# DETERMINANTS OF THE NATIONAL HEALTH INSURANCE UPTAKE IN INDONESIA

Faktor yang Mempengaruhi Tingkat Kepesertaan Jaminan Kesehatan Nasional di Indonesia

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#### Abstract

**Background:** Indonesia introduced a national health insurance program, the so-called *Jaminan Kesehatan National (JKN)*, in 2014 to enhance health access for its citizens. However, unattained universal health coverage (UHC) such as participation target becomes a concern.

Aims: This study aimed to examine the factors influencing JKN participation and propose a possible policy improvement to enhance UHC implementation

Methods: A systematic review was performed based on PRISMA guidelines, and literature was collected from PubMed, Scopus, Web of Science, Cochrane Library, and Google Search.

**Results:** 21 articles in English and Indonesian language are included in the study after being reviewed using the PRISMA flowchart and quality assessment. The main factors that emerged from the found literature affecting the low enrolment of the NHIS include socio-demographic factors: younger people, low education level, rural location, unstable incomes, and larger family members. Also, health-related, and other factors: lack of health insurance literacy, insufficient healthcare accessibility and services availability, inadequate healthcare service quality, complicated administrative procedure, negative stigma, membership data inaccuracy, and low health status.

**Conclusion:** Twelve factors have been identified as the most influential determinants for the national health insurance program. Some proposed policies derived from the current results might contribute to the attainment of UHC.

Keywords: National Health Insurance, Universal Health Coverage, Indonesia

#### Abstrak

Latar Belakang: Indonesia telah meluncurkan program Jaminan Kesehatan Nasional (JKN) untuk meningkatkan akses kesehatan bagi masyarakat. Namun, cakupan kesehatan semesta yang belum tercapai seperti target kepesertaan masih menjadi isu.

**Tujuan:** Menganalisis faktor yang mempengaruhi kepesertaan program JKN dan kebijakan yang mungkin diambil untuk mencapai target cakupan semesta.

Metode: Review sistematis dilakukan berdasarkan panduan PRISMA, dan bahan bacaan bersumber dari PubMed, Scopus, Web of Science, dan Google Search.

**Hasil:** 21 artikel dalam Bahasa Inggris dan Bahasa Indonesia diikutkan dalam studi setelah dilakukan review menggunakan PRISMA flowchart dan penilaian kualitas. Faktor utama yang mempengaruhi rendahnya tingkat kepesertaan program JKN adalah faktor sosio-demografis seperti usia yang lebih muda, tingkat pendidikan yang rendah, area tempat tinggal di pedesaan, pendapatan yang tidak stabil, dan jumlah anggota keluarga yang besar. Juga faktor yang berhubungan dengan kesehatan dan faktor lain yang berhubungan, seperti rendahnya literasi tentang asuransi kesehatan, akses terhadap pelayanan kesehatan yang kurang memadai, kualitas pelayanan kesehatan yang belum optimal, prosedur administrasi yang rumit, stigma negatif, data kepesertaan yang belum akurat, dan status kesehatan yang rendah.

Kesimpulan: Terdapat dua belas faktor yang teridentifikasi sebagai faktor yang paling berpengaruh dalam program Jaminan Kesehatan Nasional. Beberapa kebijakan yang diusulkan sebagai hasil dari studi saat ini mungkin dapat berkontribusi pada pencapaian cakupan semesta.

Kata kunci: Jaminan Kesehatan Nasional, Cakupan Kesehatan Semesta, Indonesia



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## Introduction

World Health Organization The (2019) reported that at least half of the population in the world did not have full health insurance, and approximately 100 million people still fell into severe poverty and thus were unable to pay healthcare expenses. Universal Health Coverage (UHC) ensures that individuals and families receive health care without financial difficulties (WHO, 2019). Moreover, UHC is not only concerned with health financing; it also includes all aspects of the health system, the delivery network for health services, health facilities, health personnel, and connectivity (Kutzin, 2013).

The monitoring of developments in UHC is based on two things: the number of people who can afford essential health services and the portion of the population retaining a high household income on health (WHO, 2013). Also, the World Health Organization (WHO) proposed а conceptual framework to assess the progress of UHC. The scheme suggested three effective assessment metrics that reflect the width of population coverage, the comprehensiveness of healthcare facilities (service coverage), and the percentage of healthcare cost incurred by the public (financial coverage) (WHO, 2010: Noerjoedianto, 2016; WHO, 2015).

Population coverage is one of the essential factors to ensure UHC. The government needs to extend coverage to include more individuals by subsidizing the poor who cannot afford the insurance premium and requiring the obligatory payment of others (National Team for the Acceleration of Poverty Reduction (NTAPR), 2015; Wagstaff and Neelsen, 2020).

With more than 260 million inhabitants from about 730 languages and 300 ethnic groups scattered over 17.744 islands, Indonesia is a fast-growing medium-income nation with obstacles to health equity (Agustina *et al.*, 2019). Poor quality care has resulted in a high and stagnant maternal mortality and neonatal mortality ratio of about 300 deaths per 100.000 births and 15 deaths per 1000 live births, respectively-over the last decade (Agustina *et al.*, 2019). Moreover, Indonesia's geographical position in the pacific ring of fire caused multiple natural disasters, such as volcanic eruptions, earthquakes, and tsunamis. Equality accessing health care is crucial to address this dynamic public health issue (Mboi *et al.*, 2018).

The long path prior to the National Health Insurance System (NHIS) was established in Indonesia. It began with introducing military and civil servant's health insurance in 1968. The experiments with community health insurance were proposed in the mid-1970s (Dartanto et al., 2019). Social Health Insurance for formal sector employees was launched in 1992. The health card of the "financial assistance" program was developed as part of the social security system to alleviate financial crisis effects in 1990 for disadvantaged citizens (Wiseman et al.. 2018). Furthermore, the health insurance scheme for the poor (ASKESKIN) was initiated in covering million eliaible 2005. 26 beneficiaries. In 2008, the program's name was changed to JAMKESMAS. It protected near-poor citizens and hit 76 million target recipients (Pisani, Kok, and Nugroho, 2017; Shreeshant et al., 2019; Wagstaff et al., 2016).

Indonesia initiated a groundbreaking National health insurance program in 2014, namely "Jaminan Kesehatan Nasional" (JKN), aimed to provide Universal Health Coverage (UHC) to all inhabitants in 2019, which combines all current social health insurance systems. The Social Security Agency for Health (SSAH) was set up by the National Social Security Council to govern the JKN program based on Act No. 40 in 2004 and Law No. 24 in 2011. JKN refers to medical services offered by the public services and licensed private providers and covered services ranging from health promotion, prevention, primary treatments to specialized and long-term treatment, including open-heart surgery, cancer treatment, and renal dialysis (Agustina et al., 2019). All citizens of Indonesia, regardless of previous health conditions or risk, must register with the SSAH to enforce JKN (Tan and Qian, 2019).

However, the growth in the number of participants reached 224,149,019 bv December 31, 2019, and became the world's most comprehensive single-paver social health insurance. Still, only 83,86% of the total population of Indonesia, or more than 43 million people, needs to be covered to reach the 100% population coverage target (BPJS kesehatan, 2020). Only a few studies have assessed or evaluated the population coverage in the JKN program in Indonesia after the year 2019, in which the UHC goal has been established. Therefore, this study aims to examine factors that contributed to the JKN ownership and discuss the policy implication for the NHIS improvement to achieve universal health coverage in Indonesia.

Table 1. Study Questions Development

|          | Key Point   | Question                       |
|----------|-------------|--------------------------------|
| Per      | Porsportivo | Development                    |
| rei      | Perspective | WHO UHC                        |
|          |             | framework:                     |
|          |             |                                |
| <u> </u> | Cotting     | "population coverage"          |
| S        | Setting     | Entire regions in<br>Indonesia |
| _        | Dation      |                                |
| Ρ        | Problem     | Universal Health               |
|          |             | Coverage remained              |
|          |             | unachieved as per              |
|          |             | target                         |
| Ε        | Environment | As an archipelagic             |
|          |             | country with more              |
|          |             | than 17.000 islands            |
| (C)      | Comparison  | Compared to the                |
|          |             | target of 100%                 |
|          |             | population coverage            |
| Ti       | Time        | The UHC should be              |
|          |             | achieved by the end            |
|          |             | of 2019                        |
| F        | Findings    | What factors                   |
|          | -           | contributed to the             |
|          |             | participation in               |
|          |             | Indonesia's national           |
|          |             | health insurance               |
|          |             | program?                       |
|          |             |                                |

#### Method

The research question was formulated using the PerSPecTIF framework (Booth *et al.*, 2019), which defines the broader context for the synthesis of complex intervention reviews of qualitative evidence as defined in Table 1.

Qualitative evidence synthesis is obtained by a systematic review, using the adaptation of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodological steps include identification, screening, eligibility, and included studies. Literature was selected from PubMed, Scopus, Web of Science, Cochrane Library, and Google search. The literature search was completed on March 31, 2020, using keywords as listed in Table 2. Grey literature such as media reports, government policy papers, and reviews from international institutions' publications was also used.

Duplicated articles were removed, and the articles with the title and abstract beyond the study question were excluded. The articles were further screened based on the inclusion criteria: full text is available and published from 2014 to 2020 in English or Indonesian, relevant to the topic or addressing the study question, and data in the study was obtained after January 2014, when the NHIS was implemented.

Table 2. Resource Database and Keywordsfor Literature Identification

| Database<br>sources                        | Keywords   |
|--|--|
| PubMed                                     | "universal health<br>coverage"[All Fields] AND<br>("Indonesia"[MeSH Terms]<br>OR "Indonesia"[All Fields] |
| Scopus                                     | KEY("universal health<br>coverage") AND<br>("Indonesia") AND<br>PUBYEAR AFT 2014                         |
| Web of                                     | TS=(("universal health   |
| Science                                    | coverage")<br>AND ("Indonesia")  |
| Cochrane<br>Library                        | "universal health coverage"<br>in All Text AND "Indonesia"<br>in All Text                                |
| Other<br>related<br>Indonesian<br>Journals | ((("Jaminan Kesehatan<br>Nasional") OR ("cakupan<br>semesta")) AND<br>("Indonesia")))                    |

All the studies included in the analysis were evaluated for bias and quality based on the study type. The assessment tool used for quantitative studies adapted from Akinsolu et al. (2019) provided an evaluation of 5 key domains: study design, selection bias, data collection, data analysis, and reporting. The instrument for qualitative studies contained nine questions that preceded the tool from Lorenc T et al. (2014). Moreover, the mixed methods study is examined usina quantitative and qualitative assessment tools.

All included studies were then examined to find factors that affected attaining JKN. The identified factors were drawn in Table 3.

## **Result and Discussion**

Overall, 208 articles were found with the literature search strategy (see Figure 1). After eliminating 83 duplicates, 125 articles were screened by title and abstract. Of those, 88 articles met the inclusion criteria, and their full texts were obtained. After being reviewed, 60 records are excluded due to; unavailability of full-text access, duplication, incorrect setting, data taken before 2014, or the studies are not relevant or specific to the population coverage issue in Indonesia. It resulted in 28 studies being included for quality assessment. After quality assessment, 11 were rated as "strong," 10 "moderate," and seven as "weak" or low-guality studies. All the respective low-quality studies were excluded, and the analysis contained a total of 21 studies.

# Factors Affecting JKN Participation

The Indonesian government did not successfully achieve the target of UHC due to some factors affecting participation in JKN. These factors can be classified into socio-demographic, health-related, and other factors as set out in Table 3.

# Socio-demographic Factors

The age of the participants is closely related to the JKN enrolment. Idris, Satriawan, and Trisnantoro (2017) found that people aged 40-55 had the largest

health insurance ownership. Other studies have found that coverage among those aged 70 years remained high, but people aged 20 to 50 years from lower socioeconomic groups typically had lower health insurance. Similarly, coverage was lower for children under nine, particularly those under four. (Agustina et al., 2019). A study from Nopiyani, Indrayathi, and Listyowati (2015) found that the relationship between the age and Willingness to Pay (WTP) has p < 0,001 and RR 0,99, it is indicated that the increasing age of one year will raise the willingness to pay as much as 1 %. These findings are also acknowledged by Dartanto et al. (2020) that age positively affects the sustainability of premium payments by JKN members. A person's maturity tends to increase as they grow older, influencing their decisions or actions in life. Older people will invest more than younger people in terms of health insurance because an increase in age usually decreases overall health conditions (Idris, Satriawan, and Trisnantoro, 2017).

The geographical location of individuals also influences someone to purchase JKN. Dewi and Mukti (2018) showed that 37% of rural participants lack health insurance due to distance problems, while only 10.7% in urban areas have this issue. As a result, urban inhabitants are more likely to participate in JKN than rural residents, with a proportion of 31.34% and 26.79%, respectively. Another study found are that urban residents more proportionately covered by health insurance than rural areas (Idris, Satriawan, and Trisnantoro, 2017). The rural residents make up 45% of the population in Indonesia, and most of the informal sector workers live in rural areas. They are more hesitant to buy JKN for numerous reasons, including difficulty accessing the SSAH office, distance to the healthcare facility, transportation problems, and insufficient access to gualified health professionals (Agustina et al., 2019; Mboi et al., 2018). So, the government needs to initiate an adequate health equity policy to strengthen health care services in rural areas.

Education is also a primary factor in JKN enrolment; more educated people are

keen to participate in JKN programs (Noerjoedianto, 2016). Formal education affects individuals' thought processes and will improve awareness of the health insurance value. People with better education have higher demand and perceived health to be valuable (Dartanto *et al.*, 2016).

Household size was a leading factor found to affect JKN ownership. The number of members in a household is inversely linked to WTP. The larger family size tends to have a lower likelihood of obtaining JKN. Having more family members will inevitably make people more reluctant to purchase JKN because the family needs to devote more money to pay for contribution fees (Dartanto *et al.*, 2020).

Several studies indicate that primary variables impacting JKN subscription are fixed income (Agustina et al., 2019; Idris, Satriawan, and Trisnantoro, 2017; Dewi and Mukti, 2018; Firdaus and Wondabio, 2019). The likelihood of purchasing JKN was increased by around 13.2 % for those with income over IDR 3.5 million and 11% higher for households with stable incomes (Dartanto et al., 2016). Most informal sector workers do not have regular or guaranteed wages, as farmers need to wait before harvest. This issue makes it rather complicated to implement a contributionbased system since it discourages the processing of a regular payment, which would impact individual withdrawals from the program (Kutzin, 2013). Some reports propose that the government expand the subsidy to the remaining informal sector workers with uncertain wages, financial difficulties, or near-poor living (Shreeshant et al., 2019; Dartanto et al., 2020).

### Health-related and Other Factors

Low health status also affected individual decisions to attain JKN. In line with that, the research found that 23% of self-registered participants enrolled when they were sick (Agustina *et al.*, 2019). Also, people with a history of chronic diseases are more likely to use health insurance (Dartanto *et al.*, 2020; Idris, Satriawan, and Trisnantoro, 2017). Other research noticed that people as an inpatient had a higher tendency to join the program by 12.9 % a year before the survey. While, a month before, those as an outpatient had a 15.1 % higher probability of attaining JKN (Ekawati *et al.*, 2017). Moreover, Zweifel (2007), in the theory of social health insurance, described that health insurance demand is higher when an individual is ill. Someone with a history of chronic illnesses tends to own JKN to seek healthcare services more frequently and cheaper when the illness relapses (Idris, Satriawan, and Trisnantoro, 2017).

Lack of health insurance literacy, particularly for contributing members or informal sector workers, becomes one of prominent factors affecting individual to acquire JKN. Putro and Barida (2017) recorded that 52,2% of the fishers surveyed had no information about the registration process, and 51% acknowledged that they had no socialization in JKN programs. Studies from Made et al. (2015) found that most female sex workers in Bali Province did not participate in social health insurance due to a lack of awareness of JKN. Also, a study from Dartanto et al. (2016) in 3 provinces surveyed 400 households found that 39% of respondents had zero knowledge of health insurance, and 19% did not know how to register for the program. This study also revealed that insurance literacy increases the probability of acquiring JKN by 9.5 % (Dartanto et al., 2016). Other studies acknowledged that the absence of adequate information and proper education about social health insurance leads to the low enrolment of JKN (Nopiyani, Indrayathi, and Listyowati, 2015; Dartanto et al., 2020; Deloitte Indonesia Perspectives, 2019; Andria and Kusnadi, 2018), Insurance literacy is essential to increase acceptance rates for premiums and expand insurance coverage (Dartanto et al., 2016).

Healthcare service quality is another critical aspect of people buying JKN. People who considered the treatment quality unsatisfactory appear to refuse to join the program (Idris, Satriawan, and Trisnantoro, 2017). Long waiting periods, reduced opening hours, and lack of trust of primary care practitioners are measures of low quality that influenced individual purchasing JKN (Agustina *et al.*, 2019;

(Kieny et al., 2017). Moreover, participants believe the health care services offered by JKN programs are not as satisfactory as out-of-pocket services (Nopivani. Indrayathi, and Listyowati, 2015; Putro and Barida, 2017). Several studies suggested should that the government raise investment in healthcare facilities to strengthen service quality (Made et al., 2015; Agustina et al., 2019). Also, to enhance human capital capability by redesigning performance-based incentives. introducing reward with training and advancement, and punishment with demotions, allowance reduction and dismissal for poor performance, and conducting further capacity building and establishing an accreditation program in primary care (Retnaningsih, 2018; Ekawati *et al.*, 2017)

Healthcare accessibility and services availability also play a crucial role in JKN ownership. Some reports revealed that JKN could provide only limited services to prior health insurance programs, such as Askes (Agustina *et al.*, 2019; Yustina, 2019; Myint *et al.*, 2019). Imbalanced and unstandardized healthcare facilities in diverse geographic areas have made access to medical care difficult for patients. People indicated that the provision of healthcare facilities on Java island is greater than other islands (Ekawati et al., 2017; Vilcu et al., 2016). Although more than 20.000 PCPs, 907 public hospitals, and 1106 private hospitals, including pharmacists, clinics, laboratories, and radiology centers, were contracted by the government in 2017 (Shreeshant et al., 2019), it is still vital to develop and distribute healthcare facilities equally in a comparatively significant volume and standard (Dartanto et al., 2020).

The high administrative burden of enrolment is also becoming a prominent Most studies indicated factor. that complicated registration requirements, such as all family members should enroll, led people to be more reluctant to attain JKN (Made et al., 2015). Furthermore, accessibility and long queues in the SSAH often discourage people from office registering.



Figure 1. The PRISMA Flow Diagram of Study

| Author Author   0 af<br>a af<br>a f<br>a f<br>a f<br>a f<br>a f<br>a f<br>a f<br>a f   |             |                   |                                  |      |       |         | Detem   | ninants of th       | he National He                        | alth Insurance                              | Determinants of the National Health Insurance Uptake in Indonesia | esia  |               |                                    |
|--|-------------|-------------------|----------------------------------|------|-------|---------|---------|---------------------|---------------------------------------|---|---|---|---------------|------------------------------------|
| Year   Year     Pictor   Diamond     Diamond   Author     Author   Author     A  |             |                   |                                  | Soci | n-dem | ografic | factors |                     |                                       | Health-relate                               | ed and other fact   | tors  |               |                                    |
| 2016   Noerjoedianto, D.     2015   NTAPR     2015   NTAPR     2015   NTAPR     2016   Agustina et al     2017   Pisani, Kok, and Nugroho     2018   Shreeshant et al     2019   Firdaus and Wondabio     2019   Firdaus and Wondabio     2019   Firdaus and Wondabio     2019   Dartanto et al.     2019   Dartanto et al.     2019   Dartanto et al.     2019   Deloitte Indonesia Perspectives     2019   Dartanto et al.     2010   Dartanto et al.     2011   Idits, Satriawan and Trisnantoro     2015   Nopiyani et al.     2016   Dartanto et al.     2017   Puti and Kushadi     2018   Andria and Kushadi     2017   Puti and Kushadi     2018   Puti and Kushadi     2019   Puti and Ernawaty     2010   Puti and Ernawaty     2011   Puti and Ernawaty     2013   Puti and Ernawaty     2014   Puti and Ernawaty     2015  | Ref.<br>No. | Year<br>of<br>Pub | Author                           |      |       |         | Income  | Health<br>insurance | Perceived<br>inadequate<br>healthcare | Healthcare<br>accessibility<br>and services |   | Negative<br>stigma<br>associated<br>with individual | sutate dilasH | Membership<br>data<br>inaccuracies |
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| 2019   Deloitte Indonesia Perspectives   +   +   +   +   +     2020   Dartanto et al.   2020   Dartanto et al.   +   | 7           | 2019              | Myint et al.                     |      |       |         |         |                     | +                                     |   |   |   |               |                                    |
| 2020Dartanto et al.++++2015Made <i>et al.</i> +++++2015Nopiyani <i>et al.</i> ++++++2017Idris, Satriawan and Trisnantoro+++++++2018Dewi and Mukti++++++++2018Dewi and Mukti+++++++2017Putro and Barida2017Putro and Barida++++2018Andria and Kusnadi++++++2019Yustina2019Putri and Ernawaty2019Putri and Ernawaty+++2015Guinto <i>et al.</i> 2017Ekawati <i>et al.</i> ++++2016Vilcu I. et al.2017Ekawati <i>et al.</i> ++++2017Ekawati <i>et al.</i> ++++++2017Ekawati <i>et al.</i> -++++2017Ekawati <i>et al.</i> -++++2017Ekawati <i>et al.</i> -++++2017Ekawati <i>et al.</i> -++++2017Ekawati <i>et al.</i> -++++2018Putri and Ernawaty-++++2019Putri and Ernawaty-<   | 8           | 2019              | Deloitte Indonesia Perspectives  |      |       |         |         | +                   |                                       |   |   |   |               |                                    |
| 2015   Made <i>et al.</i> +   +   +   +   +     2015   Nopiyani <i>et al.</i> +   +   +   +   +   +     2017   Idris, Satriawan and Trisnantoro   +   +   +   +   +   +   +     2017   Idris, Satriawan and Trisnantoro   +   +   +   +   +   +   +     2016   Dartanto <i>et al.</i> +   + <td< td=""><td>6</td><td>2020</td><td>Dartanto et al.</td><td></td><td></td><td></td><td></td><td>+</td><td></td><td>+</td><td></td><td></td><td>+</td><td></td></td<>   | 6           | 2020              | Dartanto et al.                  |      |       |         |         | +                   |                                       | +   |   |   | +             |                                    |
| 2015   Nopiyani <i>et al.</i> +   +   +   +   +     2017   Idris, Satriawan and Trisnantoro   +   +   +   +   +     2016   Dartanto <i>et al.</i> +   +   +   +   +   +     2018   Dewi and Mukti   +   +   +   +   +   +     2017   Putro and Barida   +   +   +   +   +   +     2018   Andria and Kusnadi   +   +   +   +   +   +     2019   Yustina   2018   Nicu I. et al.   +   +   +   +   +     2019   Putri and Ernawaty   2016   Vilcu I. et al.   +   +   +   +   +     2016   Putri and Ernawaty   2017   Ekawati <i>et al.</i> +   +   +   +   +     2015   Cuinto <i>et al.</i> +   +   +   +   +   +   +   +     2015   Cuinto <i>et al.</i> +   +   +   +   +   +   +   +   | 10          | 2015              | Made <i>et al.</i>               |      |       |         | +       | +                   | +                                     |   | +   |   |               |                                    |
| 2017   Idris, Satriawan and Trisnantoro   +   +   +   +     2016   Dartanto <i>et al.</i> +   +   +   +   +     2018   Dewi and Mukti   +   +   +   +   +   +     2017   Putro and Barida   +   +   +   +   +   +     2018   Andria and Kusnadi   +   +   +   +   +   +     2019   Yustina   -   -   +   +   +   +   +     2019   Yustina   -   -   +   +   +   +   +   +   +     2019   Yustina   -   -   +   <   | 11          | 2015              | Nopiyani <i>et al.</i>           |      |       | +       | +       | +                   | +                                     |   |   |   |               |                                    |
| 2016   Dartanto <i>et al.</i> +   +   +   +   +     2018   Dewi and Mukti   +   +   +   +   +   +     2018   Dewi and Mukti   +   +   +   +   +   +   +     2017   Putro and Barida   +   +   +   +   +   +   +     2018   Andria and Kusnadi   -   +   +   +   +   +   +   +     2019   Yustina   -   -   -   + </td <td>12</td> <td>2017</td> <td>Idris, Satriawan and Trisnantoro</td> <td></td> <td>+</td> <td>++</td> <td>+</td> <td></td> <td></td> <td>+</td> <td></td> <td></td> <td></td> <td></td>   | 12          | 2017              | Idris, Satriawan and Trisnantoro |      | +     | ++      | +       |                     |                                       | +   |   |   |               |                                    |
| 2018   Dewi and Mukti   +   +   +   +     2017   Putro and Barida   +   +   +   +   +     2018   Andria and Kusnadi   +   +   +   +   +   +     2019   Yustina   2016   Vilcu I. et al.   +   +   +   +     2016   Vilcu I. et al.   2017   Ekawati <i>et al.</i> +   +   +     2017   Ekawati <i>et al.</i> 2017   Ekawati <i>et al.</i> +   +   +  | 13          | 2016              | Dartanto <i>et al.</i>           | +    | +     | ++      | +       | +                   |                                       | +   |   |   |               |                                    |
| 2017   Putro and Barida   +   +   +   +     2018   Andria and Kusnadi   +   +   +   +   +     2019   Yustina   +   +   +   +   +   +     2016   Vilcu I. et al.   +   +   +   +   +   +     2016   Vilcu I. et al.   -   -   +   +   +   +     2017   Ekawati <i>et al.</i> -   -   +   +   +   +     2015   Cuinto <i>et al.</i> -   -   +   +   +   +  | 14          | 2018              | Dewi and Mukti                   |      |       | +       | +       |                     |                                       | +   |   |   |               |                                    |
| 2018   Andria and Kusnadi   +   +   +     2019   Yustina   +   +   +     2016   Vilcu I. et al.   +   +   +     2019   Putri and Ernawaty   +   +   +     2017   Ekawati <i>et al.</i> 2015   Cuinto <i>et al.</i>   | 15          | 2017              | Putro and Barida                 |      |       | +       | +       | +                   | +                                     |   | +   |   |               |                                    |
| 2019 Yustina + +<br>2016 Vilcu I. et al. +<br>2017 Ekawati <i>et al.</i><br>2015 Guinto <i>et al.</i>  | 16          | 2018              | Andria and Kusnadi               |      |       |         |         |                     | +                                     | +   |   |   |               | +                                  |
| 2016 Vilcu I. et al.<br>2019 Putri and Ernawaty<br>2017 Ekawati <i>et al.</i><br>2015 Guinto <i>et al</i> .  | 17          | 2019              | Yustina                          |      |       |         |         |                     | +                                     | +   |   |   |               |                                    |
| 2019 Putri and Ernawaty<br>2017 Ekawati <i>et al.</i><br>2015, Guinto <i>et al</i> .   | 18          | 2016              | Vilcu I. et al.                  |      |       |         |         |                     | +                                     |   |   |   |               |                                    |
| 2015   | 19          | 2019              | Putri and Ernawaty               |      |       |         |         |                     |                                       |   | +   |   |               |                                    |
| 2015   | 20          | 2017              | Ekawati <i>et al.</i>            |      |       |         |         |                     |                                       |   |   | +   |               |                                    |
| 2012   | 21          | 2015              | Guinto <i>et al.</i>             |      |       |         |         |                     |                                       |   |   | +   |               |                                    |

Putro and Barida (2017) found that an effective registration process of health insurance for the informal sector should be close to their workplaces. provided Nevertheless, Informal workers assume that time is money; they cannot leave their workplace only for queuing in the SSAH office. This studv suaaests the establishment of a district coordinator to collect premium fees and to open an office in the countryside so that informal workers rural residents and can register conveniently since typically, the SSAH office is located in the district's capital, away from the rural areas (Putro and Barida, 2017).

Another factor impacting enrollment is a negative stigma to JKN. People are less likely to obtain JKN due to negative media influences that provide misleading information (Ekawati et al., 2017). Individuals believe that participation in JKN is part of human rights (Guinto et al., 2015). Personal belief is influenced by external factors such as education, religion, and media information for example, а derogatory stereotype in a particular group against JKN initiatives. In 2015, the influential Muslim association MUI proclaimed that the SSAH is "haram" or forbidden because it does not conform with the values in Islamic banking; therefore, it makes people unsure whether to join the program (Pisani, Kok, and Nugroho, 2017). A system, educational and religious institutions strongly influence attitudes because they lay the foundations of understanding and moral concepts in individuals (Idris, Satriawan, and Trisnantoro, 2017). One study suggests that the SSAH should regularly discuss the importance of "gotong royong" value, a mutual collaboration to accomplish a shared objective in JKN, and build public awareness through positive framing (Putri and Ernawaty, 2019).

Membership data inaccuracies were also seen as an influential factor to the uptake of JKN. Andria and Kusnadi (2018) suggest that the SSAH should improve the data accuracy of people identified as poor that the government should cover as a noncontributing member. Moreover, numerous informal sector workers who remain uncovered live within the borders of the poverty line, and some of them are classified as poor or underprivileged. There would be overlapping in their group's definition, which might go to a noncontributing member or even be categorized as a contributing member. Therefore, the government needs to be clear about the issue of JKN membership categorization so that there will be no discrepancy in the membership data (Andria and Kusnadi, 2018).

# Conclusion

Twelve major determinants have been identified influencing Indonesian to attain JKN. This study suggests the Indonesian government should consider the factors mentioned above that influenced the low participation in JKN. For instance, it is essential to prioritize healthrelated and other factors. In particular, the top three factors that were frequently identified in this study include lack of health insurance literacy, perceived inadequate healthcare service quality, and insufficient accessibility healthcare and service availability. factors These are more dynamic and can improve the uptake of the JKN program.

Moreover, this may allow the Indonesian government to achieve universal health coverage. However, there were some limitations to this review. While this study may summarize general findings, the result may not be summarized as a general conclusion. Although this study covered grey literature, publication bias may still occur due to an under-reported risk of bias in some included studies. Further studies may explore the financial and service coverage factors, as indicated in the UHC framework.

### Abbreviations

JKN: Jaminan Kesehatan Nasional (National Health Insurance); UHC: Universal Health Coverage; PRISMA: the Preferred Reporting Items for Systematic Reviews and Meta-Analyses; WHO: World Health Organisation; NHIS: National Health Insurance System; ASKESKIN: Asuransi Kesehatan Masyarakat Miskin (Health Scheme for Insurance the Poor); JAMKESMAS: Jaminan Kesehatan Masyarakat (Healthcare for the Poor Program); SSAH: The Social Security Agency for Health.

## Declarations

**Ethics approval and consent to participate** Not applicable.

Conflict of interest None.

**Availability of data and material** Not applicable.

### Author contributions:

conceived, drafted, and revised the manuscript.

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