

THE EFFECT OF PANDEMIC IN WILLINGNESS TO PAY (WTP) FOR NATIONAL HEALTH INSURANCE MONTHLY FEE AS INDEPENDENT PARTICIPANTS: A SURVEY IN SEMARANG

Ragil Setia Dianingati^{1*}, Eva Annisaa¹, Widyaningrum Utami¹, MG Isworo Rukmi¹

¹*Pharmacy Study Program, Faculty of Medicine, Universitas Diponegoro
Jl. Prof. Mr. Sunario, Kompleks Universitas Diponegoro, Tembalang, Semarang*

**Email Corresponding: rsdianingati@lecturer.undip.ac.id*

Submitted: October 14, 2023 Revised: November 13, 2023 Accepted: January 4, 2024

ABSTRACT

Jaminan Kesehatan Nasional (JKN) is mandatory for every Indonesian. Some of them have to be independent participants who need to pay the monthly fee by themselves. The monthly fee has fluctuated since 2014, and right before the COVID-19 pandemic. This research aimed to determine the willingness to pay for the independent participants before and during the pandemic using an online survey. Results showed that of 34 participants from Semarang, most of them have 2 members of the family (31%), 3 (26%), 5 (14%) 4 (9%) and need to pay for themselves only (17%). Most of them become second-class members (40%), first-class (31%), and third-class (26%). The willingness to pay during the pandemic was lower for all type of memberships significantly ($p < 0,05$) and if the membership fee was raised by 10%, 20%, and 30 %, the rejection was increased (74%, 89%, and 94%). Most of the participants agreed that the pandemic has impacted their economic situation so they considered choosing a lower class because they did not only choose the type of membership based on the benefits but also the amount of the monthly fee.

Keywords: willingness to pay, COVID-19, national health insurance

INTRODUCTION

JKN is mandatory for every Indonesian citizen based on Law Number 40/2004 concerning the National Social Security System to fulfill basic health needs with the principle of cooperation ([Sekretaris Negara RI, 2004](#)). There are three different types of JKN membership: Wage Recipient Workers (*Pekerja Penerima Upah* or PPU) for those who work as employees; Contribution Assistance Recipients (*Penerima Bantuan Iur* or PBI) or low-income communities who receive subsidy assistance from the government; and independent participants for people who are self-employed or informal sector workers. For people who work as employees, the amount of the monthly contribution fee for JKN participants is calculated based on the employee's salary. However, informal sector workers must pay as independent participants whose membership fees are determined by the President's orders, which will be reviewed at least once every two years ([Peraturan Presiden Republik Indonesia, 2018](#)). Independent membership fees are divided into three options: Class I, Class II, and Class III. Additionally, from 2014 to 2021, there were several changes to membership fees for almost all classes. This increase is due to the deficit experienced by BPJS Health ([Hasibuan et al., 2020](#)), which occurred in 2014-2018 and continues to increase ([Adani et al., 2019](#)). The condition of deficit is very concerning, because it can lead to arrears in payment of hospital bills, which in turn will have an impact to the quality and quantity of health care services. That is why there is a need to increase the membership fees.

The recent change in membership fees occurred at the same time when the COVID-19 pandemic hit Indonesia, which was in 2021. The COVID-19 pandemic not only increased the burden of healthcare costs due to the high number of people infected but also hit the Indonesian economy, making many economic sectors affected, especially the informal sector, which made many people lose their jobs or have their salaries cut. The change in JKN membership fees is quite significant, especially when everyone is experiencing difficulties due to the pandemic. The Class I membership fee becomes IDR 150,000/person/month, Class II is IDR 100,000/person/month, and Class III is IDR 42,000/person/month. For Class III, it is possible to receive government contribution assistance of IDR 7,000, bringing it to IDR 35,000 ([Peraturan Presiden Republik Indonesia, 2020](#)). The change in membership fees and the difficulties in the economic situation can increase the risk of stopping using BPJS as health insurance ([Agustina et al., 2021](#)). Based on this, this research uses an online survey in Semarang to determine the willingness to pay of independent participants, or willingness to pay (WTP), before and during the pandemic.

RESEARCH METHODS

This research is a descriptive observational study. The population of this study are Indonesian citizens who live in Semarang and have JKN membership as independent participants. A sample of 34 respondents was recruited using snowball sampling due to difficulties to reach the independent participants of JKN as most of the residents in Semarang are PPU or PBI. Only complete questionnaires will be included. Ethical permission was obtained from the Ethics Commission of the Faculty of Medicine, Diponegoro University No. 273/EC/KEPK/FK UNDIP/XII/2020.

Tools and materials

The tool used in this research is a questionnaire on the willingness to pay JKN contributions. The material for this research is the results of the questionnaire.

Research procedure

The initial research stage involves developing a questionnaire, arranging permits, and researching ethics. The questionnaire used several scenarios and was developed using an open-ended question strategy because there is no standard value for the monthly independent membership fee. We did a pilot study using 15 respondents to measure the validity and reliability of the questionnaire. From the result of the validity test using Pearson Product Moment showed that $r_{count} > r_{table}$ ($r > 0,514$), which means that the questionnaire is valid. The reliability test was done using Cronbach's alpha, given a value of 0,701 ($> 0,6$), which means that the questionnaire is reliable. The second stage of the research was recruiting respondents using the snowball sampling method because most Semarang City residents were JKN participants in the categories of PPU and PBI. Then, the self-developed questionnaire on Google Forms was distributed using the WhatsApp platform.

Data analysis

The collected data includes information about respondents' characteristics and their willingness-to-pay value for JKN contributions before and after the pandemic, which is then presented in the form of mean, mode, maximum, and minimum values using graphs, tables, and pie charts. WTP values before and after the pandemic were analyzed using a one-tailed T-test to determine whether there was a significant difference.

RESULTS AND DISCUSSION

Of the 35 questionnaires obtained, one was incomplete, so there were 34 questionnaires, which were then analyzed, and the following results were obtained:

Characteristics of the respondents

The characteristics of the respondents are shown in Table I. Most of the respondents who filled in were women, 69% (n = 24); for age, most respondents were 31-35 years old, had jobs as employees, had a bachelor's degree, and were married.

Table I. Respondent Characteristics (n=34)

Respondent Characteristics	Frequency	Percentage
Gender		
Man	10	29%
Woman	24	69%
Age		
18-25	5	14%
26-30	9	26%
31-35	11	31%
36-40	3	9%
41-45	3	9%
46-50	0	0%
51-55	1	3%
>55	2	6%
Job		
Freelance	2	6%
Teacher	3	9%
Housewives	6	17%
Employees	9	26%
Students	3	9%
Civil servants	1	3%
Contract workers	2	6%
Health professionals	3	9%
Entrepreneur	5	14%
Latest education		
Elementary	1	3%
Secondary	1	3%
High School	7	20%
Diploma (D1/D2/D3)	8	23%
Undergraduate	12	34%
Post graduate	5	14%
Marriage status		
Single	12	34%
Married	22	63%
Number of dependent family members		
1	10	29%
2	7	20%
3	7	20%
4	4	11%
5	5	14%
>5	1	3%
Spouse job status		
Not married	9	26%
Working	17	49%
Not working	8	23%
House ownership status		
Rent	10	29%
Self-own	21	60%
Office's residents	3	9%

JKN membership class		
1	11	31%
2	14	40%
3	9	26%
Do you ever use JKN service?		
Yes	25	71%
Never	9	26%

Most respondents have their own house with the status of a married couple (husband or wife) and support one family member as an independent JKN participant. However, one respondent supported more than five family members as independent JKN participants. For the JKN membership class, the majority chose class 2, and the majority had used health services using JKN. Respondents came from all sub-districts in Semarang City, but most respondents were domiciled or resided in the Tembalang sub-district, as shown in [Figure 1](#).

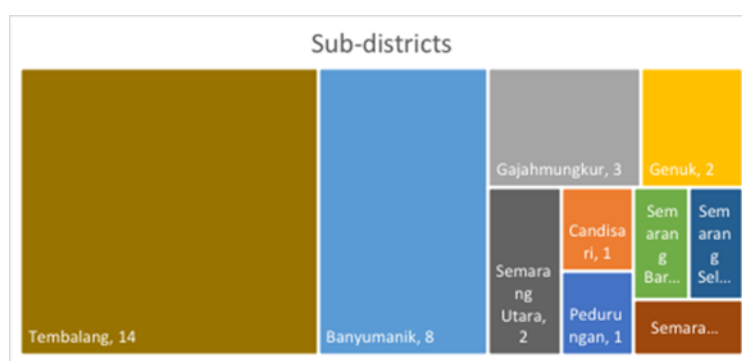


Figure 1. Respondents Based on Residential's Address (Based on Sub-districts)

JKN Membership Preference

[Table II](#) provides several statements related to JKN participation and the COVID-19 pandemic. Most respondents disagreed with the increase in the JKN independent contribution rate. This phenomenon is because most respondents choose the JKN membership class based on the benefits of the services provided and the number of contributions that must be paid every month. This result aligns with similar research conducted in Bekasi in 2022 ([Maulana et al., 2022](#)), which shows that some people have the ability to contribute more to JKN, thus making JKN have a better sustainable financial capacity; however they do not want to pay more because most of the PBPU (Pekerja Bukan Penerima Upah) of the informal sector workers have uncertain wages.

The difference in JKN membership classes is only different in the inpatient class, where class I JKN gets class I inpatient facilities, class II JKN gets class II inpatient care and class III JKN gets class III inpatient care, and remains the same. Meanwhile, it is possible to move up a class by adding additional participant fees ([Peraturan Presiden Republik Indonesia, 2020](#)). That is why most of the respondents chose the JKN membership class based on the benefits and the value for money. The COVID-19 pandemic has resulted in most respondents considering dropping their JKN membership class. This condition is due to the unstable economic situation. As stated in [Table I](#) regarding the characteristics of respondents, most respondents have more than two independent JKN participant dependents, which, if multiplied by the amount of the new JKN contribution, is felt to be quite burdensome for the family economy. This result is similar to the results of research in Tutul, Balung District, and Jember Regency ([Karimah, 2015](#)), which show that they did not want to pay for the membership fee due to their inability to pay since their economic situation was not enough to cover their daily needs, thus making them unable to afford the membership fee for the whole family.

WTP for JKN Membership fee

Next, a survey of WTP for JKN contributions for independent participation was carried out, with the results as shown in [Table III](#). In general, the average WTP value for all classes of JKN participants before the pandemic was higher than after the pandemic. The statistical test results also show that the average WTP value before and after the pandemic significantly differs because the p-value is <0.05 . However, the average WTP value for class I and II participants shows a value that is much lower than the current JKN participant contribution (class I IDR 150,000 and class II IDR 100,000). Even though some respondents answered that the WTP value was more significant than the actual contribution size of JKN participants, the average value and mode were still lower. Only in class III is the WTP is almost close to the actual value. The contribution size for class III JKN participants is IDR 35,000.00.

Apart from other influencing factors such as knowledge ([Marzuki et al., 2019](#); [Rohmawati, 2014](#)) and perceptions of the quality of health services ([Hildayanti et al., 2021](#)), which were not examined in this study, the results of this study are thought to be caused by the uncertainty in economic conditions, especially during the pandemic era. The increased contribution rates while the economic situation was uncertain will make respondents unwilling to pay more for the JKN membership fee, as shown in the previous study in Jambi City ([Istamayu et al., 2022](#)), which showed that income is a determinant factor for the WTP with a p-value of 0,000 ($<0,05$), especially given the different economic situations faced by the community during and after the pandemic. It can be seen that the majority of respondents objected to an increase in the scenario of increasing JKN contribution rates. The higher the increase, the fewer they agreed ([Table IV](#)), which is similar to the results of previous research conducted in Bulukerto District ([Budiono et al., 2021](#)), which shows that 23 of 28 respondents had an objection to the increase of the JKN membership fee. This result needs to be watched out for because objections to contribution rates will affect compliance with the payment of contributions ([Kamila & Rochmah, 2023](#); [Mekarisce et al., 2022](#)), which will then result in a deficit in BPJS Health ([Maulana et al., 2022](#)).

Limitation of the study

This study has a limited number of respondents because there is no data on how many people in Semarang are registered as independent members of JKN. This study also did not observe other potential factors such as knowledge and perceptions, which may provide a better explanation of the WTP value. However, the limitations of this study may not affect the generalizability of the results because the results in this study are aligned with several previous studies on similar topics.

Table II. Respondents' Answer About JKN Membership (n = 34)

No	Statements	SD	D	A	SA
1.	In my opinion, the amount of JKN Mandiri contributions for each class (both classes 1, 2, and 3) is appropriate.	0	17	16	1
2.	I chose the JKN membership class by considering the amount of contribution paid each month.	0	6	12	16
3.	I chose the JKN membership class by considering the health service benefits obtained.	1	6	15	12
4.	The Corona pandemic made me consider dropping the JKN class because of the unstable household economy.	6	7	11	10

Notes:

SD : strongly disagree

D : disagree

A : agree

SA: strongly agree

Table III. WTP Value for Monthly Independent Membership (in IDR)

Category	Mean	Min	Max	Mode
JKN class I fee				
After pandemic	86176,47	20000	200000	80000
Before pandemic	75147,06	10000	200000	100000
p value	0,01*			
JKN class II fee				
After pandemic	60323,53	10000	150000	50000
Before pandemic	52411,76	5000	120000	30000
p value	0,02*			
JKN class III fee				
After pandemic	30638,24	5000	100000	25000
Before pandemic	23564,71	0	100000	20000
p value	0,0003*			

Table IV. Scenario for an Increased JKN Independent Membership Fee

No	Scenario	Agree	Disagree
1.	With the economic situation during the Corona pandemic, if the current BPJS contributions were increased by 10%, would you be willing? (Class 1 becomes 165,000, Class 2 becomes 110,000, and Class 3 becomes 46200)	8	26
2.	With the economic situation during the Corona pandemic, if the current BPJS contributions were increased by 20%, would you be willing? (Class 1 becomes 180,000, Class 2 becomes 120,000, and Class 3 becomes 50,400)	3	31
3.	With the economic situation during the Corona pandemic, if the current BPJS contributions were increased by 30%, would you be willing? (Class 1 becomes 195,000, Class 2 becomes 130,000, and Class 3 becomes 54,600)	1	33
4.	Has the Corona pandemic affected your family's economic situation (any changes in household consumption patterns)?	29	5

CONCLUSION

The WTP value for independent JKN participants in Semarang City during the pandemic was lower and significantly different (p -value < 0.05) compared to WTP before the pandemic for all membership classes, potentially making many independent members, which are dominated by informal sector workers, choose lower Classes. This is due to changes in economic conditions caused by the COVID-19 pandemic, which made the informal sectors unstable, thus making them prefer to choose the type of membership based on the amount of monthly contributions. This condition can lead to a decrease in JKN contribution from the membership fee, which, if not well anticipated, can cause a deficit in the JKN budget in the future. Other studies on ability to pay (ATP) and surveys of knowledge and perception of JKN are needed for future research.

ACKNOWLEDGEMENT

Deepest gratitude to the Faculty of Medicine at Universitas Diponegoro which funded this research as Hibah Penelitian Riset Dosen Pemula Year 2020.

REFERENCES

- Adani, J., Permatasari, P., Pulungan, R. M., & Setiawati, M. E. (2019). Faktor-Faktor yang Berhubungan dengan Kepatuhan Pembayaran Iuran JKN pada Peserta Mandiri di Kota Depok Tahun 2019. *Jurnal Ilmiah Kesehatan Masyarakat*, 11(1), 287–295.
- Agustina, D., Kusuma, A. R., Siregar, K. P. A., Urip, J., Km, S., & Ii, K. (2021). Analisis

- Kemampuan dan Kemauan Pasien PBPU Membayar Iuran Jaminan Kesehatan Nasional Article history : Received in revised form 9 July 2021 Universitas Muslim Indonesia Accepted 12 July 2021 Address : Available online 25 July 2021 Email : Phone : Indonesi. *Window of Health*, 4(3), 238–247.
- Budiono, A., Yulianie, D. A., Febriansyah, F. I., Sari, R. M., Iriani, D., & Nuryani, N. (2021). Analisa Dampak Kebijakan Atas Kenaikan Iuran Jaminan Kesehatan Nasional (Studi Di Kecamatan Bulukerto). *Media Keadilan: Jurnal Ilmu Hukum*, 12(1), 115. <https://doi.org/10.31764/jmk.v12i1.2722>
- Hasibuan, R., Purnama, T. B., & Susanti, N. (2020). Respon Kenaikan Iuran Jaminan Kesehatan Nasional dan Utilitas Puskesmas Oleh Peserta JKN di Medan. *Jurnal Kebijakan Kesehatan Indonesia*, 09(04), 211–217. <https://doi.org/10.22146/jkki.59237>
- Hildayanti, A. N., Batara, A. S., & Alwi, M. K. (2021). Determinan Ability To Pay dan Willingness To Pay Iuran Peserta Mandiri BPJS Kesehatan di Kecamatan Takabonerate (Studi Kasus di Kabupaten Kepulauan Selayar). *Promotif: Jurnal Kesehatan Masyarakat*, 11(1), 30–37. <https://doi.org/10.56338/pjkm.v11i1.1515>
- Istamayu, A. A., Solida, A., & Wardiah, R. (2022). Determinan Kemauan Membayar (Willingness To Pay) Iuran Jaminan Kesehatan Nasional Pada Peserta Mandiri Di Kota Jambi Tahun 2021. *AKSELERASI: Jurnal Ilmiah Nasional*, 4(2), 10–21. <https://doi.org/10.54783/jin.v4i2.546>
- Kamila, A. R. P. El, & Rochmah, T. N. (2023). Hubungan Tingkat Pendapatan dengan Kepatuhan Peserta Mandiri Jaminan Kesehatan Nasional dalam Membayar Iuran: Literature Review. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, 13(4), 1151–1160. <https://doi.org/10.32583/pskm.v13i4.1148>
- Karimah, M. (2015). Ability dan willingness to pay pekerja kerajinan tangan terhadap iuran jaminan kesehatan nasional di desa tutul Kecamatan Balung Kabupaten Jember. *Skripsi Universitas Jember*, 130. file:///Users/sinthautami/Documents/Jurnal/Muhibatul Karimah - 112110101006.pdf
- Marzuki, D. S., Abadi, M. Y., Darmawansyah, D., Arifin, M. A., Rahmadani, S., & Fajrin, M. Al. (2019). Analisis Kemampuan Membayar dan Kemauan Membayar Peserta PBPU yang Menunggak Iuran JKN Di Kecamatan Tamalate Kota Makassar. *Jurnal Manajemen Kesehatan Yayasan RS.Dr. Soetomo*, 5(2), 102. <https://doi.org/10.29241/jmk.v5i2.158>
- Maulana, A. N., Purwaningrum, F., Thabrany, H., Fitrianti, Y., & Tri Hartini, F. (2022). Mengukur Kemampuan Mengiur untuk Jaminan Kesehatan Nasional (JKN) tahun 2021 di Indonesia. *Jurnal Jaminan Kesehatan Nasional*, 2(1), 39–52. <https://doi.org/10.53756/jjkn.v2i1.51>
- Mekarisce, A. A., Noerjoedianto, D., & Solida, A. (2022). Hubungan sosio demografi dan pendapatan dengan kepatuhan membayar iuran PBPU pekerja mandiri di BPJS kesehatan KC Jambi. *Riset Informasi Kesehatan*, 11(1), 13. <https://doi.org/10.30644/rik.v11i1.548>
- Peraturan Presiden Republik Indonesia. (2018). Perpres Nomor 82 Tahun 2018. *Peraturan Presiden Republik Indonesia Nomor 82 Tahun 2018*, 1, 1–5.
- Peraturan Presiden Republik Indonesia. (2020). Perpres Nomor 64 Tahun 2020 Tentang Jaminan Kesehatan. *Jdih BPK RI*, 64, 12.
- Rohmawati, D. (2014). *Hubungan pengetahuan sikap dan sosial ekonomi dengan pemilihan jenis iuran keikutsertaan JKN Mandiri pada wilayah cakupan JKN tertinggi di Surakarta*. 1–13. <http://eprints.ums.ac.id/32416/>
- Sekretaris Negara RI. (2004). UU RI No.40 Tahun 2004 Tentang Sistem Jaminan Sosial Nasional. *Jdih BPK RI*, 1–45.

