Increase in the Number of Active Smokers During the COVID-19 Pandemic in Indonesia

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Abstract. Tobacco doesn't just negatively impact the health of individuals, it also endangers the health of the environment. Therefore, efforts to reduce the consumption of tobacco cigarettes must continue to be strengthened. This study tries to find out after the Covid-19 pandemic spread in Indonesia, has the number of Active Smokers decreased or increased? The purpose of this study is to explain the increase or decrease in the number of Active Smokers after the Covid-19 pandemic spread in Indonesia. This study used the descriptive qualitative method. The data used are Susenas March 2019 data and Susenas March 2020 data. This study concludes that after the Covid-19 pandemic in Indonesia, namely in March 2020, the number of Active Smokers increased by 0.28% or 162,656 people. The increase in the number of Active Smokers consisted of an increase in the number of Light Smokers by 0.62% or 147,380 people, an increase in the number of Medium Smokers by 1.50% or 434,937 people, and a decrease in the number of Heavy Smokers by -9.67% or -419,661 people. This study recommends that all stakeholders take the momentum of the Covid-19 pandemic to strengthen efforts to reduce the number of Active Smokers and/or reduce cigarette consumption in Indonesia.

1. Introduction
Tobacco doesn’t just negatively impact the health of individuals, it also endangers the health of the environment. When e-cigarette and cigarette waste isn’t disposed of properly, it makes its way into the environment where it ends up polluting water, air, and land with toxic chemicals, heavy metals and residual nicotine. An estimated 766,571 metric tons of cigarette butts make their way into the environment every year [1].

In addition, amid the current Covid-19 pandemic, smoking is a very dangerous habit because it can worsen the working system of the lungs and make the lungs weaker to operate. This condition can reduce the function of the lungs in taking oxygen from the air. This can weaken the immune system, making it difficult for the body to fight the incoming Coronavirus [2].

In fact, in general, there has been an increase in smoking habits during the Covid-19 pandemic [3]. Therefore, it is important to know whether in Indonesia during the Covid-19 pandemic, the number of active smokers is increasing or decreasing? So, the research question is after the Covid-19 pandemic spread in Indonesia, has the number of Active Smokers decreased or increased? The purpose of this study is to explain the increase or decrease in the number of Active Smokers after the Covid-19 pandemic spread in Indonesia.

This study uses national-scale data, namely the Susenas March 2020 data [4] and the Susenas March 2019 data [5] so that the data and information obtained are more complete.

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2. Method
This research uses the descriptive analysis method which aims to create a review of an issue by analyzing data and facts and concluding a research object [6]. This research was conducted in July 2021. The data used are secondary, namely Susenas March 2019 [5] dan Susenas March 2020 [4] data obtained from the BPS Statistics Indonesia.

3. Result and Discussion
Hypothetically, this study defines an Active Smoker as a person who has smoked tobacco at least in the past month. This study found that in terms of the number of individuals, the number of Active Smokers in March 2020, namely during the Covid-19 pandemic, increased compared to March 2019.

In March 2019, when the Covid-19 pandemic had not yet occurred, the number of Active Smokers in Indonesia was 57,149,440 people. In March 2020, when the Covid-19 pandemic began in Indonesia, the number of Active Smokers in Indonesia was 57,312,096 people or an increase of 0.28% or 162,656 people. The increase in the number of Indonesian Active Smokers follows the trend of increasing the number of Active Smokers in the world where along with the increase in the world’s population, the number of Active Smokers also increases [7]. In addition, during the Covid-19 pandemic, people did not do much activity so that as an escape from the absence of activities, people smoked. That is why during the Covid-19 pandemic, the number of people who are smoking increases and demand for cigarettes increases [2].

This study also found that the prevalence of active smoking in March 2019 was 23.44% and in March 2020 it slightly decreased to 23.21% or decreased -0.98% or -0.23 point percentage. For information, the smokers survey was conducted by BPS on residents aged 5 years and over. In March 2019, the number of people aged 5 years and over was 243,847,120 people and in March 2020 the number of people aged 5 years and over was 246,973,216 people.

Table 1. Amount of Indonesian Active Smokers March 2019 and March 2020.

| Description         | March 2019 | March 2020 | Increase/(Decrease) |
|---------------------|------------|------------|---------------------|
|                     | Persons    | Percent    | Persons             | Percent             |
| Active Smoker       | 57,149,440 | 23.44%     | 57,312,096          | 23.21%              | 162,656              | 0.28                 |
| Respondent          | 243,847,120| 1.28       | 246,973,216         | -0.98               | -3,126,096           | -1.28                |
| Active Smoker Prevalence | 23.44%  | 23.21%     | -                    | -0.98               |                      |                      |

Source: Researcher’s calculation from [4] and [5].

Based on the number of cigarettes smoked per day, the World Health Organization (WHO) classifies active smokers based on 3 groups, namely Light Smokers, Medium Smokers, and Heavy Smokers. A Light Smoker is a person who consumes 1 (one) to 10 (ten) cigarettes per day. Medium Smoker is a person who consumes 11 (eleven) to 20 (twenty) cigarettes per day. Heavy Smokers are people who consume more than 20 (twenty) cigarettes per day [8].

Of the 3 classifications of smokers, the largest increase occurred in Medium Smokers, namely 1.50% or 434,937 people, where in March 2019, the number of Medium Smokers was 29,075,031 people and in March 2020 the number of Medium Smokers increased to 29,509,968 people.

The increase in the number of Medium Smokers mostly came from Heavy Smokers who decreased their cigarette consumption so that the classification changed to Medium Smokers. This is evidenced by data that the majority of Medium Smokers, namely 93.63%, were people who smoked daily in the previous month and evidenced by data that the number of Heavy Smokers in March 2020 decreased by -9.67%. Only a small increase in the number of Medium Smokers came from new smokers, namely people who did not smoke in the previous month. This is evidenced by data that out of 29,509,968 Medium Smokers, only 4.77% or 1,407,446 people did not smoke in the previous month.
After Medium Smokers, the increase also occurred in Light Smokers which increased by 0.62%. In March 2019, the number of Light Smokers was 23,735,245 people and in March 2020 it increased to 23,882,625 people, an increase of 0.62% or 147,380 people.

The increase in the number of Light Smokers mostly came from Heavy Smokers who decreased their cigarette consumption so that their classification changed to Light Smokers. This is evidenced by data that the majority of Light Smokers, i.e. 79.00%, were people who smoked daily in the previous month and evidenced by data that the number of Heavy Smokers in March 2020 decreased by -9.67%. Only a small increase in the number of Light Smokers came from new smokers, namely people who had not smoked in the previous month. This is evidenced by data that out of 23,882,625 Light Smokers, only 5.24% or 1,250,473 people did not smoke in the previous month.

Meanwhile, the number of Heavy Smokers in March 2020, at the time of the Covid-19 pandemic, decreased by -9.67% or 419,661 people compared to the number of Heavy Smokers in March 2019. In March 2019, the number of Heavy Smokers was 4,339,164 people and in March 2020 the number of Heavy Smokers was only 3,919,503 people.

| Description    | March 2019 | March 2020 | Increase/(Decrease) |
|----------------|------------|------------|---------------------|
| Light Smoker   | 23,735,245 | 23,882,625 | 147,380             |
| Medium Smoker  | 29,075,031 | 29,509,968 | 434,937             |
| Heavy Smoker   | 4,339,164  | 3,919,503  | -419,661            |
| Total Active Smoker | 57,149,440 | 57,312,096 | 162,656             |

Source: Researcher’s calculation from [4] and [5].

The decrease in the number of Heavy Smokers in March 2020 occurred because some of the Heavy Smokers reduced their tobacco cigarette consumption so that Heavy Smokers changed their classification to Medium Smokers and/or Light Smokers. In addition, a small proportion of Heavy Smokers are suspected of no longer smoking. This is supported by data on the increase in the number of people who do not smoke, which is quite small, namely 1.80% or 3,333,687 people in March 2020. In March 2019, the number of people who did not smoke was 184,953,250 people and in March 2020, the number of people who did not smoke was increased to 188,286,937 people. Based on Susenas March 2019 [5] and Susenas March 2020 data [4], the majority of people who did not smoke, namely 98% to 99%, did not smoke in the previous month or did not smoke from the beginning. Thus, it can be said that the number of Heavy Smokers who changed to non-smokers in March 2020 was only small. Most of them were changing their classification to Light Smokers or Medium Smokers.

Household consumption growth in the first quarter of 2020 was only 2.84% (yoy) lower than the growth in household consumption in the first quarter of 2019 which was 5.02% (yoy). The decline in household consumption growth in the first quarter of 2020 was because governments in various countries had reduced the traffic of people and goods as a result of the Covid-19 pandemic. The Indonesian government has also begun to limit the movement of people and goods to control the spread of the Covid-19 virus, resulting in a decline in economic activity which has an impact on Indonesia's household income. The decrease in household income resulted in a decrease in purchasing power, including the purchasing power of tobacco cigarettes. Furthermore, the decrease in cigarette consumption led to a decrease in the classification of Heavy Smokers to Medium Smokers, Light Smokers and/or not smoking at all [9].

Although the number of Heavy Smokers in March 2020 decreased compared to March 2019, the presence of Heavy Smokers still had to be addressed. Heavy Smoker is a person who consumes more than 20 (twenty) cigarettes per day which is a large number of cigarettes. The negative effects received by Heavy Smokers are certainly more real and stronger. Not to mention the negative effects received by people living around Heavy Smokers.
Heavy Smokers should be wary of because most of them, namely 95.22% or 3,732,178 people, are people at productive age and 99.98% or 3,918,785 people are people with the age category of working age. The working age population is the population aged 15 years and over [10]. Productive age is 15 to 64 years old [11].

Tobacco control can help accelerate poverty alleviation efforts. This is because tobacco use results in premature death and disability, with breadwinners exiting the labour market in the prime of their lives, disrupting productive employment or schooling of caregivers – often women and girls. Treating diseases associated with tobacco use can result in catastrophic out-of-pocket medical expenditures especially for the poor, trapping families in a ‘vicious cycle’ of poverty and poor health. In every region of the world, the poor are those most likely to use tobacco, have reduced access to critical prevention and treatment services, and endure lower levels of access to education and other health messaging opportunities. Spending on tobacco also diverts a significant percentage of household resources from productive investments – such as for food, education, healthcare, housing and agricultural inputs – that can help keep and lift people out of poverty [12].

School-age children are children who are at school age, namely aged 6-12 years. In March 2020, none of the Heavy Smokers was in the school age category or aged 6-12 years. The lowest age of Heavy Smokers is 13 years with a total of 206 children [13]. Hurlock (1990) divides the adolescent phase into early adolescence with ages between 13 years to 16 years and late adolescence with ages between 17 years to 18 years [14]. Based on this age category, the number of Heavy Smokers who are categorized as early adolescence is 10,100 people or 0.26% of the total Heavy Smokers in March 2020 which were 3,919,503 people. The number of Heavy Smokers in the late adolescence category is 22,449 people or 0.57% of the total Heavy Smokers in March 2020 which were 3,919,503 people, a fairly small number. The number of active smokers in Indonesia is dominated by adults. This is supported by the number of Medium Smokers in the youth age category which is also small, namely 456,791 people or 1.55% of the total Medium Smokers in March 2020 which was 29,509,968 people. However, the smoking condition of people in the adolescent age category must still be watched out for because the number of Light Smokers in the adolescent age category is the largest compared to Medium Smokers and Heavy Smokers, which are 1,072,981 people or 4.49% of the total Light Smokers in March 2020 which were 23,882,625 people. This condition is quite worrying and must be addressed because Light Smokers in the adolescent age category can develop into Medium Smokers or Heavy Smokers when they become adults.

By quitting smoking, people can increase their immunity to fight the Covid-19 virus. Methods such as token economy and behavioural therapy are expected to make someone reduce or even quit smoking. Token economy is a form of behaviour change designed to increase preferred behaviour and reduce disliked behaviour by using tokens or coins. A person will receive a token immediately after displaying a favourable behaviour and vice versa will receive a token deduction if displaying an unwelcome behaviour. These tokens will be collected and then within a certain time can be exchanged for prizes or something that has monetary value. When the token economy is running, healers or therapists can include behavioural therapy methods in it. By providing positive input, clients can think more and change their negative mindsets and habits slowly [2].

4. Conclusion
This study concludes that in March 2020, when the Covid-19 pandemic began to hit Indonesia, in terms of the number of individuals, the number of active smokers increased compared to March 2019. In March 2019 when the Covid-19 pandemic had not yet occurred, the number of active smokers in Indonesia are 57,149,440 people. In March 2020, when the Covid-19 pandemic began in Indonesia, the number of active smokers in Indonesia was 57,312,096 people or an increase of 0.28% or 162,656 people. This study also found that in terms of the prevalence of active smoking, in March 2019 it was 23.44% and in March 2020 it fell slightly to 23.21% or decreased -0.98% or -0.23 point percentage.
Smoking habits need to be reduced and even stopped because by quitting smoking, people can increase their immunity to fight the Covid-19 virus. Therefore, this study recommends that all stakeholders take the momentum of the Covid-19 pandemic to strengthen efforts to reduce the number of Active Smokers and/or reduce cigarette consumption in Indonesia.

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