



The Urgency of Health Insurance Literacy for Indonesian People: Between Smoking and Paying National Health Insurance Premium

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Abstract

Introduction: Declining the rates of smoking among the poor still becomes a challenge for the health sector. Ideally, they can use the money for smoking to pay for their family health insurance premium. This research aimed to analyze how the poor in the informal sector perceived on the payment of National Health Insurance (NHI/ JKN) using the cigarette cost.

Methods: Data were collected from focus group discussions (FGD) in three different locations, Deli Serdang, Sumedang Districts and Medan City. Thirty-three informal sector workers in low financial capabilities were participated in these FGDs. Health Belief Model was used as the framework for analyzing the data and information. Data analysis was conducted through content analysis method.

Results: The finding showed that poor people who work in the informal sector gave two different responses regarding the using of cigarette cost for paying the NHI/JKN program premium. The respondents had already an excellent perceived susceptibility and severity both on smoking habits and their low finance condition. They believed that the NHI/JKN benefit was to protect them financially if their family members need a medical treatment. However, they had low self-efficacy and high perceived barriers that hinder them from replacing the money for buying cigarettes into paying for NHI/JKN premium.

Conclusion: An approach to the poor people in the informal sector within their local context, is urgently needed to increase their health insurance literacy and knowledge about smoking.

Keywords: Health Belief Model, health insurance, the poor, informal worker, smoking

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Introduction

Since 2014, Indonesia has started the National Health Insurance Program (NHI/ *Jaminan Kesehatan Nasional* or *JKN*) to reach the Universal Health Coverage target of Sustainable Development Goals 2030, which also fulfill the need of health service for all, regardless their economic condition.^{1,2} NHI/JKN aims to give social

protection in health aspects to guarantee that the society can get health services through social insurances. NHI/JKN will prevent particular households from falling into poverty when they have to pay a high cost for health from their own pocket. Every Indonesian citizen should participate in the NHI/JKN program to avoid adverse selection. The whole family member stated

on the family card are required to have NHI/JKN membership.¹

The NHI/JKN premium is more affordable because it is cheaper than the usual health insurance from the private company. Most of the NHI/JKN memberships were from the poor people who get premium subsidies from the government. More than half of the informal workers have participated in the NHI/JKN through the government subsidies. Only 17% of them paid their NHI/JKN premium by themselves.³ The collectability of people who had to pay their own premium is only 54%.⁴ These people were not associated with any company or work informally and were not considered as impoverished. The informal sector's low premium collectability was also experienced by other Asian countries such as South Korea and the Philippines that ran a National Health Insurance Program.⁴

According to Indonesian Bureau of Statistics, 56.8% Indonesian worked independently in the informal sector. North Sumatra and West Java were among the provinces with the highest proportion of informal workers.⁵ Moreover, Deli Serdang and Medan City had the highest proportion of informal workers in North Sumatra, while Sumedang had the highest proportion of informal workers in West Java according to *Sakernas* data in 2017. The average income of the informal workers in Indonesia ranged from one million to one and half million Rupiahs, while the maximum income of people in the informal sector remained unknown.⁶ Although some of them might not be poor, but most of them were vulnerable to fall into poverty if they had to pay for a significant amount for particular medical service when they need.⁷ However, according to Indonesian Bureau of Statistics, 31% of informal workers did not have any health insurances,³ and 10% of those who worked in the informal sector and economically vulnerable still did not have

health insurance.⁸ Based on a research, the informal worker's poor understanding and knowledge about the importance of health insurance affected their willingness to become the members of NHI/JKN program and to pay the premium by themselves. Furthermore, 70% of them were willing to pay the NHI/JKN premium independently at a lower than the current rates.⁹

In the other hand, some of the poor have smoking habits in which they pay for something that, has already proven by many studies, can damage their health. Still, the poor are more identical to smoking habits than the wealthier.¹⁰ Plenty research had shown a significant decline in the smoking rates in the middle and upper classes¹¹ regarding their better knowledge and education levels.^{11,12} Besides, poor people, who had low education levels, faced many difficulties in stopping their smoking behavior as the tobacco industry lowered their cigarette prices or gave them free samples.¹² One of the significant cause of smoking behavior was cigarette affordability.^{12,14} Moreover, the stresses of living in poverty, sometimes hopelessness, and having limited access to smoking counselors caused the smokers to turn to cigarettes again and again.^{15,16} The psychological benefit from smoking, such as stress relief, cheap leisure, compensation for loneliness, break-up, or redundancy, made the increased price of cigarettes did not affect the willingness of the poor to buy cigarettes and keep smoking.¹³

Declining the smoking rates among the poor still becomes a challenge for the health sector. Ideally, they can use the money for smoking to pay for their family health insurance premium. Therefore, this research aimed to analyze how poor people in the informal sector perceived on the use of cigarette cost for paying NHI/JKN premium in order to support the sustainability of the NHI/JKN program.

The Health Belief Model

Replacing the smoking budget into health insurance premium will support the better health status of the poor. This is part of a health behavior, which can be analyzed

¹ Regulation of Social Insurance Administration Agency Number 6 in 2018 Chapter III, article 6, number 1.

with a health behavior theory. One of the most widely applied health behavior theories to analyze individual behavior is the Health Belief Model (HBM).^{18,19} After being developed from time to time, HBM has already been adapted to fit with the diverse cultural and topical contexts.¹⁴ HBM suggests that people always have the choices and capable to decide for their own health if they have adequate information

and knowledge.^{22,21} HBM posits six constructs to predict health behavior. Risk susceptibility is a believe that they are susceptible to a condition, while risk severity is a belief that particular behaviors have serious consequences. Moreover, there are action benefits, barriers to action, self-efficacy, and cues to action when they have a course of action available to avoid the condition.²³

Table 1.1. Health Belief Model Key Concepts, Definitions and the Application in this study

Concept	Definition	Application on replacing smoking cost for paying JKN premium
Perceived susceptibility	Belief about the chances of experiencing a risk or getting a condition or disease	Health impact of smoking and the need for health insurance to cover health service fee
Perceived severity	Belief about how serious a condition is	The seriousness of the negative impact of smoking and not having health insurance
Perceived benefits	Belief in the efficacy of the advised action to reduce risk or seriousness of impact	The benefit of quitting smoking and having health insurance
Perceived barriers	Belief about the tangible and psychological costs of the advised action	The potential obstacle when they replacing the cost for cigarettes into the payment for health insurance premium
Cues to action	Strategies to activate “readiness”	Support from the family and community to quit smoking and to join the NHI/JKN program
Self-efficacy	Confidence in one’s ability to take action	The measure of the self-ability to stop smoking and use the cost for health insurance

Source : Champion & Skinner, 2008

HBM would be used for predicting the condition in which poor people would prefer to pay for health insurance premium instead of buying cigarettes for the smokers. They regarded themselves as susceptible to the adverse conditions (perceived susceptibility) such as cancer, heart disease, and other smoking-related illnesses. They believed it would have potentially serious consequences (perceived severity) for them and their families. However, a particular course of action is available to them to reduce the susceptibility or severity or lead to other positive outcomes (perceived benefits) by quitting smoking and using their money to

pay for NHI/JKN premium instead. Moreover, they also perceive a few negative attributes related to health action (perceived barriers).^{22,24}

According to Jones et al. (2015), there was an ambiguity concerning which variables were the most important and how the variables interact within the model. Hence, they added other models that seem relevant to the HBM so that there were three basic models. The first was the most visual depictions of the HBM, in which the variables could have a comparable influence on outcomes. It is suggested that all of the constructs presented in a vertical

line with arrows pointing toward behavior or behavioral intention. This model

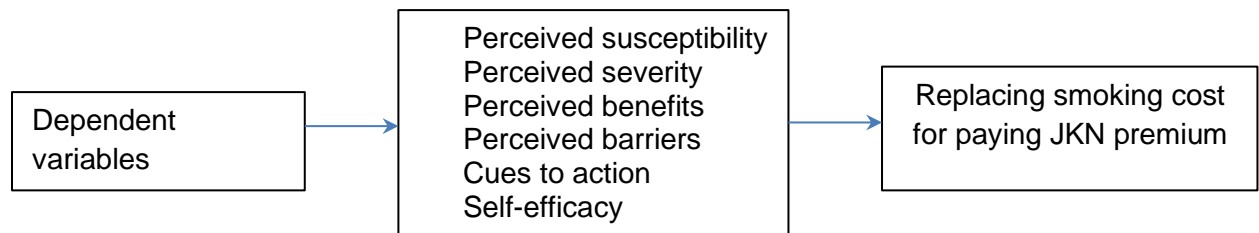


Figure 1. First Model of HBM Variables

assumes that the HBM constructs do not influence one another.

The second possibility is that the HBM constructs could function as a causal chain (look at Figure 2) since it is plausible that some of the variables of the HBM are connected in some way. For example, supports from the family could increase the smoker's self-efficacy. Studies showed that only high levels of perceived susceptibility, along with high self-efficacy, are more likely to made smokers reducing their smoking habits.¹⁶ Then, it will influence the smokers'

perceived barriers to stop smoking and join the NHI/JKN program. Lastly, perceived barriers could predict behavior on using the cost for buying cigarettes to pay for NHI/JKN premium. It is plausible as the efficacy-centered message can lead to the increased perceptions of self-efficacy. These increased perceptions of self-efficacy may lead ones to recognize the benefits of engaging in the new behavior, which can be identified only after developing a sense of efficacy.¹⁷

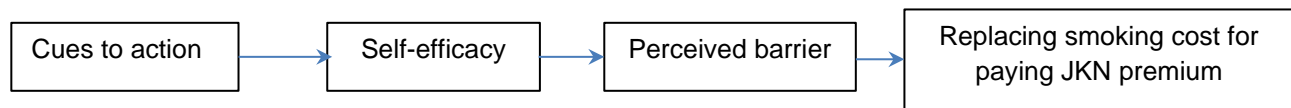


Figure 2. Second Model of HBM Variables

The last model suggests that one of the HBM constructs can serve as a moderator for the others' influence. For example, Champion and Skinner (2008) argued that perceived threat and perceived severity might moderate other HBM variables' impact. Remarkably, they contended that increased severity is required before susceptibility can significantly predict behavior. For example, tobacco users should know the adverse effects of the smoking habit, such as decreased appetite, immunity and oral health such as smelly breath, periodontal diseases, oral cancers, and many more diseases that can destroy their lives.¹⁸ On the other hand, under conditions of low perceived threat, benefits of and barriers to engaging in health-related behaviors will not

be seen as an important thing. Perceived benefits and perceived barriers may better predict behavior when the threat perception is more excellent. However, this relationship may be altered when perceived benefits are very high, and barriers are low.²³

This study explored poor people in the informal sectors' perceptions of switching the cigarettes cost to the NHI/JKN cost by engaging in all of the variables in the HBM. HBM is also applicable to the interpersonal approach used in this research.¹⁸ Moreover, the order of the variables will help the author in describing and analyzing the perceptions of joining the NHI/JKN program instead of smoking.

Methods

Study Design

This study used a descriptive and exploratory qualitative method to describe how poor people in the informal sector perceived the idea of using the cigarette cost for paying the NHI/JKN premium in order to support the sustainability of the NHI/JKN program and to explore the rationale of high-risk health behavior according to the HBM in the Indonesian culture context. Qualitative approach in descriptive nature allows the researcher to build a complex, holistic picture in a natural setting¹⁹ and explore the beliefs, values, and motives that explain why particular behaviors occur.²⁰ Focus group discussions were used to gain in-depth knowledge regarding the barriers, facilitators, and motivators in the particular health behavior.

Study Site and Participants

From June to July 2019, three focus group discussions of impoverished people who worked in the informal sector were completed. A total of 33 participants in this study were engaged in focus group discussions, which consist of ten to twelve participants in each. These focus group discussions were conducted in three different locations: a village in Sumedang, West Java, Deli Serdang, North Sumatera, and in Medan City, North Sumatera. Based on Indonesian Bureau of Statistics, data on the employment situation, these three locations have a high proportion of people who work in the informal sector. These three locations also represented rural areas of villages in Sumedang and Deli Serdang and urban areas in Medan City.

The eligibility for enrollment was an informal worker family, which can be represented by the husband or wife. As we observed the neighborhood and found that the average income of informal workers was below the minimum wages, we assumed that almost all of the population had low income. According to Indonesian Bureau of Statistics' data on August 2021' National Labor Force Survey, informal workers in the province of North Sumatra only earned less

than Rp. 1,467,636 while in West Java was not better off with an income below Rp. 1,516,498. With this category, we were looking for informal workers who got less income than those mention before to be the participants in the FGD.

We recruited the participants through the head of villages that directed us to the community health workers. Since the community health workers were most likely familiar with the socio-economic characteristics of the community, we told them about our participants' criteria and asked them to recruit the participants. Community health workers are the gatekeepers to the community since they already have a good rapport from the community. From the community, FGD participant candidates who met the criteria were asked to come at a certain time and place. They were most likely coming and becoming the participants of the FGD.

Data Collection

The study commenced after obtaining approval from the head village. All of the focus group discussions were held in the village hall. Each focus group ran for no more than one hour and was audio recorded. Times were varied based on the discussion being held in the group and the saturated information gained from the group. The discussions in each area were facilitated by the authors. At the beginning of each session, both facilitators let the participants to introduce themselves and explained their role. The facilitators functioned both as the moderator and recorded notes on a flip chart. Each session was audio-taped and transcribed. After that, the facilitators informed that the discussion had to be kept confidential and encouraged everyone to speak and respect each other's opinions.

Data analysis

After that, the audio files were transcribed verbatim, and checked against the audio recording of each session to ensure accuracy. Data analysis involved a thematic analysis of transcripts based on

the constructs of the Health Belief Model. Thematic analysis is a method of identifying, analyzing, and reporting patterns (themes) within data. Thematic analysis of open-ended responses from the transcribed interviews can explore the context while allowing flexibility and interpretation when analyzing the data. However, it should be undertaken with special care and attention to the method's transparency to ensure confidence in the findings.²⁰ The researchers first analyzed the transcripts separately and then reached a consensus regarding identified themes and patterns. The content was analyzed both within and across focus groups. Then, the interpretation of the data will be presented both in the result and discussion.

Research team and reflexivity

MYS is a researcher with several experiences of conducting health research using quantitative and qualitative methods. With a public health educational background, MYS had used to deal with community health workers and engaged with communities to do health socialization or collecting data. MWG, on the other hand, is a researcher with a health communication education background who had done a lot of research on literacy issues. In addition, MWG is an active researcher at the BRIN - research center for population who had conducted some studies on demographic issues.

Results

There were several themes that arose during the discussion related to the NHI/JKN program and smoking. Participants mentioned their perception of the NHI/JKN program, including the benefit of the NHI/JKN program as well as their willingness and ability to pay for the NHI/JKN premium. Another theme that arose during the discussion was about the positive effect of smoking, the benefit of quitting smoking, and the possibility of using cigarette costs for paying the NHI/JKN premium.

Perception of JKN program

The perception of the NHI/JKN program presented several constructs of HBM. Firstly, how impoverished people in the informal sector perceived their willingness and ability to pay for NHI/JKN premium independently (without being subsidized by the government) were cues to action and self-efficacy. Most respondents were willing to pay for the NHI/JKN premium if they had the ability, or in an excellent financial condition. This finding was relevant to other studies that workers in the informal sector had a greater willingness to pay for the health insurance premium.^{27,28} However, the level of welfare that the respondent wanted to achieve and called 'has enough money' was not clear yet since each family had their own needs and lifestyle. A respondent also said that the money to pay for the NHI/JKN premium was a sensitive issue to open up in a public discussion.

"I want to pay (NHI/JKN premium) if I can. However, the reality is I can't (do not have enough money). It is even hard to fulfill my family's basic needs every day. If I had the money, I would pay for the NHI/JKN premium as it is essential for my family, especially if they need healthcare one day." (Focus group discussion in Medan, June 2019)

The primary purpose of the NHI/JKN program is for our health needs. The subsidized or the one who pays on their own is okay. All of them are for the sake of health. If suddenly we have to access the health service, we have to have health insurance. However, we have to pay attention to how much we have to pay (NHI/JKN premium). The ability to pay the premium is a sensitive issue for me to be disclosed. (Focus group discussion in Medan, June 2019)

Furthermore, respondents already have a good perception on the NHI/JKN program's benefit to cover their healthcare service. On the other hand, one group of respondents had different ideas about paying for NHI/JKN premium by themselves. Even though they have already knew the NHI/JKN program's benefit, they still depend on the government's subsidies. They believed that the states or regional government have enough money to cover up their health insurance premium since NHI/JKN is a national program.

If there is a free one, why bother paying. (Focus group discussion in Deli Serdang, June 2019)

This statement showed a lack of knowledge about the importance and urgency of having health insurance for the family. Ownership of health insurance was not a priority yet for them. Another cause for this perspective could come from the health service availability.⁹ Based on the respondents' answers, they were not satisfied with the services by the local health service. They often had a bad experience in utilizing the primary health care center due to the health workers unfriendliness, including the doctors, nurses, and even the administrators. These facts were the barriers of poor people to pay for the NHI/JKN program even though they have the ability.

Perception of cigarettes costs and NHI/JKN premium

Female respondents in the focus group discussion, who were the housewives, had accepted the fact that most men had smoking habits. They also did not mind if their husband used money for buying cigarettes if there was any. Nevertheless, when researchers started to compare the cost for cigarettes with the opportunity to pay for NHI/JKN premium as the replacement, there were two types of responses from the participants of focus group discussions. The first type was the respondent who accepted this idea and

found that it was a good choice to replace the cost for smoking with other beneficial needs.

I wish he would quit smoking.

(Focus group discussion in Medan, June 2019)

If buying cigarettes, 25,000 rupiahs are just for one person. But for food, 25,000 rupiahs can be used for all of the family members. (Focus group discussion in Sumedang, July 2019)

The second type was the respondent who rejected this idea, slightly or hardly. They have already known that it was better to use the money to pay for NHI/JKN premium than buying cigarettes. Still, they admitted that it was a strenuous movement, and they doubt themselves to do so. Moreover, some respondents refused the idea without a second thought. They believed that smoking was beneficial for their husbands' productivity and cigarettes could not be replaced, including with health insurance. Moreover, they felt that paying for the NHI/JKN premium gave more burdens for their finances than cigarette costs.

For paying NHI/JKN premium of 250,000 rupiah (the NHI/JKN premium for all of the family members), it has to be directly paid at one time, while 600,000 rupiahs for smoking (total expenditure on cigarettes in a month), it was paid 20,000 rupiahs per day. So, there were different. Also, his cigarette is not our business. If he does not smoke, he might not be able to do his work. Thus, the money to buy cigarettes cannot be used for paying the NHI/JKN premium. Cigarettes and NHI/JKN premiums are different and cannot be replaced with each other. (Focus group discussion in Deli Serdang, June 2019)

Wives who allowed their husbands to smoke could be a non-supportive environment for people who wanted to stop smoking.²¹ The act to normalize smoking behavior might cause the fact that Indonesian people already have a smoking habit that was rooted even since they were young.⁴¹ Also, data showed that 80% of male adolescents smoked in their daily behavior, and the majority (53%) of male adolescents, who were currently smokers, smoked at least one cigarette in 24 hours.⁴⁰ Lack of support from the family (in this case were the wives) for quit attempts made the smokers had more significant addiction to tobacco and less motivation to quit smoking.²²

Finally, although the female respondents had different responses to replacing cigarettes costs into NHI/JKN premium, the men in the group discussion generally accepted the idea. However, this statement could not be the good news since the respondents had an opportunity to give an opinion that was morally accepted.

I am willing to pay for the NHI/JKN premium because previously, we have discussed the cost of cigarettes. (Focus group discussion in Medan, June 2019)

Discussion

Indonesians had 'special' conditions both for health insurance ownership and the smoking habit. Generally, Indonesians were the risk-takers in terms of health and death. Thabrany²³ stated that Indonesians often think that illness and death were God's destiny. Indonesian smokers are myopic addicts because their cigarette consumption ignores anticipated future changes, including the potential health problem they could gain.²⁴ On the other hand, research in the United States had shown that one-third of current smokers were afraid to find out whether they had lung cancer, which leads to screening avoidance.²⁵ The smokers'

perspective and behavior added more barriers to implement one single health insurance program for entire population to achieve universal health coverage (UHC) which is NHI/JKN program.

Moreover, achieving UHC in Indonesia might be challenging due to the informal workers. While WHO²⁶ defines UHC as efforts to provide health services access to everyone in need, some developing countries that aimed to achieve UHC using national health insurances, including Philippines, South Korea, and Indonesia, often face difficulties with informal workers.^{27,28} Workers in informal sectors might be known as a small business, using simple technology, and having unstable income.²⁹ This condition might hinder informal workers to pay for NHI/JKN premium themselves as in 2019 only half of the informal workers in Indonesia enrolled and paid for JKN premium independently.⁸

Findings in this study might help to identify specific information or intervention that increase informal workers to switch from buying cigarettes into paying for NHI/JKN premium. All findings suited the third model of HBM, which was a particular variable that moderated the other variables. On the NHI/JKN program perception, perceived barriers among Deli Serdang respondents were higher than others, so they were less likely to pay the JKN premium independently even though they could pay for it. Furthermore, Deli Serdang's respondents had no strong self-efficacy, which led to the low desire to engage in actions required to quit smoking and replaced it with paying for NHI/JKN premium. Self-efficacy was reported to be a gradual process starting from an individual with the support of the surrounding environment, including their families. This shallow self-efficacy moderated the other constructs, such as the perceived benefit of the NHI/JKN program, perceived threat, and severity of smoking behavior. Smokers who had higher perceived severity of the smoking-related disease, fewer perceived barriers to quitting, and greater self-efficacy

were more likely to do smoking cessation.³⁰ However, a higher proportion of such barriers was found among heavy smokers than light smokers.³¹

The different perceptions of Deli Serdang's respondents might be related to their type of informal sector. Respondents in Medan mostly worked as a small trader, driver, and other services jobs. Most Sumedang District respondents were farmers and Deli Serdang's respondents were mostly fishermen as they lived in the coastal area. The fisherman community has the culture to be wasteful when they got excess caught, apathetic to the environmental conditions, and surrender to the society developments due to their lacked of knowledge and low level of education.³² These distinctive characteristics lead the respondents in Deli Serdang to have a high perceived barrier and low self-efficacy to switch the money used for smoking to pay for the NHI/JKN premium.

What is more worrying is that smoking among Indonesians will continue to exist without health literacy which can prevent them from this endless "vicious cycle". Discussions about the dangers of smoking in the families, had never been carried out intensely. Indonesia is one of the countries with the highest burden of adolescent smokers worldwide. It is estimated that this record will last for a long time.³⁷ In addition, Abidin et al,³⁸ found that more than half of adolescents (52.6%) were smokers in the families who were unable to carry out family health tasks, such as participating in government health administration, teaching health problems and making decisions related to health problems that afflicted them. These families had no health literacy regarding the dangers of smoking from their parents. Health literacy determined the extent to which individuals can obtain, process and understand basic health information and services needed to make informed health decisions.³⁹

To the best of our knowledge, our paper is the only one who utilizes the HBM

theory to analyze health insurance willingness to pay among informal workers and compare it to the ability to buy cigarettes. Studies in other countries that have discovered both smoking and health insurance had investigated the willingness to pay health insurance that covers health problems derived from smoking. A study among older people in Germany found that becoming a smoker decreased willingness to pay among respondents.³³ While a study by Bock et al.³⁴ had measured the aspect of willingness to pay quantitatively, this study had gained deeper understanding on smoking and health insurance willingness to pay and discovered different ideas among respondents regarding smoking and paying for insurance. Findings from this study might be useful to specify the aspects in smoking and health insurance that can boost or hinder smoking cessation and health insurance willingness to pay. It will be beneficial for policymakers who intend to improve informal workers' willingness to pay on health insurance as well as smoking cessation so they can develop appropriate education programs or other interventions in the community.

This study, however, had limitations in data collection. The eligibility criteria were based solely on the data from the National Bureau of Statistics. According to Indonesian National Bureau of Statistics, the informal workers usually did not earn more than the minimum wage set by the local government. We included every informant in the category of workers under the minimum wage because of their status as informal workers. Even though this is a macro category, some informal workers may have incomes above the regional minimum wage. In addition, we also did not accurately record the education and income of every informant we interviewed.

Conclusion

Poor people who work in the informal sector gave two different responses regarding the replacement of cigarette cost into NHI/JKN premium payment. Some of them agreed with this idea, but the others

refused the idea due to the unsatisfaction to the health services. Based on the Health Belief Model predictors, respondents had already an excellent perceived susceptibility and severity both on smoking habits and their poor financial condition. They believed the NHI/JKN benefit was to protect them financially from the adverse situations. However, they had low self-efficacy and high perceived barriers that hinder them from replacing the money for buying cigarettes into NHI/ JKN premium payment. In general, the poor had low education and lack of insurance literacy. Approaching the poor people in the informal sector through their local context is urgently needed to increase their health insurance literacy and knowledge about smoking effects. Moreover, the aspects that bring up the barriers for informal workers to join the NHI/JKN program must be overcome.

Ethics approval

Not applicable.

Availability of data and materials

The qualitative datasets used and/or analyzed during the current study was available on reasonable request to the corresponding author.

Acknowledgment and declaration

We acknowledge researchers in the Research and Innovation National Agency who had collected the data together with the authors. The authors' opinions expressed in this study did not necessarily reflect the views of the Research and Innovation National Agency or the authors' affiliated institutions.

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Author Contribution

MYS collected and analyzed the data about NHI/JKN and smoking cessation. MWG elaborated the health belief model and literacy aspect in this manuscript. Both authors contributed equally in writing the manuscript. All authors had read and approved the final manuscript.

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