The Determinant of National Health Insurance Membership in Ogan Komering Ilir District

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Abstract—Membership in social security is one of the dimensions formulated by the World Health Organization in achieving Universal Health Coverage. It is also an indicator of the successfulness of the National Health Insurance (NHI) program. In the SP. Padang Subdistrict of Ogan Komering Ilir Regency, the number of NHI membership is still low, especially for non-worker participants or participants working in the informal sector. Many people are also participating in Jamsoskes Sumsel Semesta. This study aims to find out the determinants of NHI membership in the SP.Padang District, especially the informal sector which was previously a participant in the Jamsoskes Sumsel Semesta. The research type used in this study is a cross-sectional-design analysis. Obtained samples were 238 respondents acquired by accidental sampling using determined criteria. The analysis methods were bivariate test using chi square as well as multivariate test using multiple logistic regression. Analytical results show that age is the most dominant factor and has a positive relationship with NHI membership (p-value 0.028), OR 3,129 (95%, CI 1,129-8,668). Knowledge is also a factor that relate to NHI membership (p-value is 0.002, OR 2,441, 95%, CI 1,383-4,306). Knowledge is the factor that can be improved in order to increase NHI membership of the informal sector. Therefore, more specific education is needed regarding the benefits and objectives of NHI as a form of risk management for disease and high cost of treatment.

Keywords: membership, NHI, informal sector, Jamsoskes Sumsel Semesta

I. INTRODUCTION

National social security, including national health insurance (NHI), is compulsory for all residents. NHI is administered by Badan Penyelenggara Jaminan Sosial Kesehatan or BPJS Kesehatan (Social Security Administering Agency for Health) [1].

The membership aspect is one of the dimensions formulated by the World Health Organization (WHO) in achieving the Universal Health Coverage. It is also an indicator of the successfulness of the NHI program. Data from the BPJS Kesehatan shows that as of October 31, 2019, NHI membership has reached more than 215 million members. The details figures are as follows. More than 96 million members are subsidized by central government (PBI-APBN) and around 37 million members are subsidized by local government (PBI-APBD); civil servants, private employees, and independent

workers are more than 17 million, 34 million; and 30 million members, respectively. If compared with the total population of Indonesia (267 million according to BPS), the participation rate of BPJS Health only reached 83,27%. The largest membership came from PBI and the lowest came from non-workers, as many as 26.4% of the total participants.[2].

There are around 36.8% of Indonesia's population still do not have health insurance in any form including workers in informal sector who are a relatively larger compared to the number of formal sector workers [3].

Regionally, the government of South Sumatra province had formed a regional health insurance program (Jamsoskes). The program was intened to increase public health efforts and to address quota restrictions in the Jamkesmas Program for the poor in South Sumatra. The Jamsoskes was later called *Jaminan Kesehatan Sumatera Selatan Semesta* or Jamsoskes Sumsel Semesta (Universal South Sumatra Health Social Security) which was intended for the poor who did not have other health insurance and not registered as Jamkesmas recipients [4].

Next, Presidential Regulation No. 82 Year 2018 concerning Health Insurance rules that the regional government has to integrate regional health insurance program into the NHI program administered by BPJS Kesehatan [5]. Consequently, the Government of South Sumatra Province with the Circular of the Governor of South Sumatra No.057/SE/ DINKES/2018 terminated that the Jamsoskes Sumsel Semesta program. As of January 1, 2019 all regions in the South Sumatra Province were required to integrate Jamsoskes Sumsel Semesta into the NHI Program and to close the Jamsoskes program for health services [6].

There are many factors affecting NHI membership, especially for independent participants. Several studies have found that knowledge, education, access, family support, perception are related to NHI membership. Susilo (2015) concluded that knowledge, education, income and access to health services are determinants of independent membership in BPJS Kesehatan [7]. In addition, Siswoyo, et al (2015) found that the awareness level of informal workers to NHI program is relatively high. The study also found that the type of work,

education, knowledge, age, work status and income are influencing variables to the awareness [8].

Another research by Nadiyah found a significant correlation between knowledge, attitudes of respondents and family support with NHI membership [9]. Lastly, another study by Tiaraningrum concluded that community participation in the NHI program was triggered by their own desires and influence of others [10]. Perception about the benefits of NHI also influences people to register NHI program. Widhiastuti, et al (2015) found that the perception of benefits is the only variable associated with NHI membership [11].

A field study of Sriwijaya University public health students in 2017 at 16 villages of SP. Padang District found that there are many people in the area using their resident card (Kartu Tanda Penduduk/KTP) or family card (Kartu Keluarga/KK) when seeking treatment at health facilities, especially Puskesmas (community health center). This situation also confirmed during the community service in November 2018. This fact raises the suspiciousness that there are many residents in the District are not yet members of the NHI.

In short, the NHI membership number, especially for non-worker or informal workers, is still low, and there are many people in SP. Padang using Jamsoskes Sumsel Semesta. This study aims to find out the determinants affecting NHI membership of the community in SP. Padang, especially in the informal sector, which was previously participated in the Jamkesmas Sumsel Semesta. The results of this study are expected to provide input to the Central Government or the Provincial Government of South Sumatra and BPJS Kesehatan regarding NHI membership in terms of optimizing the NHI.

II. RESEARCH METHOD

This research is a cross-sectional study with a quantitative approach. The population of the study is residents in the SP. Padang of Ogan Komering Ilir Regency who works in the informal sector and participates on Jamsoskes Sumsel Semesta. The obtained sample is 238 respondents who work in the informal sector and previously were Jamsoskes Sumsel Semesta members. There are four villages selected as research sites, namely Awal Terusan Village, Terusan Laut, Batu Ampar Baru, and Batu Ampar Lama. The samples are obtained based on an accidental sampling method according to the sampling criteria (inclusion and exclusion). Data analysis consists of univariate, bivariate (*chi-square*), and multivariate using multiple logistic regression.

III. RESULTS

Table I present the distribution of characteristics of research respondents

TABLE I
Distribution of respondent characteristics

Variables	Frequency (n=238)	Percentage
NHI Membership		
No	105	44,12
Yes	133	55,88
Sex		
Female	196	82,35
Male	42	17,65
Age (Year)		
17-55	218	91,60
> 55	20	8,4
Education		
Not graduated from elementary school	9	3,78
Elementary-Junior High School /Equivalent	188	78,99
Senior High School/Equivalent	36	15,13
Higher Education	5	2,10
Occupation of Family Leader		
Farmer	147	54,65
Merchant	43	15,99
Worker	20	7,43
Others	59	21,93
Number of Family Member (Persons)		
0	1	0,42
1	211	88,66
2	16	6,72
3	1	0,42
4	9	3,78

Descriptive results on Table I show that the percentage of respondents who are NHI members is 55.88%, and the majority of the respondent is female (82.35%). The dominant range of age is between 17 to 55 (91.60%) while the majority of responder is graduated from elementary-junior high school or equivalent with the proportion is 78.99%. Lastly, most of respondents are covering one person (88.66%).

TABLE II
Bivariate Analysis

Variables	NHI Membership Yes	NHI Membership No	p-value	PR (95% CI)
Sex				
Male	26	16	0,386	1,351 (0,682-2,676)
Female	107	89		
Age				
Young (17-55 year-old)	126	92	0.049	2,543 (0,976-6,625)
Old (> 55 year-old)	7	13		
Education				

Variables	NHI Membership		*p-value*	PR (95 % CI)
	Yes	No		
High	24	17	0.707	1,139 (0,576-2,253)
Low	109	88		
Income				
High	13	9	0.750	1,155 (0,473-2,817)
Low	120	96		
Knowledge				
High	94	53	0.001	2,364 (1,385-4,035)
Low	39	52		
Support				
High	75	48	0.102	1,535 (0,917-2,569)
Low	58	57		
Perception				
High	79	54	0.219	1,381 (0,824-2,314)
Low	54	51		
Motivation				
High	89	74	0.557	0,847 (0,4872-1,473)
Low	44	31		
Intention				
High	53	48	0.363	0,786 (0,468-1,320)
Low	80	57		

Bivariate test using chi-square as summarized on TableII indicates that age and knowledge are two variables that have relationship with JKN membership. In detail, the p-value of age is 0.049 and knowledge variable has smaller *p-value* which is 0.001.

TABLE III
Multivariable logistic model

Variabel	*p-value*	PR (95% CI)
Sex	0.440	1,347 (0,631-2,875)
Age	0.028	3,129 (1,129-8,668)
Education	0.618	1,217 (0,560-2,644)
Income	0.898	0,940 (0,363-2,429)
Knowledge	0.002	2,441 (1,383-4,306)
Support	0.075	1,651 (0,950-2,869)
Perception	0.222	1,429 (0,805-2,537)
Motivation	0.561	0,827 (0,437-1,564)
Intention	0.385	0,773 (0,433-1,380)

Multivariate analysis results are summarized on Table III. It can be seen that age is a dominant determinant of and has positive correlation with NHI membership (*p-value* 0.028) for the people who previously are participant in the Jamkesmas Sumsel Semesta. The age has an effect of 3.129 times in JKN membership, with confidence intervals (95%, CI 1.129-8.668). Knowledge is also a factor that relate to NHI membership (*p-value* is 0.002, OR 2,441, 95%, CI 1,383-4,306). Compared to age, knowledge is a factor that can be modified or be increased in order leverage NHI membership of informal workers.

IV. DISCUSSION

NHI is carried out with a social insurance mechanism. It is expected will increase access and utilization of health services, and will reduce the risk of spending costs that have an impact on catastrophic expenditure and poverty [12]. The results of this study showed that the of number NHI member was 133 of 238 total respondents (55.88%). This figure is higher than study by Sari and Idris which found insurance ownership for informal sector workers was 16.6%. [13]. The Pengestika Research found that 48.1% of the groups participating independently in BPJS Kesehatan [14]. The majority of the informal sector (83.34%) did not yet have health insurance [15].

This condition can be explained by several reasons. First, the majority of the 133 respondents are categorized as contribution-subsidised participants (Penerima Bantuan Iuran/PBI). In addition, field study findings indicate the community tends to postpone NHI independent membership because they are expecting to get membership as contribution-subsidised participants (PBI). This result is different from Suwoyo, Probandari and Hendrartini which claim that, in general the level of awareness of informal sector workers towards NHI is high. Most informal sector workers tend to delay membership [8].

This research also find that as many as 107 female respondents (44.95%) were NHI participants. However, further examinations suggest that gender apparently did not have a significant relationship with NHI membership. It is different from the findings of Baros, which concluded that female respondents have a larger proportion of health insurance membership compared to male. With the chi-square test and the *p-value* was 0.000, the study indicated there was a significant relationship between the sex and the ownership of health insurance. The 95% confidence interval results obtained an odds ratio of 1.056 (between 1.034 - 1.078) meaning that female respondents have 1.056 times the chance of health insurance ownership compared to male respondents [16].

The results of the bivariate and multivariate tests indicate that age variables (categories 17-55 years) have a positive relationship with NHI membership. It is also the most dominant variable influencing NHI membership (*p-value* 0.028), with an OR 3.129. The research by Sari and Idris also obtained the same results. Respondents on the age range 40-55 years have the highest proportion in the ownership of health insurance [13]. Similarly, research by Prasetyo also mentioned a relationship between age and the independent participation of BPJS Kesehatan (p-value = 0.041, OR = 3.176). The statistical values indicate the respondents with an adult age have 3 times more opportunity to independently participate in BPJS Kesehatan compared to the elderly [17].

Further analysis indicates that education does not show a significant correlation with NHI membership (*p-value* 0.707). This finding is not congruent with the result of Baros (2013) which found a significant relationship between education and health insurance ownership. The 95% confidence interval of Baros' result obtained an odds ratio of 2.063 (between 1.995-2.134) means that respondents graduating from higher education have 2.063 more chance of health insurance ownership compared to respondents who not completing elementary school [16]. Research conducted in Ghana also found that people with lower education levels did not subscribe to insurance schemes

[18]. Low education is a factor that has been identified to be the root cause of less NHI participation of informal sector workers in rural areas [19].

Next, the income also not have a significant relationship with NHI membership (*p-value* 0.750> 0.005). These results are in line with the results of the Pangestika (2017) which suggests no relationship between income and independent participation of NHI in the informal sector. Furthermore, field study on the membership in BPJS Kesehatan of informal sector (entrepreneurs/traders) concluded that those who have an income above the regional minimum wage have similar opportunities to join or not in the NHI of BPJS Kesehatan. The respondents use obtained income to meet their daily needs, especially foods. The researcher assumes that even though the community has incomes above the minimum wage, but the income is uncertain and so they are reluctant to join NHI program independently because they have to pay premium routinely every month and participate in NHI is considered as not a major need [14].

The results of bivariate and multivariate tests confirm that knowledge is another factor that related to NHI membership (*p-value* 0.002) with OR 2,441, 95%, and CI 1,383-4,306. It indicates that respondents with higher knowledge have a 2.441 larger chance to become NHI participants compared to respondents with less knowledge. The research of Nadiyah et al (2017) obtained *p-value* = 0.006 below 0.05 of the correlation between knowledge and NHI membership in the work area of the Samarinda Youth Health Center. The correlation between knowledge and NHI membership status has C = 0.16 [9].

Results of the Widhiatutu *et al* study concluded that NHI was quite popular as indicated by the fact that most respondents had received information about NHI. The most trusted information source by the community is friends or family. However, to increase NHI independent membership, it is necessary to educate people with more specific messages about the magnitude of the risk for experiencing disease and high costs of treatment [11]. It is consistent with the results of this study which discussed respondents' knowledge related to NHI, benefits, the type and amount of contributions. Knowledge is a factor that can be improved in order to broaden the membership of the informal sector on NHI. Therefore, it is essential to have a more specific education program related to the benefits and objectives of NHI as a form of risk management for disease and the high cost of health treatment.

Support variable in this research is defined as social support specifically from families, health professionals, and community leaders. The analytical results suggest that there is no relationship between social support and NHI membership (*p-value* is 0.102 or above 0.005). This is not inline with the results of previous study by Kusumaningrum and Azimar who found that family support is one of the factors associated with community participation in NHI. They found family support has *p-value* of 0.008, PR = 2, and 95% CI = 1.24-3.20).[20] In addition they found that respondents who received family support had twice the awareness to become independent participants of NHI than respondents who lacked family support [20]. This study obtained different results from Kusumaningrum and Azmir because the categories used by Kusumangrum and Azmir only distinguish whether family support is exist or not. This study divides the categories of high and low social support as well as more diverse forms of support (family, health professional, and religious or communities leaders).

Next, the perception also does not show a significant relationship with NHI membership (*p-value* = 0.219). This result is different from Widhiastuti's research. The further analysis shows that a variable that significantly correlated to NHI membership is respondents' perception of the benefits of NHI with *adjusted* OR is 4.53 (95% CI: 2.15-9.55) [11]. When the perception of the program benefits is high, it will encourage behavioral change in the direction of desired goals. This driven perception will be strengthened if the inhibiting factor is low, so the goal hopefully will be reached more quickly [21].

In this study, the *p-value* of motivation variable is 0.557, It means there is no significant relationship of motivation and NHI participation. Different results are obtained by Tiaraningrum who found a significant relationship between two variables (*p-value* is 0.004). The community's motivation to join NHI is driven by several factors such as the ease of registering, education, received information, doctors who deal with is collaborating with BPJS Kesehatan, borne health costs by BPJS Kesehatan, medical facilities, old age security scheme, incurred costs, simple payment process, and awareness of health importance [10].

Lastly, the intention shows a weak relationship with NHI participation (*p-value* is 0.363). Tiaraningrum (2015) found a contrasting result. It concluded that intention had a significant influence on NHI membership (*p-value* is 0.002). The community registered NHI independently because of several reasons, namely their own desire (62%), and the invitation of others or personal reference (32%). The highest proportion of personal reference comes from family (35.3%) [10].

V.   CONCLUSION

Age is the most dominant affecting variable and has a positive relationship with NHI participation. Age has an effect of 3.129 times in NHI membership. Another important factor is knowledge. It is also associated with NHI membership. Knowledge is the factor that can be improved in order to increase NHI membership of the informal sector. Therefore, more specific education is needed regarding the benefits and objectives of NHI as a form of risk management for disease and high cost of treatment.

VI.   ACKNOWLEDGMENT

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