warning that smoking will kill you.

Every manufacturer is obliged to include health warning images in accordance with those stipulated in the Republic of Indonesia Minister of Health Regulation Number 56 of 2017. The policy for including health warning images on cigarette packs was established in April 2013 and came into effect on July 24, 2014. By including health warning images, it is hoped that information about the dangers will be provided. Smoking is acceptable for all groups. The aim of enacting this policy is to remind the public of the terrible impacts of smoking, and with this information, it can reduce the amount of cigarette consumption in Indonesia, especially for older people, such as those aged those aged 35 and older. We should be aware that cigarettes contain dangerous substances that are worrying. The government has carried out a lot of education about smoking in the hope of reducing the level of cigarette consumption, especially among older people who especially need health monitoring for survival.

Collecting from the Central Statistics Agency (BPS) website from 2018 to 2022, the highest percentage of smokers based on age in East Java Province is aged 35 years and over, with a maximum percentage of 34.42%. From this percentage, the percentage of cigarette consumption is highest among those aged 35 years and over. Cigarette consumption will decrease when smokers are interested in the message conveyed through the health warning images on cigarette packs; conversely, if smokers are not interested in the messages on cigarette packs, smokers will ignore the warnings on cigarette packs, so there will be no reduction in the amount of cigarette consumption.

In this research, we will discuss how influential health warning images on cigarette packages have on cigarette consumption among consumers aged 35 and over in East Java province. With this research, we can see whether the warning images on cigarette packs can reduce cigarette consumption at the age of 35 years and over or not change smoking habits, where the highest cigarette consumption is among those aged 35 years and over. This can provide an overview of the strategies that must be carried out by the government to reduce cigarette consumption among those aged 35 years and over because cigarette consumption has a negative impact on the health of the Indonesian population.

2. Materials and Methods

Legal Basis for Using Health Warning Images on Cigarette Packs

The use of Health Warning Images on Cigarette Packs is regulated and required in the Government Regulation of the Republic of Indonesia Number 109 of 2012 concerning Health Safety of Products Containing Addictive Substances in the Form of Tobacco Products. Addictive substances are substances that cause addiction or dependence that endanger health, are characterized by changes in behavior, cognitive and physiological phenomena, a strong desire to consume the substance, difficulty in controlling its use, giving priority to the use of the substance over other activities, increased tolerance, and can cause state of withdrawal symptoms.

Minister of Health Regulation Number 28 of 2013 concerning the inclusion of health warnings and health information on tobacco product packaging. Then this regulation was updated in Minister of Health Regulation Number 56 of 2017, which contains amendments to Minister of Health Regulation Number 28 of 2013 concerning the inclusion of health warnings and health information on tobacco product packaging. Health warnings in the form of pictures and writing provide information about the dangers of smoking. Information on the dangers of smoking is included on cigarette packs in order to educate and advise the public about the bad effects of smoking.

Understanding Cigarettes

According to the Big Indonesian Dictionary (1989:752), a cigarette is a roll of tobacco about the size of a human little finger wrapped in palm leaves, paper, and so on. In PP No. 81/1999, Article 1 paragraph 1 explains that cigarettes are processed wrapped tobacco products, including cigars or other forms produced from the plants *Nicotiana tabacum*, *Nicotiana rustica*, and other species or synthetic ones containing nicotine and tar with or without additional ingredients. Cigarettes are included in the category of addictive substances; if used continuously, they will cause harm to human health. Therefore, it is necessary to take various precautions, such as providing health warning images on cigarette packs. Cigarettes are said to be dangerous because they contain many compounds that are toxic to the body. There are 250 types of toxic substances and 70 types of substances that are carcinogenic. This content is a substance that triggers cancer in the body.

Image of Cigarette Pack Health Warning

The Ministry of Health of the Republic of Indonesia always takes action to prevent, reduce and stop Indonesian citizens from smoking in order to create a healthy society. The use of health warning images is an implementation of PP Number 109 of 2012 and Minister of Health Regulation Number 28 of 2013 concerning the Inclusion of Health Warnings and Health Information on Tobacco Product Packaging. This is an effort to make people aware of the dangers of smoking for health. There are 5 (five) types of health warning images and text, including:

1. Oral Cancer with the words, "SMOKING CAUSES MOUTH CANCER".
2. A picture of lungs blackened by cancer with the words, "SMOKING CAUSES LUNG CANCER".
3. A picture of throat cancer with the caption, "SMOKING KILLS YOU".
4. Pictures of people suffering from lung and laryngeal cancer with the caption, "SMOKING NEAR CHILDREN IS DANGEROUS FOR THEM".
5. A picture of cancer with the words, "SMOKING CAUSES LUNG CANCER AND CHRONIC BRONCHITIS".

Cigarette Consumption Age 35 years and over East Java Province

Smoking behavior is no longer foreign to Indonesian society. The results of the 2021 Global Adult Tobacco Survey (GATS) presented by the Ministry of Health (Kemenkes), the number of adult smokers has increased, by 8.8 million people, namely from 60.3 million in 2011 to 69.1 million smokers in 2021. Although the figures Cigarette consumption in Indonesia has decreased from 1.8% to 1.6%. The Central Statistics Agency (BPS) states that the highest cigarette consumption by age is among those aged 35 years and over. The East Java BPS report noted that residents who smoke spend or smoke cigarettes on average reaching 76.44 cigarettes per week or it can be concluded that they spend or smoke around 5 packs per week. Smoking cigarettes has been clearly proven to have a bad impact on health. The more often someone smokes cigarettes, the greater the risk of someone developing chronic diseases in the future.

Therefore, education on the dangers of smoking really needs to be carried out by the government. By warning about the dangers of smoking for health, people will consider using cigarettes more. This research is useful for finding out how influential health images on cigarette packs are on cigarette consumption, especially among those aged 35 years and over, because the level of cigarette consumption based on age is highest among those aged 35 years and over.

3. Results and Discussion

Contents of a Cigarette

Cigarettes are a product of processed tobacco that has dangerous substances in it. According to research by the World Health Organization (WHO) in 2020, more than 8 million people were killed because of smoking. The Ministry of Health has provided information to the mass media that a cigarette contains 7000 chemicals, of which there are 250 substances that are dangerous to health, with 70 substances that can cause cancer.

There are 9 (nine) ingredients in cigarettes that are dangerous and can even damage health, the first of which is carbon monoxide which can cause decreased muscle and heart function, causing easy fatigue and weakness. Second, nicotine has an addictive effect on cigarette smokers, so it can cause a faster increase in blood pressure and heart rate. Third, tar is carcinogenic and can trigger lung cancer, mouth cancer, diabetes, heart disease and even fertility problems in the body. Fourth, it contains hydrogen cyanide which can cause the body to be unable to use oxygen properly. Fifth, benzene or long-term cigarette burning residue which can trigger leukemia and anemia because it can damage white blood cells, red blood cells and damage bone marrow. The sixth content, namely formaldehyde, can be called short-term cigarette burning residue which can cause nasopharyngeal cancer. Seventh, namely the arsenic content which is usually found in pesticides used by tobacco farmers, this substance can cause liver cancer. The eighth ingredient, namely cadmium, which is found in cigarette smoke, can cause kidney disease, brittle bones, and a high risk of lung cancer. The final ingredient is ammonia which is a poisonous gas, colorless but usually found in the sharp smell of cigarettes. In the cigarette industry, this substance is used to increase the addictive taste of nicotine which can cause shortness of breath in people who inhale it.

The Effect of Cigarette Packaging Health Warning Images

The health warning image on cigarette packs can be called a Pictorial Health Warning (PHW). PHW is an image warning of the dangers of smoking for health which must be included on cigarette packs, in accordance with Minister of Health Regulation Number 28 of 2013 concerning the Inclusion of Health Warnings and Health Information on Tobacco Product Packaging. On Thursday, June 19 2014, a press conference was held at the Indonesian Government Ministry of Health office. Dr. Nafsiah Mboi, Sp.a., MPH (2014) as

Minister of Health conveyed another warning in his speech regarding an appeal to the entire cigarette industry in Indonesia to implement the regulations stipulated in Minister of Health Regulation Number 28 of 2013 concerning the Inclusion of Health Warnings and Health Information on Tobacco Product Packaging. On June 24 2014, it was determined that there would be sanctions for industries that do not comply with the regulations set out in Law no. 36 of 2009 conveyed by the Minister of Health, sanctions imposed on cigarette industries that do not include health warning images will be subject to imprisonment for a maximum of 5 years with a fine of a maximum of 500 million. Apart from that, the head of BPOM has the authority to impose administrative sanctions in the form of warnings, product withdrawals, temporary suspension of activities in accordance with statutory regulations.

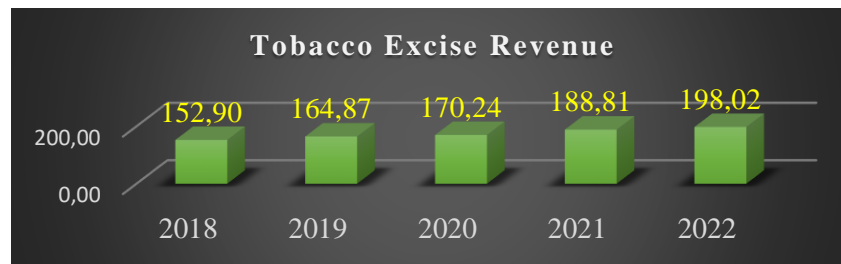
There are 5 (five) health warning images that must be included on cigarette packs, including a picture of mouth cancer, a picture of blackened lungs, a picture of throat cancer, a picture of a person holding a child while smoking, a picture of a person suffering from lung cancer and laryngeal cancer and a warning picture. smoking kills you. The health warning image provides information to smokers that frequent smoking will cause chronic diseases in the future. The inclusion of scary images to provide education and health warnings on cigarette packs will change the mindset of smokers regarding their interest in consuming cigarettes, especially those aged 35 years and over.



Figure 1. Cigarette Pack Health Warning

Source: Minister of Health Regulation Number 28 of 2013

Even though the government has made efforts to include warning images about the dangers of smoking, this has not made people stop consuming cigarettes. It turns out that the inclusion of health warning images on cigarette packs does not have a significant effect, the decrease in cigarette consumption is caused by the increase in Tobacco Products Excise (CHT) rates. On the CNBC Indonesia page, the Ministry of Finance stated that cigarette production in Indonesia will reach 323.9 billion cigarettes in 2022. Total cigarette production in 2022 will decrease by 3.26% compared to the previous year when cigarette production reached 334.8 billion cigarettes.

Table 1. Excise revenue from tobacco products in Indonesia

Source: Ministry of Finance (2018-2022)

The warning image printed on cigarette packs does not cause cigarette consumption to decrease, but there are other factors that cause the decline in cigarette consumption levels, namely the increase in the Tobacco Products Excise (CHT) rate which was authorized by President Joko Widodo (2019). The increase in excise rates on tobacco products results in a decrease in cigarette consumption every year.

Based on data obtained from the Ministry of Finance, excise revenue from tobacco products always increases significantly. This is proven by the fact that every year tobacco tax revenue always increases, starting from 2018 amounting to IDR 152.50 trillion, 2019 amounting to IDR 164.87 trillion, 2020 amounting to IDR 170.24 trillion, 2021 amounting to IDR 188.81 trillion, and 2022 amounting to IDR 198.02 trillion.

The Central Statistics Agency (BPS) from 2018 to 2022 has recorded the percentage of cigarette consumption based on age in East Java Province. The results of data obtained from the Central Statistics Agency (BPS) show that there are fluctuations in the level of cigarette consumption every year. This proves that the effect of health warning images on cigarette packs is not significant.

Cigarette Consumption Levels at Ages 35 Years and Over East Java Province

The results of a survey conducted by the Central Statistics Agency (BPS) in the last 5 (five) years, namely 2018 to 2022, show that the level of cigarette consumption among those aged 35 years and over in East Java Province has fluctuated.

Table 2. Details of Cigarette Consumption Data for Ages 35 Years and Over

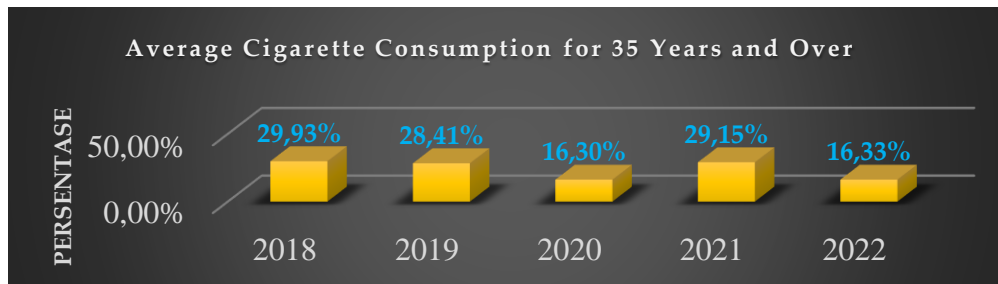
Year	Age				Average Per year
	35-44	45-54	55-64	65+	
2018	34.3	31.5	30.5	23.4	29.93%
2019	33.86	29.57	28.79	21.43	28.41%
2020	23.19	20.00	13.80	8.22	16.30%
2021	34.42	31.90	28.40	21.86	29.15%
2022	23.42	19.50	13.71	8.68	16.33%
Average by Age	29.84%	26.49%	23.04%	16.72%	

Source: Central Statistics Agency 2018-2022

Based on data obtained from the Central Statistics Agency (BPS) from 2018 to 2022, it can be concluded that the level of cigarette consumption in East Java Province for those aged 35 years and over is highest among those aged 35-44 years with a percentage of 29.84%. Meanwhile, the lowest percentage of cigarette consumption is at the age of 65 years and over with a percentage of 16.72%. In those aged 45-54 years, it can be seen that there

is a slight difference with those aged 35-44 years amounting to 3.38%, the percentage for those aged 45-54 years is less than those aged 35-44 years. As the age increases, at 35 years and above the percentage of cigarette consumption becomes lower, at the age of 45-54 years with 55-64 years experiencing a decrease of 6.32% with the percentage of cigarette consumption for those aged 45-54 years amounting to 26.49% and at the age of 23, 04%.

Table 3. Average Percentage of Cigarette Consumption for Ages 35 Years and Over



The results obtained from an official survey conducted by the Central Statistics Agency (BPS) from 2018 to 2022 can be processed into the average percentage of cigarette consumption aged 35 years and over in East Java Province from 2018 to 2022. The highest percentage of cigarette consumption is 35 years and over it can be concluded that 2018 was the highest year for cigarette consumption among people aged 35 years and over. From 2018 to 2020, cigarette consumption among those aged 35 years and over always decreased. In 2018 and 2019 there was a decrease of 1.52% with the percentage of cigarette consumption in 2019 amounting to 28.41%.

Based on the average percentage of cigarette consumption among those aged 35 years and over, it shows that in the last 5 (five) years cigarette consumption has decreased except in 2021. 2021 is the third (3rd) year since the COVID-19 pandemic. Information is available on the Ministry of Health page (2022). The COVID-19 pandemic has resulted in a decline in the quality of human life in terms of health and socio-economics, but it turns out that economic limitations during the COVID-19 pandemic have actually influenced the increase in cigarette consumption levels in Indonesia. The government's policy of limiting people to minimize activities outside the home actually provides ample opportunities for smoking. Even though economic income is limited, people's cigarette consumption during the pandemic has not decreased, but has actually increased by 15.2% (Komnas PT 2020). Access to buying cigarettes is getting easier and there are more cigarette variants in circulation, 25% of people buy cigarettes by choosing cheaper variants than usual. People use cigarettes as a way to deal with stress by providing a temporary sensation of satisfaction. As many as 73.2% of poor people even prioritize spending on buying cigarettes compared to other needs that cannot be met (IDEAS, 2021). Research conducted by the Center for Indonesia's Strategic Development Initiatives (CISDI) in 2020 stated that 60% of smoking behavior had not decreased, spending on cigarette consumption was 55% with the price and type of cigarettes remaining the same at 73%.

4. Conclusion

The government has established a mandatory policy to include health warning images on cigarette packs for every cigarette manufacturer in Indonesia. The implementation of this policy apparently does not make people understand the dangers of smoking, especially in the province of East Java. The inclusion of health warning images on cigarette packs does not have a significant effect on the level of cigarette consumption for those aged 35 years and over, as evidenced by data obtained from the Central Statistics Agency (BPS) from 2018 to 2022, there are fluctuations every year. However, there are other factors that

have caused a decline in cigarette consumption, namely the increase in excise rates on tobacco products set by the Ministry of Finance. The high tax revenue from tobacco products is the cause of the lower level of cigarette consumption in Indonesia, especially among those aged 35 years and over in East Java Province.

Apart from that, there will also be an increase in the level of cigarette consumption for those aged 35 years and over in 2021, which previously always decreased every year, this was caused by the COVID-19 pandemic. In the third year since the government's appeal to limit activities outside the home came into force, people tend to get bored and stressed, which causes cigarette consumption to increase.

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