

ORIGINAL RESEARCH

Analysis of elderly anxiety levels in Baiturrahman area of Banda Aceh city during COVID-19 pandemic

Yuhardiati^{1*}, Fahmi Ichwansyah², Amin Haris¹, Asnawi Abdullah¹, Marthoenis³

ABSTRACT

Introduction: According to the Covid-19 distribution map, it is evident that in Indonesia, the proportion of individuals aged 60 and above who tested positive for Covid-19 was 11.7%. Among this group, 13.7% received treatment or were isolated, while 10.3% successfully recovered from the illness. Unfortunately, the mortality rate among the elderly population stood at a significant 46.5%. The objective of this study is to examine the extent of worry among the elderly population in the Baiturrahman district of Banda Aceh City in relation to the Covid-19 epidemic.

Methods & Materials: The research methodology employed in this study is analytical descriptive, utilizing a cross-sectional research design. The entire sample size consisted of 681 seniors, with a subset of 97 seniors selected using purposive selection technique. The application of logistic regression analysis for data analysis.

Results: The study's findings indicated a significant association between various factors and old age anxiety during the Covid-19 pandemic in the Baiturrahman district of Banda Aceh in 2021. These factors include old age (P-value = 0.005), gender (P-value = 0.001), work (P-value = 0.0001), comorbidities (P-value = 0.001), home residence (P-value = 0.001), exposure of Covid-19 (P-value = 0.002), and quality of life (P-value = 0.010).

Conclusion: The present study's findings indicate a significant association and potential danger between work-related factors, residential conditions, and anxiety levels among older individuals during the Covid-19 pandemic in the Baiturrahman area of Banda Aceh City in 2021. Bivariate analysis found that there is a relationship between elderly age, gender, work, comorbidities, living in the same house, Covid-19 history, and elderly quality of life to elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh city in 2021. While the data from this study obtained no relationship between elderly education and vaccination against elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District of Banda Aceh city in 2021.

Keywords: Elderly, Anxiety, Vaccination, Covid-19

1. Fakultas Kesehatan Masyarakat Universitas Muhammadiyah Aceh, Indonesia
2. Balai Penelitian dan Pengembangan Kesehatan Aceh, Indonesia
3. Fakultas Keperawatan Universitas Syiah Kuala

* Email: yuhardiati79@gmail.com

INTRODUCTION

On March 11, 2020, the World Health Organization (WHO) officially classified the outbreak of Coronavirus disease (Covid-19) as a pandemic. A significant number of individuals globally have been officially diagnosed with Covid-19, with a mortality rate exceeding one million. The first verified case in Indonesia was reported on March 2, 2020. As of present, a substantial number of individuals have tested positive for SARS-CoV-2, reaching the magnitude of hundreds of thousands, while the number of fatalities has exceeded ten thousand. The incidence of confirmed cases has exhibited an upward trajectory subsequent to the initial identification of patients in early March 2020. The Covid-19 pandemic has a significant impact on various dimensions of human existence. SARS-CoV-2 demonstrates the ability to infect individuals across many age groups; nevertheless, it is noteworthy that the elderly population exhibits a higher susceptibility to severe outcomes such as hospitalization and mortality (Komazawa *et al.*, 2021).

The global community is presently grappling with a public health emergency precipitated by the coronavirus. The viral transmission exhibits a high rate of propagation and poses challenges in terms of containment. This phenomenon gives rise to a state of emergency in numerous geographical regions. The senior population also experiences worry as a result of the ongoing pandemic. The aged population is considered to be among the most vulnerable categories in terms of susceptibility to Covid-19 exposure. The death rate seen among those aged 60 and above who contracted Covid-19 was found to be 15.93%. This phenomenon can be attributed to a decline in bodily resistance as individuals get older (Tobing & Wulandari, 2021).

The global dissemination of the coronavirus, which has resulted in the Covid-19 pandemic, has not seen a decline in the number of reported cases thus far. Indeed, it is noteworthy that in several nations, the transmission of Covid-19 cases attributed to the Delta variation has precipitated a significant upsurge in infection rates. According to the data provided by Worldometers, as of 7 p.m. on Wednesday, July 14, 2021, the global tally of Covid-19 instances stands at 188,563,150. Out of the whole population, a significant portion of 4,065,129 individuals succumbed to mortality, while a substantial number of 172,396,201 individuals were officially designated as having achieved a state of recovery (Muhamad, 2021).

Concurrently, there is a growing concern regarding the Covid-19 situation in Indonesia. This is supported by the ongoing increase in active cases and the rising number of fatalities. According to government data collected till Wednesday, July 14, 2021 at 12:00 am, there was an increase of 54,517 new instances of Covid-19 throughout the preceding 24-hour period. This figure represents the peak number of individuals diagnosed with Covid-19 within a single day over the duration of the pandemic. The rise in Covid-19 instances in Indonesia has led to a cumulative total of 2,670,046 individuals being recorded as of 12:00 PM on July 14, 2021. This tally includes all cases reported since President Jokowi's initial announcement of the first case on March 2, 2020. Since the onset of the pandemic, a total of 2,157,363 cases have been reported as recovered, while 69,210 individuals have succumbed to the disease (Muhamad, 2021).

The elderly are included in the high-risk group for coronavirus infection because their immune system weakens with age. This causes anxiety for the elderly who have a history of illness and old age factors. Psychological shock began to be reflected in the elderly, not a few elderly people who feel anxious, panic and even stress. Based on the Covid-19 distribution map shows that in Indonesia the number of positive Covid in the elderly over 60 years of age is 11.7%, treated/isolated 13.7%, patients recover 10.3%, and die by 46.5% (covid19.go.id, 2021).

Aceh province based on Covid-19 Info on August 26, 2021, it was found that suspected Covid-19 cases amounted to 9,894 cases, including 9,704 completed isolation, 166 isolation at home, and 24 isolation cases in hospitals. While the probable cases of Covid-19 amounted to 887 cases, including 785 cases completed isolation, 25 cases of isolation in hospitals, and 77 cases died. Banda Aceh City based on the results of cumulative data, it was found that confirmed cases of Covid-19 amounted to 10,249 cases, in the treatment of 2,109 cases, cured cases 7,920 cases, died 220 cases, suspended Covid 984 cases, and probable 48 cases (BPBA, 2021).

Based on the health profile of Aceh, the number of elderly (60 years+) in Aceh province is as many as 394,175 people including elderly men 184,655 people and women 209,520 people. While in the city of Banda Aceh, there are 13,988 elderly people including elderly men 6,957 people and women 7,031 people (Health Office, 2020).

Data at the Baiturrahman Health Center in Banda Aceh City based on information that researchers obtained from contact Tracer Covid-19 volunteers, in Baiturrahman District in May to August 2021 there were 46 cases of Covid-19 in the elderly, and increased every month, and every day in August there are always new confirmed cases in the elderly.

The number of elderly people aged 60+ years in Baiturrahman district increased in 2020 by 1,917 elderly people and increased in 2021 the number of elderly people was 2,917 people with elderly age resti (high risk) as many as 681 people including men 303 people and women 378 people. The remaining 2,236 were not at high risk.

METHODS & MATERIALS

The type of research used is descriptive analytical analysis using cross sectional research design. In this study, the population includes all seniors over 60 years old in Baiturrahman District in 2021. The number of elderly as many as 2,917 people with elderly age resti (high risk) as many as 681 people including men 303 people and women 378 people. While the remaining 2,236 elderly do not include resti. Sampling technique used in this study is nonprobability sampling by using purposive sampling. The number of samples in this study as many as 97 respondents. This research has been carried out from November 16 to December 14, 2021, 2021 in the Working Area of the Baiturrahman Health Center in Banda Aceh City. Data collection techniques by conducting interviews using questionnaires. Analysis test using ordinal logistic regression test.

RESULT

To perform multivariate analysis then all the variables that have been done bivariate analysis and have a p-value of 0.25 can be used as selected variables (Riyanto, 2012). The results of the analysis can be seen in Table 1:

Table 1. Multivariate analysis of ordered regression logistic model 1 ($p < 0.25$) for elderly anxiety levels during Covid-19 pandemic

No	Variables	OR	95% (CI)	P Value
1	Elderly age	2.172	0.752-6.273	0.152
2	Sex	1.524	0.412-5.636	0.527
3	Education levels	1.815	0.605-5.439	0.287
4	Employment status	2.406	0.577-10.021	0.228
5	Comorbid	4.232	1.175-15.237	0.027
6	Vaccination	0.438	0.128-1.493	0.187
7	Living partner	2.187	0.727-6.579	0.164
8	Exposure of Covid-19	2.528	0.829-7.707	0.103
9	Quality of life	1.629	0.808-3.284	0.172

Source : Primary Data (Processed in 2021)

Based on the results of the model 1 multivariate analysis, Table 16 shows that there are still variables with a p value of 0.25, such as gender and schooling, that are not included in the model 2 multivariate analysis. In model 2's multivariate analysis, variables like age, job, comorbidity, vaccination, home residence, covid-19 exposure, and quality of life are included if they have a p-value of less than 0.25.

Table 2. Multivariate analysis of ordered regression logistic model 2 ($p < 0.25$) for elderly anxiety levels during Covid-19 pandemic

No	Variables	OR	95% (CI)	P Value
1	Elderly age	2.385	0.852-6.670	0.098
2	Employment status	2.879	1.196-12.579	0.024
3	Comorbid	3.156	0.961-10.359	0.058
4	Vaccination	0.515	0.154-1.719	0.281
5	Living partner	2.601	0.899-7.527	0.078
6	Exposure of Covid-19	2.439	0.858-6.928	0.094
7	Quality of life	1.599	0.795-3.214	0.187

Source : Primary Data (Processed in 2021)

Based on the results of model 2 multivariate analysis, Table 1 shows that there are still factors with a p value of less than 0.25. These variables include vaccination and quality of life, so they are not included in model 3 multivariate analysis. In model 2 multivariate analysis, variables such as age, job, comorbid conditions, living partner, and Covid-19 exposure are used that have a p-value of less than 0.25.

Table 3. Multivariate analysis of ordered regression logistic model 3 ($p < 0.25$) for elderly anxiety levels during Covid-19 pandemic

No	Variables	OR	95% (CI)	P Value
1	Elderly age	2.321	0.833-6.461	0.107
2	Employment status	2.827	0.990-8.075	0.052
3	Comorbid	2.622	0.859-7.999	0.090
4	Living partner	2.769	0.972-7.887	0.056
5	Exposure of Covid-19	2.952	1.066-8.177	0.037

Source : Primary Data (Processed in 2021)

Based on the results of model 3 multivariate analysis, Table 2 shows that there is still an age variable with a p value of less than 0.25. This variable is not used in model 4 multivariate analysis. While factors with p-values of less than 0.05 are used in model 4 multivariate analysis. These variables include work variables, co-occurring conditions, home residence, and Covid-19 exposure.

Table 4. Multivariate analysis of ordered regression logistic model 4 ($p < 0.25$) for elderly anxiety levels during Covid-19 pandemic

No	Variables	OR	95% (CI)	P Value
1	Employment status	2.631	0.935-7.398	0.067
2	Comorbid	3.169	1.068-9.400	0.038
3	Living partner	3.096	1.111-8.625	0.031
4	Exposure of Covid-19	3.125	1.135-8.603	0.027

Source : Primary Data (Processed in 2021)

Based on the results of model 4 multivariate analysis, Table 3 shows that there are still factors with a p value of less than 0.05. Since this is a work variable, it is not included in model 5 multivariate analysis. While factors with p-values of less than 0.05 are included in model 5 multivariate analysis. These include comorbid variables, home residence, and Covid-19 exposure.

DISCUSSION

The relationship of elderly age to elderly anxiety during the Covid Pandemic

Based on the results of the above research, it can be concluded that there is a relationship between elderly age and elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh City in 2021. This is because elderly people over the age of 75 have many comorbid diseases such as diabetes mellitus and asthma so that the elderly feel anxious. What if they are exposed to the covid virus which causes the elderly to feel restless and not calm when they see or hear that someone is exposed to Covid-19 compared to elderly people aged < 75 years who some elderly people still work must vaccinate and consume vitamins so that the elderly are not too anxious and stressed if exposed to covid.

Elderly gender relationship with elderly anxiety during the COVID Pandemic

Based on the results of the above research, it can be concluded that there is a relationship between the elderly sex and elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh City in 2021. This is because elderly women feel more anxious about contracting covid because they always go out to work and go to the market so they feel afraid of being exposed to covid but men who also have some anxiety will transmit covid because they interact a lot with people outside the home such as offices or coffee shops so they are anxious and restless.

The relationship of elderly education with elderly anxiety in the Covid Pandemic

Based on the results of the research above, it can be concluded that there is no relationship between education and elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh City in 2021. This is because the elderly with higher or secondary education still feel anxious about contracting Covid-19 so that the elderly feel afraid that even though they have higher education they can be infected from other people so that the elderly sometimes have difficulty sleeping at night because they feel anxious.

Employment relationship with elderly anxiety during the Covid Pandemic

Based on the results of the above research, it can be concluded that there is a work relationship with elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh City in 2021. This is because the elderly do not work and more at home feel more anxious because their partners who work can transmit Covid-19 if they return home so that the elderly always feel anxious and frustrated every time they return to work.

The relationship of comorbid diseases with elderly anxiety during the Covid Pandemic

Based on the results of the above research, it can be concluded that there is a relationship of comorbid diseases to elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh city in 2021. This is because the elderly who have comorbid diseases such as diabetes mellitus, hypertension and asthma feel more anxious about contracting covid such as experiencing sleep disorders, anxiety and fear of strangers coming home. As for when the elderly recur, the elderly feel more anxious again because they feel they will experience Covid-19 symptoms. This causes the elderly to experience severe anxiety.

The relationship of vaccination with elderly emergencies during the Covid Pandemic

Based on the results of the above research, it can be concluded that there is a relationship between vaccination against elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh City in 2021. This is because the elderly who have been vaccinated still feel more anxious about issues outside who say there will be side effects of vaccination such as paralysis and death. This is what makes the elderly feel anxious whether they can contract covid or not experience these side effects so that the elderly have palpitations when thinking about the Covid-19 virus, feel sad because they feel they can be infected at any time and are always restless every night.

Stay-at-home relationship with elderly emergencies during the Covid Pandemic

Based on the results of the research above, it can be concluded that there is a relationship between staying at home and elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh city in 2021. This is because the elderly who live with children feel more anxious if infected with covid will transmit to children and grandchildren or infected from children who work outside the home so that the elderly always behave excessively in preventing contracting covid such as fear if they are crowded with other people and if there are strangers coming home causing difficulty concentrating if doing activities and difficult to sleep at night.

The relationship of Covid-19 history with elderly anxiety during the Covid Pandemic

Based on the results of the above research, it can be concluded that there is a relationship of Covid-19 history to elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh city in 2021. This is because the elderly who have been exposed feel anxious to be infected again because the elderly who have comorbidities such as DM are more afraid that contracting covid will cause complications in the DM disease suffered so that the elderly often have nightmares, wake up lethargic, restless and afraid, but the elderly who have never been exposed to covid also feel afraid they could also be exposed to Covid-19.

Relationship of quality of life with elderly anxiety during the Covid Pandemic

According to this study, it can be concluded that there is a relationship between elderly quality of life to elderly anxiety in the Covid-19 pandemic situation in Baiturrahman District, Banda Aceh City in 2021. This is because the elderly feel anxious about Covid-19 which causes the quality of life of the elderly to be bad like the elderly are desperate with their lives whether they will still be healthy, comorbid diseases that the elderly have limit me in doing activities and have a physically weak, and the elderly are afraid if they meet other people and friends, and I cannot do activities outside the home as usual because it is restricted.

CONCLUSION

According to bivariate analysis, there is a relationship between age, gender, work, comorbidity, domicile, Covid-19 exposure 19, and quality of life of the elderly against aging anxiety in the Baiturrahman area of Banda Aceh City in 2021. According to the findings of this study, there is no link between senior education and immunization against old age anxiety in the Baiturrahman area of Banda Aceh City in the event of a Covid-19 pandemic in 2021. According to the findings of the multivariate research, the variables with the highest odd ratio value are comorbid and the exposure of Covid-19 against old age anxiety on the status of Covid-19 pandemic in the Baiturrahman area of Banda Aceh City in 2021.

REFERENCES

- Abidin A.Z. & Julianto E.K., Hubungan Fungsi Pemeliharaan Kesehatan Keluarga Dengan Pencegahan Penularan Covid-19 Bagi Lansia Di Desa Kadungrejo Baureno Bojonegoro, Jurnal Ilmu Keperawatan Komunitas, 2020;3(2):1-9.
- Arikunto S.S., Prinsip Penelitian Suatu Pendekatan, Praktek Cetakan Kesembilan, Jakarta: PT. Rineka cipta; 2012. Aritonang J., Sirait A. & Lumbantoruan M., Tingkat Kecemasan Kelompok Lanjut Usia Di Situasi Pandemi Covid-19, JURNAL KESEHATAN DELIMA PELAMONIA, 2021;5(1):26-31.
- Bai Y., Yao L., Wei T., Tian F., Jin D.-Y., Chen L. & Wang M., Presumed Asymptomatic Carrier Transmission of Covid-19, Jama, 2020;323(14):1406-1407.
- Bowling A., Banister D., Stenner P., Titheridge H., Sproston K. & McFarquhar T., Quality of Life in Older Age: Psychometric Testing of the Multidimensional Older People's Quality of Life (Opqol) Questionnaire and the Causal Model under-Pinning It, 2009.
- Bowling A., Hankins M., Windle G., Bilotta C. & Grant R., A Short Measure of Quality of Life in Older Age: The Performance of the Brief Older People's Quality of Life Questionnaire (Opqol-Brief), Archives of gerontology and geriatrics, 2013;56(1):181-187.
- BPBA, Aceh Tanggap Covid-19, <https://covid19.acehprov.go.id/>, 2021;[26 Agustus 2021].
- covid19.go.id, Peta Sebaran Covid-19, <https://covid19.go.id/peta-sebaran-covid19>, 2021;[26 Agustus 2021].
- Dinkes A., Profil Kesehatan Aceh, Banda Aceh: Dinas Kesehatan Aceh; 2020.
- Faairin A.A. & Muhlisin A., Gambaran Tingkat Kecemasan Keluarga Lansia Pada Masa Pandemi Covid-19 Di Desa Gentan Kecamatan Baki Kabupaten Sukoharjo: Universitas Muhammadiyah Surakarta; 2021.
- Komazawa O., Suriastini N.W., Mulyanto E.D., Wijayanti I.Y., Maliki & Kharisma D.D., Lanjut Usia Dan Covid-19 Di Indonesia, Jakarta: Economic Research Institute for ASEAN and East Asia (ERIA) dan Kementerian Perencanaan Pembangunan Nasional/Bappenas; 2021.

- Muhamad S.V., Pandemi Covid-19 Sebagai Persoalan Serius Banyak Negara Di Dunia, *INFO Singkat (kajian Singkat Terhadap Isu Aktual dan Strategis) PPBK DPR RI*, 2021;XIII(13).
- Nazir A., Muhith A. & Ideputri M., Buku Ajar: Metodologi Penelitian Kesehatan, Yogyakarta: Nuha Medika; 2014. Nursalam. Metodologi Penelitian Ilmu Keperawatan, Jakarta: Salemba Medika 2017.
- PDPI. Pedoman Tatalaksana Covid-19 Edisi 3, Jakarta: Perhimpunan Dokter Paru Indonesia (PDPI); 2020.
- Puteri K.E., Wiranti K., Ziliwu Y.S., Elvita M., Frare D.Y., Purdani R.S. & Niman S., Kecemasan Masyarakat Akan Vaksinasi Covid-19, *Jurnal Keperawatan Jiwa (JKJ): Persatuan Perawat Nasional Indonesia*, 2021;9(3):539-548.
- Rahayu A., Noor M.S., Yulidasari F., Rahman F. & Putri A.O., Buku Ajar Kesehatan Reproduksi Remaja Dan Lansia, Surabaya: Airlangga University Press; 2017.
- Rahayu A., Noor M.S., Yulidasari F., Rahman F. & Putri A.O., Buku Ajar: Kesehatan Reproduksi Remaja Dan Lansia, Yogyakarta: CV. Mine; 2020.
- Redjeki G.S. & Tambunan H., Factors Pertaining to Elderly Anxiety at Puskesmas Johar Baru Ii Jakarta, *Jurnal Kesehatan Saemakers PERDANA (JKSP)*, 2019;2(1):83-90.
- Rothan H.A. & Byraredy S.N., The Epidemiology and Pathogenesis of Coronavirus Disease (Covid-19) Outbreak, *Journal of autoimmunity*, 2020;109:102433.
- Sari I., Analisis Dampak Pandemi Covid-19 Terhadap Kecemasan Masyarakat: Literature Review, *Bina Generasi: Jurnal Kesehatan*, 2020;12(1):69-76.
- Tobing C. & Wulandari I.S.M., Tingkat Kecemasan Bagi Lansia Yang Memiliki Penyakit Penyerta Ditengah Situasi Pandemi Covid-19 Di Kecamatan Parongpong, Bandung Barat, *Community of Publishing In Nursing (COPING)*, 2021;9(2):135-142.
- WHO, Coronavirus Disease (Covid-19) Advice for the Public, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>, 2019;[26 Agustus 2021].