

Sociodemographic correlates of older adult acceptance of the COVID-19 vaccine

Arlene Supremo^{1,*} , Sillmark Bacason , Alexander Rex Sañosa 

¹ Biliran Province State University, Philippines

*Correspondence: Arlene Supremo. Address: Biliran Province State University, Philippines. Email: arlene.supremo1986@gmail.com

Responsible Editor: Praba Diyan Rachmawati

Received: 2 September 2021 ◦ Revised: 3 January 2022 ◦ Accepted: 3 February 2022

ABSTRACT

Introduction: An increase of the COVID-19 global statistics in late 2019 prompted the swift manufacturing of vaccines to protect people, especially older adults, from the debilitating effects of the disease. This study aimed to determine the socio-demographic correlates of older adults and their relationship with COVID-19 vaccine acceptance.

Methods: This correlational study invited the entire population of older adults to answer the survey. In total, 89 elderly individuals participated in face-to-face interviews because of the old age limitations. The tool used consisted of two parts. The first part determined the socio-demographic correlates. The second part assessed the level of acceptance of the COVID-19 vaccine. Rank Biserial and Spearman Rho were used to measure the correlations between the socio-demographic variables and COVID-19 vaccine acceptance.

Results: The respondents were predominantly female (n = 45; 50.56%), with an elementary level of education (n = 48; 53.93%), below PHP 10,000.00 for monthly family income (n = 77; 86.52%), unemployed (n = 79; 88.76%), and Roman Catholic (n = 87; 97.75%). Generally, older adults will not accept the COVID-19 vaccine. Specifically, older adults will not accept the vaccine if it has less than a 50% effectiveness (n = 51; 57.30%) and if they have existing medical conditions (n = 51; 57.30%). Finally, the findings suggest that employment status has a significant negative relationship with the acceptance of the COVID-19 vaccine (r = -0.357, p = 0.0001).

Conclusions: 47.19% to 57.30% of older adults will not accept the COVID-19 vaccine. National and local government units need to intensify their vaccination campaigns to persuade the public to engage with the free COVID-19 vaccines.

Keywords: acceptance; COVID-19; hesitancy; pandemic; vaccine; vulnerable

Introduction

The novel coronavirus (COVID-19) pandemic, which started in Wuhan, China, is a global threat, with more than 3 million new reported cases in March 2021 (World Health Organization, 2021). The high statistics in terms of the number of COVID-19 cases prompted nations worldwide to develop mitigating policies to curb the surge of new infections. The health policies include the mandatory wearing of face masks and other personal protective equipment (PPE), as well as isolation and quarantine protocols, granular and community lockdowns, physical distancing, limiting through to prohibiting super spreading interactions like prayer meetings, social gatherings, and personal meetings, and hand sanitization. These non-pharmacological interventions have slowed the rate of coronavirus transmission (El-Elimat et al., 2020). However, pharmacological interventions such as vaccination

remain the best solution to prevent COVID-19 infection (Chakraborty & Parvez, 2020).

Scientists from around the world raced against time to develop potential vaccines against coronavirus. In 2020, the WHO (2021) reported that at least seven vaccines were available for administration. Vaccines are considered helpful in protecting an individual from coronavirus infection through immunity development (CDC, 2021). In the Philippines, the Department of Health (DOH, 2021) conducted an initial vaccine rollout of the Chinese-made SinoVac and UK-made Astrazeneca vaccines to healthcare frontline workers.

Among those who most need the COVID-19 vaccine is the older population group, specifically individuals 65 years old and above, aside from frontline healthcare workers. This group was identified by the WHO (2021) as among the high-risk individuals clustered together with healthcare providers and persons with co-morbidities

because they comprise the majority of the morbidity and mortality cases of the disease. The Centers for Disease and Control Prevention (CDC, [2020](#)) recommended that the older population should be included in the first layer of recipients of the COVID-19 vaccine since the risk of severe illness from the infection increases with age.

With the availability of the COVID-19 vaccine, the next concern that must be overcome by the health authorities and government is its acceptability by older adults as vaccine recipients. Understanding the perspectives of the vaccine recipients is essential when determining the best strategy to maximize vaccine uptake. This milestone in the vaccine roll-out for the older adult population sought to prevent an increase in the disease's morbidity and mortality cases.

Locally, the older adults' acceptance and hesitancy regarding the COVID-19 vaccines have remained unexplored. According to the report by the Biliran Provincial Health Office (BPHO, [2020](#)), there was a low level of compliance with routine immunizations such as the pneumococcal and flu vaccines by older adults. Because of this, a considerable number of older adults were vulnerable to acquiring the infection. This study, therefore, sought to investigate the level of acceptance of COVID-19 vaccination among older adults.

Specifically, this study has been undertaken to determine the sociodemographic profile of older adults in terms of age, sex, education level, monthly income, employment status, and religion. Furthermore, this study wanted to determine the level of acceptance of COVID-19 vaccination among the older adults residing in one of the regions in the Philippines. After determining the sociodemographic profile and level of acceptance of older adults, the causal relationship between the variables was established.

Materials and Methods

Study Design

This study was a correlational research study in terms of its design. Correlational research is concerned with establishing relationships between two or more variables in the same population or between the same variables in two populations. Curtis, Comiskey, and Dempsey ([2016](#)) emphasized that exploring the relationships among the variables is a significant part of research in nursing. Understanding the associations and relationships among human phenomena is a consistent impetus for scientific inquiry in all social science disciplines. This impetus transcends even the most polarized paradigmatic distinctions between various research methods (Fitzgerald et al., [2004](#)). Since the study's goal was to measure and explore the degree of relationship between the demographic characteristics of the older adults and their acceptability of the COVID-19 vaccine, it was appropriate to utilize a correlational research design.

Respondent

The COVID-19 coronavirus pandemic is a global health disaster of the 21st century. This pandemic has caused untold fear and suffering for older adults across the world. According to the World Health Organization (WHO) as cited in the paper by Chee ([2020](#)), older adults in aged care homes are at a higher risk of infection due to living in an enclosed environment with others. Older people are more susceptible to COVID-19 infection, caused by a defective immune response to infectious challenges (Benksim, Addi, & Cherkaoui, [2020](#)). In addition, comorbid illnesses, malnutrition, drugs, and stress predispose the elderly to an increased risk of coronavirus by declining their immune function (Benksim, Addi, & Cherkaoui, [2020](#)). Hence, this study sought the participation of the older adults in the community of Barangay Imelda.

In the Municipality of Naval, Barangay Imelda is held to be one of those barangays with the greatest number of older adults. The barangay is also the barangay furthest away from the urban center of Naval. This confirms their information inaccessibility regarding the benefits of the COVID-19 vaccine. For these reasons, the elderly in this barangay were relevant when it came to providing the data needed for this study.

The researchers used the list of the elderly provided by the barangay health unit as its sampling frame. The elderly listed reached 126 in total. Due to the small population, the researchers used complete enumeration as its sampling technique. However, only 89 were surveyed because only those who were still able to process information were included in the study.

Table 1 Socio-demographic profile of the older adults (n=89)

Demographic Variable	n	%
Sex		
Male	44	49.44%
Female	45	50.56%
Educational Attainment		
Did Not Attend School	2	2.25%
Pre-School Level	3	3.37%
Pre-School Graduate	2	2.25%
Elementary Level	48	53.93%
Elementary Graduate	31	34.83%
Junior High School Level	2	2.25%
College Level	1	1.12%
Family Income		
Below PHP 10,000.00	77	86.52%
PHP 10,000.00 - Php 19,000.00	12	13.48%
Employment Status		
Employed	10	11.24%
Unemployed	79	88.76%
Religion		
Roman Catholic	87	97.75%
Iglesia Filipina Independiente	1	1.12%
Others	1	1.12%

Excluding the few who were not capable of answering the survey increased the reliability of the results.

Instrument

The study developed a questionnaire that would capture its objectives. This self-made questionnaire consisted of 13 items and was pilot tested in Barangay P.S. Eamiguel. The internal consistency of the items was measured using Cronbach's Alpha. The alpha coefficient for the 13 items was 0.992, suggesting that the items had a relatively high internal consistency. To note, a reliability coefficient of 0.70 or higher is considered "acceptable" in most social science research situations. This includes research situations in the field of health and nursing.

The research instrument was divided into two. The first section contained the questions on the demographic profile: (1) Sex, (2) Educational Attainment, (3) Family Income, (4) Employment Status, and (5) Religion of the respondents. The second section contained the 13 items capturing the acceptance of the older adults of the COVID-19 vaccines. The details of the items are presented in [Table 2](#). Furthermore, the respondents rated the variable "acceptance to COVID-19 vaccines" using a five-point Likert scale (Definitely not = 1, Probably not = 2, Probably = 3, Very probably = 4, Definitely = 5).

Data Collection

Initially, the researchers sought ethical clearance from the Research and Innovation Office of the Biliran

Province State University, and permission from the Local Government Unit before the conducting of the study. Informed consent was secured with an emphasis on the study's intention and coverage. Subsequently, the researchers sought assistance from the Barangay Health Office to be provided with a list of older adults in the community. The list was then used as a reference to identify and locate the residences of the older adults in the barangay. Before letting the respondents answer the survey, transmittal letters were given to each of the respondents. After receiving approval through the signing the consent form to survey them, the researcher gave them the survey questionnaire. All of this happened in a face-to-face set-up.

The survey lasted last for a week. A repetition of the barangay visits was done until the data was completed. Since the number of respondents was manageable, the researchers were also those who conducted the survey. They did not seek the help of research assistants or enumerators from the research office of the university.

To emphasize, the survey followed the Inter-Agency Task Force (IATF) guidelines for COVID-19 when visiting the residences of the respondents.

Data Analysis

After gathering the data, the researchers encoded the responses in Microsoft Excel to summarize the data. The responses to some of the variables, particularly those used for profiling, were coded accordingly. Consequently, the researchers produced a descriptive summary with the

Table 2 COVID-19 vaccine acceptance

Statement	Definitely	Very Probably	Probably	Probably Not	Definitely Not
If a vaccine against COVID-19 that has less than 50% effectiveness is available in the market, I will accept it.	9	8	9	12	51
If a vaccine against COVID-19 that has more than 50% effectiveness in the market, I will accept it.	19	5	9	11	45
If a vaccine against COVID-19 has known minor side effect (such as dizziness, lightheadedness, fever, flu-like symptoms (cold, sneezy, body malaise), body pain) and is available on the market, I will accept it.	13	13	7	8	48
I will accept a COVID-19 vaccine if my other family members will take the vaccine shot too.	24	5	9	6	45
I will accept a COVID-19 vaccine if my friends and significant others will take the vaccine shot too.	24	9	3	5	48
I will accept a COVID-19 vaccine if it was recommended by the local health authorities.	26	7	2	8	46
I will accept a COVID-19 vaccine if it was recommended by the national health authorities.	25	9	5	7	43
I will accept a COVID-19 vaccine if it was proven safe and effective by the government.	27	6	6	6	44
I will accept a COVID-19 vaccine if information about the vaccine is provided by trusted health professionals before vaccination starts.	23	11	7	6	42
I will accept a COVID-19 vaccine if information about the vaccine is seen on online platforms such as Facebook, Instagram, etc.	8	12	10	9	50
I will accept a COVID-19 vaccine even if I have existing medical health problems (diabetes, hypertension, rheumatoid arthritis, etc).	13	7	8	10	51
I will accept a COVID-19 vaccine despite my old age.	26	5	2	9	47
I will accept a COVID-19 vaccine even if I am fearful of the vaccination outcome.	21	6	4	8	50

encoded data to determine the completeness of all observations.

The study used SPSS version 25 to analyze and determine the correlation of the demographic variables in relation to the acceptability of the older adults in terms of the COVID-19 vaccine variable. The statistical tools used to measure the correlations of the variables were the Rank Biserial and Spearman Rho. Rank Biserial was used to determine the degree of relationship between the Sex and Acceptance of the older adults of the COVID 19 vaccine and between Employment Status and the Acceptance of the older adults of the COVID 19 vaccine. Meanwhile, Spearman Rho was used to measure the other three demographic variables (Age, Educational Attainment, and Religion) in relation to the Acceptance of the older adults of the COVID 19 vaccine. Sex and Employment Status were run using a different statistical tool of correlation because their data was discrete and nominal in nature. The authors used the p-values of the correlation coefficients to reject or accept the null hypotheses at a significance level of 0.05 and below.

Data Collection

Initially, the researchers sought ethical clearance from the Research and Innovation Office of the Biliran Province State University, and permission from the Local Government Unit before the conducting of the study. Informed consent was secured with an emphasis on the study's intention and coverage. Subsequently, the researchers sought assistance from the Barangay Health Office to be provided with a list of older adults in the community. The list was then used as a reference to identify and locate the residences of the older adults in the barangay. Before letting the respondents answer the survey, transmittal letters were given to each of the respondents. After receiving approval through the signing the consent form to survey them, the researcher gave them the survey questionnaire. All of this happened in a face-to-face set-up.

The survey lasted last for a week. A repetition of the barangay visits was done until the data was completed. Since the number of respondents was manageable, the researchers were also those who conducted the survey. They did not seek the help of research assistants or enumerators from the research office of the university.

To emphasize, the survey followed the Inter-Agency Task Force (IATF) guidelines for COVID-19 when visiting the residences of the respondents.

Ethical Consideration

This study strictly followed the principles of ethical standards when conducting the research. The researchers obtained ethical clearance from the University Internal Review Panel before the actual conducting of the study. Before the data collection process, the researchers provided transmittal letters to the Mayor, Barangay Captain, and Municipal Health Officer.

Three basic principles were observed in the conducting of this study: the principles of respect for persons, beneficence, and justice. Privacy and confidentiality were strictly observed throughout. The respondents in this study were informed of the purpose of the research and provided a clear description of the extent of their involvement and the risks, benefits, and rights of being a study respondent. They were also given the study's strengths related to the actual determination of the acceptance level of older adults for COVID-19 vaccination. However, the actual implementation of the study was constrained due to strict adherence to the COVID-19 protocols, such as the wearing of a face mask, physical distancing, and limited hand hygiene.

A standard form of informed consent was read, elaborated on, and explained in the language that the respondents understood to secure the elements of adequate information and comprehension. The respondents were not coerced, forced, or bribed to participate in this study to secure the element of voluntary participation. The respondents were of legal age and not of unsound mind as declared by the court to secure the element of competency and they qualified based on the inclusion criteria of the study. It was emphasized that they could withdraw from the study at any time during the conducting of the research. The respondents were reminded that they could stop participating in the study at any time without any danger of repercussions.

All data gathered in this study is considered private and confidential. All materials gathered were handled with utmost care. The anonymity of the respondents was preserved. No identifying data was exposed in the report of the study including any names, addresses, etc. All data was destroyed upon the completion and publication of this study.

Compensation or the giving of tokens to respondents poses an ethical dilemma. Nonetheless, this study recognizes the ethical principles of justice and respect and the respondent's time and effort will be given due credit and recognition. Before starting the interview, a token was offered to the respondents. The respondents

Table 3 Employment status and COVID-19 vaccine acceptance

Statement	Correlation Coefficient	p-value	Decision
Q1	-0.414**	0.000	Reject H ₀
Q2	-0.383**	0.000	Reject H ₀
Q3	-0.286**	0.007	Reject H ₀
Q4	-0.315**	0.003	Reject H ₀
Q5	-0.305**	0.004	Reject H ₀
Q6	-0.317**	0.003	Reject H ₀
Q7	-0.311**	0.003	Reject H ₀
Q8	-0.288**	0.006	Reject H ₀
Q9	-0.317**	0.002	Reject H ₀
Q10	-0.342**	0.001	Reject H ₀
Q11	-0.394**	0.000	Reject H ₀
Q12	-0.344**	0.001	Reject H ₀
Q13	-0.357**	0.001	Reject H ₀

*<0.05 **<0.01

were informed that the interview tokens were given based on their assessed needs.

Lastly, there was no known potential conflict of interest for this study.

Results

Out of the 89 respondents who participated in the study, 45 (50.56%) were female and 44 (49.44%) were male. Most of the respondents had reached the elementary level of education, totaling 48 (53.93%). Concerning family income, many older adults belong to a family that receives a monthly revenue of less than PHP 10,000.00 per month as most of them are unemployed (88.76%). Roman Catholicism (97.75%) is the predominant religion of the group.

The older adults will definitely not accept the vaccine in the circumstances presented in [Table 2](#). However, more older adults will definitely not accept the vaccine if it has less than 50% effectivity and if they have existing medical conditions such as diabetes, hypertension, and rheumatoid arthritis at 51% and 57%, respectively.

Regarding understanding the correlation between the socio-demographic correlates and the acceptance of the COVID-19 vaccine, only the employment status of older adults, particularly those who were unemployed, showed a significant correlation. The majority of the socio-demographic correlates (sex, educational attainment, family income, and religion) had a negative correlation with COVID-19 vaccine acceptance.

Discussions

The COVID-19 pandemic has wreaked havoc on the global economy since its first occurrence in Wuhan, China. Because of the negative pandemic effects, the WHO and its partners, especially drug manufacturers, have raced against time to develop a vaccine that will help reduce the statistics of COVID-19 infection (WHO, [2021](#)). The available COVID-19 vaccines ready for administration include SinoVac Astrazeneca, Moderna, Sputnik V, and Pfizer. However, successful vaccines will still rely on the uptake of the population (Zigron et al., [2021](#)).

As of July 7, 2021, the WHO ([2021](#)) reported that 3,032,056,355 people have received the COVID-19 vaccine out of the 7,753,000,000 total population around the world (World Bank Group, [2021](#)). In the Philippines, the COVID-19 vaccination rollout began in March 2021 to eligible priority groups which included older adults (Department of Health, [2021](#)). The acceptance of these older adults of the available COVID-19 vaccines has been studied here in relation to their sociodemographic profile.

The COVID-19 vaccine acceptance of the older adults showed that most people belonging to this population group will definitely not accept the vaccine. Among the notifiable response where most older adults did not show

acceptance of the COVID-19 vaccine was if the vaccines had less than 50% effectiveness. Harapan et al. ([2020](#)) and Alqudeimat et al. ([2021](#)) described in their studies that acceptance is relative to the effectiveness of a certain COVID-19 vaccine. The higher the effectiveness, the more people will definitely accept the vaccine. Therefore, the government must put out effective strategies that will persuade the population to avail the free COVID-19 vaccines if the one purchased has been known to have low effectiveness.

Furthermore, older adults who have existing comorbidities such as diabetes and hypertension expressed their unwillingness to accept the COVID-19 vaccine. The previous literature showed a similar finding that people with underlying medical conditions are hesitant and resistant to accepting the COVID-19 vaccines (Murphy, [2021](#)). Unacceptance was linked to the medical contraindication of vaccines and the fear of vaccine side effects. This result is counterintuitive to the somatic benefit-risk analysis where people with health problems should take extra protective measures from infectious diseases. Older adults with existing health problems are considered vulnerable to COVID-19 infection (CDC, [2021](#)), therefore they need the vaccine more. The unacceptance of the COVID-19 vaccine from this group might hamper the achievement of herd immunity where more people are expected to be fully vaccinated.

Upon studying the relationship between the sociodemographic correlates of the older adults in relation to their willingness to accept the COVID-19 vaccine, only unemployment showed a significant correlation. This information revealed a contrasting result to those of the available studies in the literature where unemployed individuals are less likely to accept the COVID-19 vaccines (Malik et al., [2020](#); Echoru et al., [2021](#)). Malik et al. ([2020](#)) reported that vaccine acceptance is directly proportional to literacy level. The higher the education level, the more accepting an individual is of the COVID-19 vaccine.

Strikingly, the study shared the same result as the study by El-Elimat et al. ([2020](#)). Their study reported that unemployed participants were more accepting of the COVID-19 vaccines than the employed participants. This is not a perplexing finding as most of the respondents in the study were unemployed due to old age. Most of them were retired individuals receiving pensions. Others were supported by their family.

Limitations in relation to the conducting of this study were identified. One limitation was the research locale, wherein all study participants lived in a mountainous barangay. A different finding may have been gathered if the study encompassed a wider coverage of older adults – those living in rural-upland, rural-coastal, and urban areas, respectively. Also, the study was conducted when COVID-19 vaccines were still undergoing clinical trial. As more studies proving the safety and effectiveness of the

COVID-19 vaccines emerge, the respondents might change their perception regarding acceptance.

Conclusions

Generally, the results of this study highlight the need to improve the level of knowledge and increase the trust in the COVID-19 vaccines to expedite their uptake in the older adult population. Educating them on the benefits of the COVID-19 vaccine is an essential milestone in preventing further morbidity and mortality cases of the COVID-19 disease, considering their high-risk category. Moreover, the local government should intensify its public awareness campaigns to reach everyone in the community. Providing rewards or incentives can also be a strategy to improve the level of vaccine uptake.

References

- Al-Qerem, W. et al. (2021). 'COVID-19 vaccination acceptance and its associated factors among a Middle Eastern population'. *Frontiers in Public Health*, 9, 34. Retrieved from <https://doi.org/10.3389/fpubh.2021.632914>.
- Alqudeimat, Y. et al. (2021). 'Acceptance of a COVID-19 vaccine and its related determinants among the general adult population in Kuwait'. *Medical Principles and Practice*, 30(3), 262-271.
- Baldacchino, G. (2006). 'Islands, island studies, Island Studies Journal; *Island Studies Journal*, 1(1), 3-18. Retrieved March 29, 2021, from <https://islandstudies.ca/sites/vre2.upei.ca/islandstudies.ca/files/u2/SJ-1-1-2006-Baldacchino-pp3-18.pdf>
- Benksim, A., et al. (2020). 'Vulnerability and Fragility Expose Older Adults to the Potential Dangers of COVID-19 Pandemic'. *Iranian Journal of Public Health*, 49(1), 122-124. Retrieved March 29, 2021, from https://www.researchgate.net/publication/340984493_Vulnerability_and_Fragility_Expose_Older_Adults_to_the_Potential_Dangers_of_COVID-19_Pandemic
- Biliran Provincial Health Office. (2020). *Needs assessment survey of Barangay Imelda Naval*. BPHO: Naval. Biliran.
- Burns, A. (1999). 'Collaborative Action Research for English Language Teachers'. Cambridge University Press.
- Centers for Disease Control and Prevention. (2021). *What older adults need to know about COVID-19 vaccines*. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/older-adults.html>
- Centers for Disease Control and Prevention. (2021). *Benefits of getting a COVID-19 vaccine*. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html>.
- Centers for Disease Control and Prevention. (2021). *COVID-19: people with certain medical conditions*. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>.
- Chakraborty, R. et al. (2020). 'COVID-19: an overview of the current pharmacological interventions, vaccines, and clinical trials'. *Biochemical pharmacology*, 114184. <https://doi.org/10.1016/j.bcp.2020.114184>
- Chee, S. Y. (2020). 'COVID-19 Pandemic: The Lived Experiences of Older Adults in Aged Care Homes'. *Millennial Asia*, 11(3), 299-317. DOI: 10.1177/0976399620958326
- Curtis, E. et al. (2016). 'Importance and use of correlational research'. *Nurse Researcher*, 23(6), 20-25. doi:10.7748/nr.2016.e1382
- Department of Health. (2021). *When will the COVID-19 vaccines be available to me?* Retrieved from <https://doh.gov.ph/Vaccines/when-will-the-COVID-19-available-to-me>
- Echoru, I. et al. (2021). 'Sociodemographic factors associated with acceptance of COVID-19 vaccine and clinical trials in Uganda: a cross-sectional study in western Uganda'. *BMC public health*, 21(1), 1-8. <https://doi.org/10.1186/s12889-021-11197-7>
- El-Elimat, T. et al. (2020). 'Acceptance and Attitudes Toward COVID-19 Vaccines: A Cross-Sectional Study from Jordan'. *medRxiv*. <https://doi.org/10.1101/2020.12.22.20248676>
- Fitzgerald, S. M. et al. (2004). 'Correlational designs in rehabilitation research'. *Journal of Vocational Rehabilitation*, 20(2), 143-150.
- Hair, J. F. et al. (2010). 'Multivariate Data Analysis (7 ed.)'. Pearson Prentice Hall.
- Harapan, H. et al. (2020). 'Acceptance of a COVID-19 vaccine in southeast Asia: A cross-sectional study in Indonesia'. *Frontiers in public health*, 8. doi: 10.3389/fpubh.2020.00381
- Malik, A. A. et al. (2020). 'Determinants of COVID-19 vaccine acceptance in the US'. *EClinicalMedicine*, 26, 100495. DOI: [10.1016/j.eclinm.2020.100495](https://doi.org/10.1016/j.eclinm.2020.100495)
- Murphy, J. et al. (2021). 'Psychological characteristics associated with COVID-19 vaccine hesitancy and resistance in Ireland and the United Kingdom'. *Nature communications*, 12(1), 1-15. <https://doi.org/10.1038/s41467-020-20226-9>
- World Bank Group. (2021). *Population, total*. Retrieved from <https://data.worldbank.org/indicator/SP.POP.TOTL>.
- World Health Organization. (2021). *COVID-19 vaccines*. Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>
- World Health Organization. (2021). *Weekly epidemiological update on COVID-19-16 March 2021*. Retrieved from <https://www.who.int/publications/m/item/weekly-epidemiological-update---16-march-2021>
- World Health Organization. (2020). *Coronavirus disease (COVID-19): vaccines*. Retrieved from [https://www.who.int/news-room/q-a-detail/coronavirus-disease-\(covid-19\)-vaccines?adgroupsurvey={adgroupsurvey}&gclid=CjwKCAjwOGCBhAlEiwA7FUXkugtjuY2FBIHXby_DO9t0RSrwTDZDc008BtToDzINnh0_4Umn-ytBoCkIOQAyD_BwE](https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines?adgroupsurvey={adgroupsurvey}&gclid=CjwKCAjwOGCBhAlEiwA7FUXkugtjuY2FBIHXby_DO9t0RSrwTDZDc008BtToDzINnh0_4Umn-ytBoCkIOQAyD_BwE)
- Zigron, A. et al. (2021). 'COVID-19 vaccine acceptance among dental professionals based on employment status during the pandemic'. *Frontiers in Medicine*, 8, 13. DOI: [10.3389/fmed.2021.618403](https://doi.org/10.3389/fmed.2021.618403).

How to cite this article: Supremo, A., Bacason, S., and Sañosa, A. A. (2022) 'Sociodemographic correlates of older adult acceptance of the covid-19 vaccine', *Jurnal Ners*, 17(1), pp. 2-7. doi: <http://dx.doi.org/10.20473/jn.v16i1.29655>