The Effect of Willingness to Pay on Customer Preferences for Health Insurance Membership: A Systematic Review

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ABSTRACT

The community’s access to healthcare services is ensured by health insurance, which is a critical element in health finance. Insurance for health can shield you from expensive medical bills that can strain family's budget. This systematic review intended to examine customer preferences for health insurance membership based on their willingness to pay. Four electronic databases served as the information’s sources (ScienceDirect, Pubmed, Scopus, and Proquest). The PECOS Framework approach and certain keywords and synonyms were utilized in the search strategy to find publications published between 2011 and 2023. The data extraction, data synthesis, and deductive analysis were carried out on sixteen papers that matched the eligibility requirements. The findings demonstrated that customer preferences for health insurance membership are influenced by willingness to pay, with criteria including education, income, and medical history having a favorable impact. Health insurance managers must be aware of the variables that influence willingness to pay in order to increase membership coverage.

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INTRODUCTION

Strong, stable, and sustainable health financing is very influential in the delivery of health services. This is to achieve the important goal of health development in a country, namely equity in health services and access (equitable access to health care) and quality services (assured quality) and focusing on the underprivileged community (equitable and pro poor health policy) that can help achieve universal health access (Setiyawan, 2018). This is in accordance with the direction of the World Health Organization (WHO) which calls on countries to provide universal health coverage which is divided into two elements; namely access to fair and quality health services and financial risk protection (WHO, 2005). While universal coverage related to the financing system is divided into three categories, namely single payer, double payment (two-tier, dual health care system), and insurance mandate system (Murti, 2011). Through this health insurance, there is a mutual assistance mechanism that overcomes limited access and ability to pay for the poor by more well-off groups, so that health status is expected to improve (Mahendradatta et al., 2017).

A vital component of getting universal health coverage is having health insurance (UHC). A vital component of getting universal health coverage is having health insurance (UHC) (Aku et al., 2021). A significant intervention that encourages financial access to healthcare and lowers catastrophic medical costs is health insurance (Anaba et al., 2020). Wirastyanto (2016) through his research found a close and unidirectional correlation between public perception of the JKN program and participation in the program. In other words, the higher the perception the better the participation in the program (Wirastyanto, 2016). In line with these findings, the results of Hasibuan's research (2016) show that the lack of information about the JKN program causes people, especially at the lower level, to be reluctant to join the program. The low interest in using JKN-KIS is in fact not only based on reluctance. This condition is also based on the factor of the number of family members that must be borne. Indonesia targets to increase the number of people participating in the National Social Security System Program (SJSN) until Universal Health Coverage (UHC) is achieved in 2019 (Hasibuan, 2016).

Retnaningsih (2018) said that there are obstacles that vary from the aspects of JKN program organizers and prospective JKN participants. One of them according to BPJS Watch Advocacy Coordinator, Timboel Siregar, there are 4 things that cause the JKN-KIS Program participation target to be difficult to pursue, namely: 1) JKN socialization by BPJS Kesehatan is still inadequate; 2) there are still many complaints from the public regarding JKN services; 3) weak law enforcement for business entities that have not registered their workers with BPJS Kesehatan; and 4) weak coordination between BPJS Kesehatan, local governments, and other relevant institutions. According to Deputy Director of Trade Union Right Center (TURC) Andirko Otang, several obstacles faced by BPJS Kesehatan are: 1) There is still overlap between PBI participant data and Regional Health Insurance (JAMKESDA) participants; and 2) The number of PBI participants is greater than participants who are wage earners (Retnaningsih, 2018).

Based on the explanation above, the problem raised is that the target of JKN membership coverage in 2019 has not been achieved, which is 83% of 100% of the Indonesian population. Therefore, our research question was How Willingness to Pay Affects Customer Preferences in Health Insurance Membership.

METHODS

Study design

This research is a scientific review process in the form of systematic review. Systematic Reviews are conducted in accordance with pre-defined protocols based on the guidelines or templates of PROSPERO The Centre for Review and Dissemination Centre for Reviews and Dissemination University of York (Booth et al., 2012). The evaluation of the preparation of this systematic review uses the PRISMA checklist to determine whether the results of the analysis in the selected study are in accordance with the objectives of the systematic review.

Quality assessment

Based on Table 1, it is known that the eligibility criteria in searching for articles using the PECOS Framework, because the study design of the articles to be reviewed is an observational study design, so the intervention component is replaced by exposure. The observational study design was chosen because articles that review willingness to pay on insurance membership mostly use observational study designs. The comparator component has no criteria, because this study does not compare the value of willingness to pay as exposure. The types of original research and open sources..
articles are inclusion criteria as researchers consider to be able to know the variables studied clearly. For the year of publication of articles that enter the inclusion criteria are 2011 to 2023.

Search strategy
The literature search in this systematic review uses electronic databases with medium and high-quality criteria, namely: Science Direct, PubMed, Scopus, and ProQuest. Article or journal search uses keywords and Boolean operators (AND and OR) and quotation marks that are used to expand or specify the search, making it easier to determine the article or journal used. The keywords used are customer preferences OR patient preferences; Health insurance OR cost sharing; Willingness to pay OR Willing to pay.

Assessment risk of bias
Assessment of the quality of selected studies (studies included) using The Joanna Briggs Institute (JBI) Critical Appraisal. Assessment tools in the form of checklists that have been differentiated based on the type of research design. The checklist of assessment lists based on The JBI Critical Appraisal has provided several questions to assess the quality of the studies. All selected studies were assessed by four reviewers independently before the study was included in the review. Reviewer determines the assessment of quality criteria according to the research design in the selected study. Then the four reviewers together determine the value of the cut-off point, namely choosing studies according to the criteria used, in this study is JBI. Furthermore, in the three research designs, if the score in the study assessed is ≥60% with medium to high categories, the study meets the criteria to be included in a reference group or information source and is ready for data synthesis (Nursalam, 2020). Researchers excluded low-quality studies to avoid bias in the validity of results and review recommendations. And during the assessment process, the reviewers prioritize agreement by discussing to reach consensus if there are differences of opinion when assessing studies.

Data extraction
The results of literature search based on research protocols and in accordance with inclusion eligibility criteria are used to summarize or summarize the findings of research studies, namely summarizing all data findings from references or sources of information (data extraction). Data extraction that will be presented in this systematic review is data characteristics of research studies and characteristics of research study analysis results. The research study characteristic data summarized include the type of research design, scope of research, population characteristics and type of health insurance studied.

Data analysis
The study uses descriptive analysis that describes and explains through narrative the results of research described in the literature. Relevant data were reviewed by the review questions, including author, country, year, background, research objectives, study design, sample size, sample description and results analysis that explained factors affecting willingness to pay for health insurance membership as well as WTP scores in each study that made the measurement. Narrative approach with 3C 2S techniques, namely compare, contrast, criticize, synthesis and summarize (Sugiyono, 2019). Analysis with such techniques has the main objective of gathering evidence about key factors and developing textual narratives about similarities and differences between studies, used to synthesize data in this systematic review.

RESULT AND DISCUSSION
Figure 1 shows that researchers obtained 1421 articles that match predetermined keywords. The search results were checked for duplication, and 344 identical articles were excluded. Screening was conducted based on titles and abstracts adjusted to the theme of the systematic review, namely willingness to pay for health insurance membership. Of the 730 articles, 670 articles did not match the themes and inclusion criteria. 62 articles were assessed for feasibility and conformity with the eligibility criteria, and 46 articles were issued for reasons such as not reviewing willingness to pay, not reviewing health insurance, incomplete article content, and the research design entering the exclusion criteria. At the end of the selection, 16 articles were obtained that were included in the selected study.

Study characteristics

<table>
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<th>Table 2. Study characteristics (N=16)</th>
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Based on Table 2, it is known that the characteristics of the included studies have variation, and cross-sectional research designs are widely used in conducting research on community selection in the participation of health insurance assistants, which is 68.75% (11 studies). The scope of research was mostly carried out in the urban level set area, which was 50% (8 studies) with the characteristics of the population studied were mostly urban communities by 50% (8 studies) and formal sector work by 25% (4 studies). For research locations, most of them were carried out in developing countries, especially on the African continent as much as 68.75% (11 studies). While the type of health insurance discussed Social Health Insurance (SHI) by 56.25% (9 studies) and discussed Community-Based Health Insurance (CBHI) by 43.75% (7 studies). This can be attributed to the number of developing countries that has been running so far. For this reason, the working population began to be studied about the willingness to pay in the national insurance system, both workers in the formal sector and workers in the informal sector.

Analysis results

The most important idea is that the community/caste system factor in the CBHI scheme has a contrasting influence on willingness to pay and customer preferences on health insurance membership. The data synthesis process used in this systematic review uses 3C 2S techniques, namely compare, contrast, criticize, synthesis and summarize (Sugiyono, 2019). The results of the data synthesis are as follows:

1. **Compare**
   - The results of the study stated that there was a great willingness to participate or contribute to health insurance followed by a good WTP value. This condition occurs in both SHI and CBHI insurance schemes. The results of the study of Gidey et al., (2019) which examined the SHI scheme with a research sample of civil servants, stated that 85.3% of respondents chose social health insurance with an average WTP value of 3.6% of their salary. The WTP value is even much higher than the government's premium insurance scheme offers, which is 3% of the population's income (Gidey et al., 2019).
   - This condition also occurred in study Ko Hansoo et al., (2018) who examined the CBHI scheme with 88% of respondents stating that they were willing to participate in the health insurance scheme offered by the government with 61% of respondents stating WTP of US $ 5.6 per household (Ko et al., 2018).
   - The above conditions can be influenced by several factors, including:
     a) Education Level The results of the study stated that respondents with higher education will be more likely to take health insurance (Biggeri et al., 2018; Cheno et al., 2021; Mekonne et al., 2020; Mhere, 2013).
     b) Income Level Based on the results of the study, it is known that a person's income level will affect the willingness to pay in health insurance. The greater a person's income, the greater their chance of participating in health insurance (Biggeri et al., 2018; Harris et al., 2011; Mhere, 2013).
     c) Community/Caste system This community/caste system has a stronger influence on the CBHI scheme (Biggeri et
al., 2018; Ko et al., 2018; Taddesse et al., 2020). However, in the SHI scheme, community is also a positive influence and states that a sense of same-race solidarity in respondents shows a positive influence on willingness to pay for health insurance studied (Harris et al., 2011).

d) History of Disease History of disease is a strong influential factor in the SHI and CBHI schemes. The results of research explained that the history of illness in the last 3 (three) months and the history of illness of family members affect the willingness to pay for social health insurance applied (Mekonne et al., 2020). This is in line with another research who explained that the history of illness from family members, especially children, will positively influence them to take health insurance (Akokuwebe & Idemudia, 2022; Jain et al., 2014; Mhere, 2013).

e) Level of Awareness The level of awareness of the importance of health insurance is a factor that affects a person’s willingness to pay, especially in the SHI scheme (Al-Hanawi et al., 2018; Mekonne et al., 2020; Yeshiwas et al., 2018). However, in the CBHI scheme, the level of awareness is also a factor that has a positive influence on willingness to pay in health insurance membership (Basaza et al., 2019).

Contrast

In the selected study, several factors are known to have a contrasting effect in influencing a person’s willingness to pay, including:

a) age in the studies known that age positively affects a person’s willingness to pay for health insurance (Gidey et al., 2019; Liu et al., 2021; Mhere, 2013). However, when a person becomes older, insurance companies are less eager to pay for their coverage (Basaza et al., 2019).

b) Gender distribution in the study. It is well-known that the propensity of men to pay for health insurance membership is positively and significantly influenced by their gender (Harris et al., 2011). On the other hand, it was claimed that women have a negative and considerable impact on their desire to pay for health insurance (Biggeri et al., 2018).

c) Number of Family Members The next factor that has a contrasting effect is the number of family members. According to the study, many participants will have a higher risk of contracting a sickness, which may lead some people to get health insurance (Taddesse et al., 2020). However, many family members will also require large funds to participate in health insurance so as to reduce their willingness to pay (Mhere, 2013).

d) Community/Caste As mentioned in the study, the sense of same-race solidarity in respondents showed a positive influence on willingness to pay on the social health insurance (Harris et al., 2011; Ko et al., 2018). However, it was clarified that the caste system’s sense of camaraderie reduced the level of willingness to pay because respondents had a low level of health awareness and someone who was willing to donate money when they were ill, so the community factor that had a negative influence could not be a reference for the negative influence of customer preferences on willingness to pay for health insurance participation (Jain et al., 2014).

Critize

In selected studies, several studies explain the limitations that exist in their research, in the qualitative research designs, the sample obtained is relatively small so that it only describes the condition of the population (Al-Hanawi et al., 2018; Jain et al., 2014). In addition, the risk of bias in research is also realized, namely respondents’ memories and perceptions of income affect data accuracy (Taddesse et al., 2020). The calculation of the average WTP value was higher than the WTP value mentioned by the key informant (Gidey et al., 2019). The determination of the target population in the study is also bias in the study of Yeshiwas et al. (2018) because none of the study samples participated in the health insurance applied so that their expectations were high for the health insurance being studied (Yeshiwas et al., 2018). Additionally, although using data from the 2011 ENAHO household survey, which most likely indicated the respondents’ characteristics, several of the studies did not properly explain the characteristics of the respondents. Although it was stated that the study’s goal was to determine whether continuing health insurance was feasible, only the respondents’ degree of awareness was examined, and the study’s review of the insurance program was not made explicit. Additionally, there is no explanation of the respondents’ status, including whether or not they have engaged in the program (Bernal et al., 2017; Biggeri et al., 2018; Jain et al., 2014; Stephen Sunday et al., 2017).

Synthesize

The criteria that stood out the most and had a substantial beneficial impact on willingness to pay consumer preferences for insurance membership in a few studies looking at SHI schemes were education, income, disease history, and level of awareness. And the number of family members has a considerable negative impact on research looking at the SHI plan. While in other research looking at CBHI schemes, education, income, community/caste system, and disease history were the elements that stood out the most and had a strong beneficial impact on willingness to pay customer preferences on insurance participation. Age and sex were important unfavorable factors in research looking at CBHI schemes. According to the study’s findings, education, income, and medical history are characteristics that frequently come up and have a favorable and significant impact on people’s willingness to pay for health insurance membership. Because the community/caste system and level of awareness are important characteristics of each health insurance program.

Summarize

According to a study of the findings from a few studies, customers’ preferences for health insurance participation are positively and significantly influenced by their willingness to pay. The positive determinants of willingness to pay differ across the SHI and CBHI programs. However, in general, education, money, and sickness history are the 3 (three) characteristics that have the most equal influence on both schemes. Additionally, there are elements that negatively affect each scheme’s participants’ desire to pay for various insurance memberships. The number of family members is a negative influencing element for the SHI program, whereas age and gender are negative influencing factors for the CBHI program.
Positive Effect of Willingness to Pay on Customer Preferences of Health Insurance Membership

Based on the results of the study, it is known that there is a positive influence of willingness to pay on customer preferences in health insurance participation in both the SHI scheme and the CBHI scheme. Gidey et al.'s study, (2019) explained that most respondents who are civil servants are willing to be part of a social health security scheme with an average WTP value of 3.6% of their monthly salary, this value is greater than the premium proposed by the government (Gidey et al., 2019). They also demanded that the government concentrate more on raising the standard of healthcare. This condition is in accordance with Setiadi's (2019) explanation that the relationship between work and the need for quality health services is an influencing factor in the preference of social health insurance applied (Setiadi, 2019). In addition, awareness of financial risks that will arise is a motivation that drives individuals to make preferences to meet their needs, desires and expectations (Setiadi, 2019). As explained in the study of Basaza, et al. (2019) which states that respondents who have a willingness to pay for community health insurance scheme (CHIS) as many as 240 people (77.9%) in consideration of the development of health service infrastructure, risk protection and reducing household expenditures in health costs (Basaza et al., 2019). People's income and the existence of health insurance can increase demand for health services (Laksono, 2016).

Negative Effect of Willingness to Pay on Customer Preferences of Health Insurance Membership

In the study it is known that only 28.7% of respondents have a willingness to pay for public health insurance (Mekonne et al., 2020). This is because the sample of health workers already has free access to health at the hospital where they work. In addition, choosing to pay health costs directly makes them freer to choose the desired health facilities. Demand for healthcare services is negatively correlated with tariff economic indicators, particularly among patients having options. High-income, educated individuals in the formal sector will prioritize access to healthcare services, including health insurance (Laksono, 2016). Additionally, if the offered health insurance plan does not cover all medical expenses, it will force medical professionals to pick better medical facilities by paying out of pocket when their illness cannot be treated at the hospital where they work. The relationship between demand and health services in developing countries is influenced by several factors, one of which is the efficacy and quality of health services provided. These factors are very influential in making decisions to request certain services and service providers. In addition, public health insurance should be the government's responsibility in ensuring the health of its population. So that this reason is a factor that reduces the value of WTP and health insurance membership coverage. This perception is in line with the purpose of the implementation of National Health Insurance which mandates the government to guarantee the entire population to get health services according to medical needs without considering their economic capabilities. However, the economic conditions of each country vary so that national health insurance requires a mutual aid mechanism. This is necessary so that limited access and ability to pay (for the poor) can be helped by more well-off groups of society so that the expected health status will improve (Mahendradata et al., 2017).

CONCLUSION AND SUGGESTIONS

The most positive factors on willingness to pay in the SHI scheme are education, income, disease history and level of awareness. And the factor that negatively influences the SHI scheme is the number of family members. The most positive factors affecting willingness to pay in the CBHI scheme are education, income, community/caste system and history of illness. While the factors that have a negative influence in the CBHI scheme are age and gender. There is evidence of a positive influence of willingness to pay on customer preferences in health insurance participation, namely a high WTP value indicating a fairly high participation in the health insurance studied. There is evidence of the negative influence of willingness to pay on customer preferences in health insurance participation, namely the WTP value on health insurance membership is low enough so that the coverage of health insurance participants is also low. This condition is not only influenced by factors that negatively affect the willingness to pay, but also influenced by the insurance scheme offered and the level of trust in the health insurance manager studied.

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