Influence Analysis of *BPJS Kesehatan* Ownership on Participant's Health Behavior in Surabaya

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Keywords: BPJS Kesehatan, Health behaviour, Ex-ante moral hazard.

Abstract: The Government of Indonesia aims to have Universal Health Coverage by 2019 which means that all citizens will be covered by JKN, a national health insurance program. Some studies have found the existence of ex ante moral hazard that can bring disadvantages for the government and the community itself. This research is intended to analyse the influence of BPJS *Kesehatan* towards health behaviour of the participants. The research design is analytic and cross-sectional with a multi-stage random sampling method. 250 respondents from two districts that had been randomly selected were enrolled in the study. A binary logical regression test was used to analyse the data obtained. The results showed a positive and significant influence of BPJS *Kesehatan* towards the participant's health behaviour, with a significance value of 0.039. The value is smaller than the alpha 0.05 which means that the statistical hypothesis has been rejected. Furthermore, OR analyses shows an exp.value of 1.951. In conclusion, the participation of BPJS *Kesehatan* influences the preventive health behaviour of the participants and they have the tendency to behave 1.951 times healthier than people who do not have health insurance at all.

1 INTRODUCTION

Health is the right of every individual. Protecting and ensuring the fulfilment of these rights for every citizen is the responsibility of the government. To make it happen, the government established an agency *named Badan Penyelenggara JaminanSosial (BPJS)* which officially began operating on January 1st, 2014. *BPJS* is in charge of organising the JKN (National Health Insurance) program with the services offered divided into *BPJS Kesehatan and BPJS Ketenagakerjaan*. Up until October 16th, 2016, there were 169,574,010 Indonesians registered on the JKN program (BPJS, 2016) out of a total of 237,641,326 Indonesians according to the Population Census of Indonesia, 2010.

In 2019, in accordance with the Indonesian Ministry of Health's strategic plan of 2015-2019, all Indonesian citizens must be registered as *BPJS Kesehatan* participants. It means that two years on from this year, all residents will have health insurance that allows them to access health services. This is one of the government commitment steps to achieve Universal Health Coverage (UHC) in Indonesia. However, even when the whole of society has been insured, there will be the possibility of ex post moral hazards and ex ante moral hazards.

The results of the previous studies have shown the existence of ex post moral hazard and increased visits to health service agencies to get curative and rehabilitative facilities, while the existence of ex ante moral hazard is still not consistent. Anderson E.Stanciole's (2008) study shows that health insurance has an effect on lifestyle selection, increasing the tendency for active smoking, a lack of exercise and obesity, and decreasing the tendency to consume alcoholic beverages. Dhaval Dave and Robert Kaestner (2006) pointed out that otherwise, the ex ante moral hazard was not found consistently in women, but showed consistent evidence as having an effect on men.

This study is designed to analyse the influence of *BPJS Kesehatan* ownership towards health behaviours (preventive) of the participants in Surabaya. The results of this study are expected to be used as a reference for the Government or the

parties associated with the implementation of JKN to allow them to be more prepared for the possibilities that can arise after the achievement of UHC 2019. In addition, the results of this study can be used as government considerations to improve the quality of the National Health Insurance (JKN) program.

2 METHODS

This explanative quantitative research explains and tests the hypothesis of the research variables. The study was conducted over a period of five months, starting from March to July 2017. The study design was cross-sectional with a population consisting of the *BPJS Kesehatan* participants in Surabaya. The design was used because the study examined two variables at the same time. The independent variable is the ownership of *BPJS Kesehatan* in Surabaya. The dependent variable is health behavior. The sampling technique used was multi-stage random sampling. The location of the research was obtained by randomly taking individuals as samples from 2 sub-districts from the 31 sub-districts in Surabaya, and then selecting 2 urban villages until the final 2 RW (*Rukun Warga*) were chosen as the research location. The selected RWs were RW 1 Krembangan Utara, Pabean Cantian and RW 7 Nginden Jangkungan, Sukolilo, Surabaya.

The equation used to determine the sample size is known as the Lemeshow formula (1997):

$$n = \frac{N\,Z^2\,P(1-P)}{(N-1)d^2 + Z^2 P(P-1)} \qquad (1)$$

From the formula above, we have got a sample size of 250 people, with a ratio of 4:1 which was obtained from the number of participants of Surabaya City BPJS 2016 and the number of people who do not have health insurance (the population in 2016 - the number of participants of BPJS in 2016, assuming that non-BPJS participants are included in the community who do not have health insurance because of the difficulties in knowing the number of people who do not have *BPJS Kesehatan* in Surabaya. The assumption is only used to determine the ratio of the research sample). The data used in this study was the primary data obtained from the data collection in the field using the aid of a questionnaire instrument with a Likert scale (1-4). The questionnaire passed the test of validity and reliability before being given to the community.

Based on the research objectives and the data scale of each variable (the scale of the independent variable data is nominal, the dependent variable is the ratio), the linear regression test with a dummy variable could be used. However, because there are some unfulfilled assumptions in the test, the Binary Logistic Regression test was used to perform the data analysis.

3 RESULTS

A total of 250 respondents participated in this research. Each of them was asked to fill the questionnaire to assess their health behavior.

The data obtained are analysed by binary logistic regression test. Below is the result of partial test and model formation:

Table 1: Variable in the Equation

	B	S.E	Wald	df	Sig.	Exp (B)
Step 1 BPJS owner-ship	0.668	0.323	4.267	1	0.039	1.951
Constant	-0.804	0.292	7.599	1	0.006	0.447

Based on Table 1, it can be seen that the coefficient of the participation of BPJS is 0.668 (value significance (p) = 0.039). This value is less than alpha 0.05, which means that it has been rejected. This, in turn, means that "there is a significant influence of *BPJS Kesehatan* participation on the health behaviour of the participants" or "BPJS participation affects the participant's health behaviours". In addition, from the Table 1, Exp(B) shows a value of 1.951 which means that the probability of societal members who have health insurance behaving more healthily is 1.951 times better than those who do not have health insurance at all.

4 DISCUSSIONS

Risk management theory states that people do not like to be in risky circumstances, so they try to hand over the responsibility of risk to others. The other party in this study is the provider of health insurance, but with the granting of this responsibility, a person will have two possibilities related to moral hazards. It describes the changes of behaviors in prevention and treatment caused by

health insurance (Yaohui Dong, 2017). Those moral hazards are called ex post moral hazard, when there is increase in visits to health services and ex ante moral hazard, which is the possibility of increasing risky behaviours or decreased health preventive behaviours.

Research that has been done shows that the ex ante moral hazard effect has not been consistent, that in some behaviours can be seen to have a significant impact whereas in others, the behaviour has not. However, other studies have shown that the ownership of health insurance had an effect on the increase in risky behaviour. The inconsistency of similar research results suggests that health insurance can have ex ante moral hazard risks or not, when under different circumstances.

This research study indicates that there is influence when it comes to *BPJS Kesehatan* insurance ownership toward the health behavior of the participants, but does not prove the existence of ex ante moral hazard. The results of this study show that people who have *BPJS Kesehatan* insurance will actually behave twice as healthy as those who have no insurance at all. This can be used to deduce that the ownership of *BPJS Kesehatan* actually increases health preventive behaviours among the participants. The participants in Surabaya City still maintain and suggest that even if they already have insurance, they can keep on maintaining their health, by not tending towards risky behaviours which lead to bringing in negative effects towards their health.

The health behaviors mentioned in this study are behaviours related to physical activity, hygiene, diet, sleep patterns, health checks, smoking behaviours, and other preventive behaviours.

5 CONCLUSIONS

From the discussion above, it can be concluded that *BPJS Kesehatan* has an influence on the participant's health behaviour in the Surabaya context. The result of the data analysis shows that those who have health insurance have health behaviour that is twice as good as those who do not have health insurance at all. Having health insurance will encourage the participants to behave more healthily. They tend to have a good physical activity, hygiene, diet, sleep patterns, health checks, smoking behaviours (do not smoke in public areas or do not smoke at all) and other preventive behaviours.

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