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Situational Analysis of Extending National Health Insurance Coverage to the Informal Sector in Banyumas, Indonesia: A Case Study Among Palm Sugar Farmers

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Abstract

Background: To explore the situation of national health insurance coverage among informal workers and to identify the enrollment strategy for such workers.

Method: This study used the descriptive qualitative method. Participants were eight palm sugar farmers and fifteen stakeholders of national health insurance in the district of Banyumas, Indonesia. This study included a semi-structured informant interview and open-ended questions. A thematic framework analysis was applied to guide the interpretation of the data. Data analysis was facilitated by using MAXQDA 12 software.

Results: This study highlighted several interesting issues regarding the efforts to extend health insurance coverage among palm sugar farmers. First, the nature of palm sugar cultivation possesses a higher risk of injury and work-associated diseases, including falls and seasonal diseases. Second, health insurance possession is crucial, but farmers face the problem of how to ensure the continuity of the premium payment amid the uncertainty of palm sugar business revenue. Third, multi-stakeholder initiatives, bringing together government, business, and civil society will solve coverage expansion challenges among these workers.

Conclusion: This study suggests that extending health insurance coverage among informal workers needs various and innovative approaches by considering their characteristics to maintain a sustainable membership. This study identifies the important role of cross-cutting collaboration between the government with other stakeholders to assure informal workers' coverage under the national health insurance program. Further research is needed to explore alternative ways of maintaining the sustainability of health insurance membership.

Keywords: Health insurance, Informal workers, Qualitative approach, Indonesia

1. Introduction

Currently in developing countries, the effort to achieve universal health coverage has been a top national priority in order to improve better access to healthcare. Some countries such as Peru, Vietnam, and Ghana are striving to reach universal coverage, while others have already achieved success like Thailand, Costa Rica, and Colombia [1].

Indonesia has instituted national health insurance (BPJS Kesehatan) since early 2014, in the process of restructuring the health care financing system. It

was initiated to improve access to health services for all people by transforming the previous health insurance programs into a single-payer model health insurance system. Following progress in December 2014, BPJS Kesehatan had covered about 133.4 million beneficiaries or approximately 50% of the total population in Indonesia [2]. Most BPJS Kesehatan beneficiaries were from the previous schemes (including Jamkesmas, Askes, and Jamsostek schemes) which covered about 94% of total members of BPJS Kesehatan. The increasing number of enrollments had impressively inclined during the initial year of the establishment. However, there are

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approximately 32.5 million people (60.14% of all Indonesian jobs) who are working in the informal sectors who are not been covered by *BPJS Kesehatan*.

Health insurance is found to have a positive impact on access to healthcare in developing countries [3,4]. Previous research by Aji et al. has confirmed that health insurance programs also provided financial protection to alleviate the burden of out-of-pocket spending [5,6]. Therefore, a lack of coverage among informal sector workers in Indonesia becomes a prominent issue in response to health service coverage and financial risk protection aspects.

The challenge toward achieving universal health coverage in Indonesia is to extend health insurance coverage to the informal sectors. Evidence from other countries has found that the most common difficulties encountered in covering health insurance for the informal workers include the problem with the premium collection, low enrollment rates, and adverse selection [1]. Moreover, the difficulty in extending coverage to such workers consists of multiple factors, including irregularity of earned income [7].

This research study is conducted in response to the aforementioned problem in the healthcare sector. The study is designed to explore the situation of national health insurance coverage among informal workers focused on palm sugar farmers in Indonesia and to identify the enrollment strategy for such workers. This study focuses on palm sugar farmers that account for a significant number of informal workers from the agriculture industry in Indonesia and absorbed more workforces [8]. The household working characteristics of palm sugar farmers and traditional business style with its very simple technology might reflect the informal worker's condition in Indonesia [9]. Most of them are not categorized as poor households who receive government subsidies for the national health insurance premium. Therefore, identifying such workers for the expanding national health insurance coverage would also provide an essential recommendation to the policymakers.

1.1. An overview of national health insurance in Indonesia

BPJS Kesehatan has a mandate to achieve universal health coverage that ensures all Indonesians are protected by comprehensive health treatments for most outpatient and inpatient visits in both public and private facilities [10]. This program has no cost-sharing policy except services that may raise 'moral' issues, and all medical conditions in nature are

covered [11]. *BPJS Kesehatan* has four groups of beneficiaries: 1) subsidized or premium assistance beneficiaries, for the poor and near-poor; 2) formal workers and salary earners, for public and private sectors' employees; 3) informal workers, for non-poor who work in the informal economic sector; and 4) non-salaried workers. The poor and near-poor beneficiaries have no contribution to the premium due to being fully subsidized by the government. Premium contribution for formal workers is set at 5% of their salary (1% by the employee and 4% paid by the employer), while informal and non-salaried workers pay a fixed monthly premium contribution [12].

2. Methodology

2.1. Study setting

This study applied a qualitative descriptive approach as the research design. The study was conducted in the district of Banyumas, Central Java, Indonesia. Banyumas was selected as the study site because it has been a hub of palm sugar production for decades. To find the appropriate participants or informants, this study employed a purposive sampling approach. The main participants of this study were palm sugar farmers in the sub-district of Cilongok and Somagede, and the supported participants were stakeholders from the village, sub-district, and district level. The study recruited 23 informants from both palm sugar farmers and stakeholders.

2.2. Data collection and analysis

The study approach included semi-structured informant interviews and open-ended questions with palm sugar farmers, *BPJS Kesehatan* branch officers, district health officers, heads of community health centers, representatives of informal worker association/groups, and community leaders. All interviews were conducted by using mixed languages between *Javanese*, as the local language, and *Bahasa*, as the national language, to increase the accuracy of expression among study participants. The interview protocol was developed based on the literature review [13–15]. The interview guide included four sections including study description, engagement, exploration, and exit questions. The interview collected information about demographic details, working conditions, perception of the health insurance mechanism, willingness to join, premium collection strategy, as well as expectations, suggestions, and recommendations for the policy. Data saturation or completion of data collection was decided by analyzing the adequate and quality data

with respect to overall research objectives to be achieved. On average, each interview lasted 45–60 minutes in duration. From the final research project sample of participants, the authors extracted the interviews to analyze their narratives.

Thematic framework analysis was adopted as the main method of qualitative data analysis. This step consisted of a detailed analysis to crystallize the concepts, themes, and issues contained in the findings. To facilitate this process, it used data coding to ease analyses of larger data files and ensure the accuracy of the analysis. Coding was done according to a main theme and subtheme for each sentence and paragraph. This process was facilitated by using a qualitative data analysis software package, MAXQDA 12, which assisted the researcher in sorting and coding the data into conceptual and thematic categories.

2.3. Ethical consideration

Ethical approval was issued by the ethical committee of the Faculty of Medicine, Jenderal Soedirman University, Indonesia (157/KEPK/V/2018).

3. Results

Most participants (91.3%) were male between the ages of 27 and 66. The majority of participants had low educational levels ranging from elementary to senior high school (Table 1).

Table 1. Characteristics of study participants.

Participant's characteristics	Frequency	%
Informants	N = 23	
Palm sugar farmer	8	34.9
Neighborhood head	1	4.3
Head of palm sugar farmer cooperation	2	8.7
Village head	6	26.2
Community health center staff	2	8.7
District health officer	1	4.3
BPJS Kesehatan branch officer	1	4.3
District cooperation officer	1	4.3
District social welfare officer	1	4.3
Gender		
Male	21	91.3
Female	2	8.7
Education level		
Elementary school	7	30.4
Junior high school	2	8.7
Senior high school	8	34.7
University	6	26.2
Age (years)		
27–34	4	17.4
35–42	4	17.4
43–50	7	30.4
51–58	5	21.7
59–66	3	13.1

Findings have been summarized into four major themes to represent the situation of national health insurance coverage among palm sugar farmers and its strategy to extend such a program. The process of analysis from the thematic framework analysis is provided in Supplement 1 (<https://drive.google.com/drive/folders/1pVkgTUqRbL1K8ziRzNX4mTRjQnC8wGDE?usp=sharing>).

3.1. Characteristics of palm sugar working condition

Palm sugar farmers have higher risks of working accidents according to their characteristics. Three risk factors of work-related accidents are found to be environment, person, and vehicle.

The working environment of palm sugar farmers could lead to accidents. Tree height, weather, and slippery pole are the main environmental risk factors of a working accident. As two palm sugar farmers said,

“I had fallen many times during the rainy season causing light scratches [...] although it was raining, we had to climb the tree.” (A palm sugar farmer, 27 years old)

A district social welfare officer also confirmed that palm sugar farmers had a higher working environmental risk as follows,

“[...] based on our report from January 2015, there were about 15–20 fall cases of palm sugar farmers, but the cases decreased during May to June. The cases often occurred during the rainy season and decreased in the dry season. The cases were higher during the rainy season because the palm tree becomes slippery.” (A district social welfare officer, 54 years old)

The second risk factor is the individual. This factor is related to the health condition of the palm sugar workers. A palm sugar farmer reported that their health condition has influenced the safety as follows,

“I had cramp while I was on the top of the tree so I could not get down till I was relieved of the cramp. It was so dangerous actually!” (A palm sugar farmer, 43 years old)

The third identified risk factor is the vehicle. Unwillingness to wear a personal safety device was also found to be related to work accidents. A palm sugar farmer expressed his unwillingness to use a safety belt as follows,

“[...] it was so annoying to wear a safety belt! It was better without a safety belt. Most of us did

not want to wear this device [...] wearing a safety belt was so inconvenient and reduced our working time.” (A palm sugar farmer, 29 years old)

3.2. Perception towards health insurance scheme that is appropriate to the palm sugar farmer's condition

Three persistent themes have emerged from the issues of palm sugar farmers including health insurance, health insurance settings, and premium collecting and channeling strategies.

Participants have described their perception regarding the health insurance scheme that could be adjusted with their characteristics. Palm sugar farmers have expressed that health insurance can protect them when they need health services as follows.

“We need health insurance to protect us when we have no money to pay for health services, so we could keep ourselves healthy and could work as usual [...]” (A palm sugar farmer, 43 years old)

Palm sugar farmers have already organized micro-social protection through the palm sugar farmer cooperation that provides accident and health benefits. As a palm sugar farmer cooperation officer said,

“[...] our cooperation has a social protection scheme for the members. The cooperation would donate about 3.5 million if a member had fallen [...] if a member was sick due to accident, the cooperation would pay his medical services at the hospital.” (A palm sugar farmer cooperation officer, 61 years old)

A second persistent theme is related to the health insurance settings for palm sugar farmers. Participants have hoped that the health insurance premium should consider the ability to pay the palm sugar farmers although *BPJS Kesehatan* had already set their premium levels. As a palm sugar farmer described.

“We hope we could pay the premium with an installment because our income was uncertain.” (A palm sugar farmer, 54 years old)

The third persistent theme is related to premium revenue, collecting, and channeling. Participants have described the strategies for how to pay health insurance consistently per month. An innovative approach dealing with premium revenue is found to be the ‘palm sugar savings’ method. Participants have described this method as follows,

“By saving in the cooperation, for example, cooperation will deduct 1 Kg of our palm sugar sales and save it for a year. This saving could be used for paying health care costs and the rest would be kept as the real savings.” (A palm sugar farmer, 29 years old)

The idea of ‘palm sugar savings’ is to take some money from each kilogram of palm sugar sales and use it for health insurance premiums. This idea has also been supported by a district industry, commerce, and cooperation officer as follows,

“[...] the palm sugar farmers were asked to put aside 2 Kgs of their sales from every day they produced palm sugar. 2 Kgs of palm sugar deduction per month or 1 Kg per 15 days, I think palm sugar farmers would be able to do it.” (A district industry, commerce, and cooperation officer, 56 years old)

However, a participant expressed the objection that he was unable to pay the premium for all family members due to the limitation of their economic condition. As a participant said.

“If I should pay 25,000 IDR per member each month, I thought I would not register all household members. [...]” (A palm sugar farmer cooperation member, 61 years old)

For channeling strategy, palm sugar farmers have tended to choose a palm sugar farmer group or cooperation as a collecting agency. A palm sugar farmer described as follows.

“It would be simple if we could pay the premium through our palm sugar farmer group. We had to consider this idea.” (A palm sugar farmer, 27 years old)

“I think it would be better if a cooperation would collect the premium, although developing cooperation was quite difficult.” (A palm sugar farmer, 29 years old).

The idea of developing an informal collecting agency is also supported by *BPJS Kesehatan* officer as follows,

“I am confident if the cooperation will be able to be a collecting agency for health insurance premium. The cooperation could develop the ‘palm sugar saving’ method and deduct the palm sugar sales for this purpose.” (A *BPJS Kesehatan* officer, 46 years old)

3.3. Barriers and challenges to providing health insurance for palm sugar farmers

Several barriers and challenges to providing health insurance for the informal sector, particularly palm sugar farmers, are related to internal and external aspects. Household economic stability and households' knowledge regarding *BPJS Kesehatan* are the major internal barriers that limit health insurance from becoming a part of household priorities.

Uncertainty of income due to the uncertainty of palm sugar pricing leads to the instability of household economics. As a neighborhood head describes,

"Palm sugar household income depends on the palm sugar price. If the palm sugar price is higher, it would be better for the palm sugar farmer's household economics. Moreover, many palm sugar farmers do not have their own trees, so they have to share their palm sugar production with the owners." (A neighborhood head, 42 years old)

They have also confirmed that health insurance is not yet a priority for households. Palm sugar households have prioritized other necessities rather than health insurance. Furthermore, their knowledge regarding health insurance mechanisms is not sufficient, as described as follows.

"We have so many necessities for our family, so our income does not do enough to enroll health insurance [...]." (A neighborhood head, 42 years old)

"Palm sugar farmers still perceive that the government should provide health insurance free of charge [...] so they do not have to pay for the premium. They do not understand about health insurance mechanism [...]." (A village head, 44 years old)

External barriers consist of unaffordable premium rates, the experience of unequal distribution of social protection programs, less satisfaction towards the quality of health care, and government support to social protection programs for palm sugar farmers.

A higher premium price of health insurance is the major cause of their unwillingness to join the scheme as expressed by a participant,

"We think that 25,000 IDR for premium per household member causes a financial burden for us, if the premium is only 10,000 IDR, we think

that we could afford that. However, it should also consider the fluctuation of the palm sugar price [...]." (A palm sugar farmer, 27 years old)

Previous experience related to unequal distribution of social protection, feeling less satisfied with health care services, and less adequate government support have also become external barriers for extending such a program. As a participant has described,

"The government did not evaluate the distribution methods of *BPJS Kesehatan* card for the poor that caused mis-targeting. It caused misunderstanding amongst the people [...] the quality of services for people who received *BPJS Kesehatan* for the poor were less satisfied and they had a long waiting list to get services [...] the government should provide better information dissemination relating to the *BPJS Kesehatan* program so people could understand comprehensively." (A head of palm sugar farmer cooperation, 36 years old)

3.4. Policy recommendations for the implementation of health insurance for palm sugar farmers.

Policy recommendations for the government regarding extending *BPJS Kesehatan* enrollment to palm sugar farmers have emerged from this study. Cross-cutting strategy for conducting *BPJS Kesehatan* program campaigns and dissemination and improving beneficiary's administration are the main recommendations as described by two participants,

"There are so many invalid beneficiaries' administration according to their identity and conditions. Government should re-check the data to the field such as in the district level or at village level to assure the quality of the data [...] moreover, the government should empower the palm sugar farmer on how to manage their household economies in order to increase the capability of the household to save their income for health insurance premiums [...] the government should also revitalize palm sugar farmer cooperation so they could facilitate the collection of the health insurance premium [...]." (A head of palm sugar farmer cooperation, 36 years old)

"*BPJS Kesehatan* should have a direct campaign for their program especially among the informal sector such as palm sugar farmers. To date, they are only focusing their campaign on the private formal sector." (A district health officer, 53 years old)

4. Discussion

This study has demonstrated the situation of national health insurance coverage among informal workers and the enrollment strategy for such workers. The results of the study have highlighted several interesting issues and challenges regarding the efforts to extend *BPJS Kesehatan* coverage among palm sugar farmers.

The palm sugar farmer's working environment has a higher risk of work-related accidents. This condition has badly influenced the health status of the workers that may lead to the increased need for health insurance. The adverse selection may be due to the characteristics of working conditions [16,17]. The enrolment to *BPJS Kesehatan* among palm sugar farmers is encouraged by health problems due to the high working rate. *BPJS Kesehatan* is susceptible to high-risk individuals including people who are working in extreme environments and with high rates of activity, including palm sugar farmers.

Palm sugar farmers have a perception regarding health insurance that is appropriate with their working characteristics, particularly their household economic condition. The uncertainty and low income among palm sugar farmers have influenced their perception of the health insurance model that fits their condition. A prior study by Priyanto has confirmed that the level of income among palm sugar farmers is lower than the regional minimum wage [18]. Palm sugar farmer income is only enough for the basic household necessity and is not sufficient for health insurance premiums. It needs an innovative approach to deal with the low income of the palm sugar farmers to be enrolled under *BPJS Kesehatan*.

The idea of 'palm sugar savings' has become an alternative approach for enhancing palm sugar farmers to generate the source of premium payment. This approach will have a minimum effect on decreasing the palm sugar income while they can save a part of their palm sugar production as premium instalments. It is tailor-made revenue generated for health insurance payments. However, it should be piloted to evaluate the success of its implementation. This innovative method can also consider other factors of social capital such as palm sugar farmer group/cooperation to support its implementation. For example, in the Philippines, PhilHealth has used an informal group to support the national health insurance enrolment as well as to collect insurance contributions among informal sectors. Working with partner organizations, PhilHealth has sought to offer greater payment flexibility to its beneficiaries [19].

Empowering informal organizations to support the idea of 'palm sugar savings' has provided an opportunity for *BPJS Kesehatan* to disseminate its programs. To date, the people in rural areas have not received comprehensive information regarding the *BPJS Kesehatan* program including its procedure for enrolment, premium payment, as well as health care providers that can be accessed. Evidence from other developing countries has found that convenient enrolment by collaborating with informal stakeholders has increased the number of new enrolments [19]. Therefore, cross-cutting strategies with other informal stakeholders can support the effectiveness of the *BPJS Kesehatan* campaign.

Cross-cutting strategies with other stakeholders should also consider how to assure the sustainability of premium payment among palm sugar farmers. Several methods have been implemented in developing countries for the sustainability of health insurance membership. Partially subsidized premiums, premiums varied by income, dividing the premium into smaller payments, and payment of the premium at harvest time have become alternative ways of maintaining the sustainability of health insurance membership that have been conducted in some developing countries in Africa [20]. The Indonesian government can develop possible strategies for achieving universal health coverage especially while enrolling informal sector workers.

4.1. Limitations

The study was only conducted in the district of Banyumas that limits its results and generalization. Therefore, it may not represent all informal workers in Indonesia, so different districts can have different characteristics and infrastructure. The implementation of the innovative strategy to deal with informal sectors can have different outcomes in different locations. Furthermore, this study is only focused on palm sugar farmers. Different informal sector workers are also required for different intervention strategies in extending *BPJS Kesehatan* coverage.

5. Conclusions

Extending *BPJS Kesehatan* among informal sectors such as palm sugar farmers requires various approaches. *BPJS Kesehatan* should rigorously promote the scheme, coverage, terms, conditions, and benefits to the target population, to reduce the misunderstanding between the user and the provider, while at the same time enhancing collaborative work with the local government to conduct a robust survey and identification for eligible recipients of

the waived-premium health insurance or providing various options of payment. The study has also suggested an innovative premium payment mechanism by developing 'palm sugar savings' that can be an alternative strategy for dealing with the uncertain income of palm sugar farmers. Moreover, the government should pay more attention to the sustainability of premium payment of the informal sector workers.

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Conflict of Interest

None.

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