BKM Public Health & Community Medicine
Berita Kedokteran Masyarakat

Volume 40 **Number** 9, 2024, **Pages** e10389
DOI: 10.22146/bkm.v40i09.10389

Navigating older adults care: insights from caregivers and community health workers in Ngestiharjo, Bantul, Yogyakarta

Firdaus Hafidz[1,2]*, Adelia Pramudita Monanda[2], Dewi Caesaria Fitriani[2], Tatik Hariyanti[1], Erni Jamiah[3]

Submitted:
November 1st, 2023
Accepted:
September 27th, 2024
Published:
September 30th, 2024

[1]Department of Health Policy and Management, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

[2]Sleman Health and Demographic Surveillance System, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia

[3]LKS Abiyasa Ngestiharjo, Yogyakarta, Indonesia

***Correspondence:**
hafidz.firdaus@ugm.ac.id

Abstract

Purpose: This study aimed to elucidate the knowledge, attitudes, and practices of older adult caregivers in Ngestiharjo, Bantul, Yogyakarta, Indonesia, towards older adult care and to discern the role of Community Health Workers (CHWs). **Methods:** A mixed-methods approach was employed between April and June 2023, encompassing quantitative data collection with a cross-sectional approach from 253 older adult caregivers via a pretested questionnaire and qualitative insights with a descriptive approach from focus group discussions with seven CHWs. The data were analyzed using descriptive analysis and thematic analysis. **Results:** The caregivers were predominantly female (67.2%) and over the age of 50 (46.6%), with the most common occupation being housekeeping (34.8%). Knowledge deficits were noted in several areas, with mean scores of 0.53 for depression signs, 0.56 for physical exercise, 0.73 for sleep quality, and 0.79 for fall risk. Caregivers' sleep quality and fall risk knowledge were better than depression and physical exercise. Attitude scores averaged 82.42 ± 20.42 (out of 125), showing moderate confidence in caregiving activities. Practices related to older adult care showed promising results, especially in maintaining a clean living environment (mean Score: 4.08 ± 0.86). The pivotal role of CHWs in bridging this knowledge gap and facilitating healthcare access was underscored. **Conclusion:** The study highlights the need for targeted educational programs to improve the knowledge and practices of caregivers, particularly in physical exercise and mental health areas. Strengthening the role of CHWs is essential to enhancing caregiving outcomes.

Keywords: attitude; community health workers; knowledge; older adult caregivers; practices

INTRODUCTION

The global surge in aging populations is pervasive across numerous countries, including Indonesia [1]. Being the world's fourth most populous nation, Indonesia is home to nearly 280 million individuals, with the percentage of the older adult population in 2020 surpassing 10.70 percent (28 million people) [1]. Notably, the Special Region of Yogyakarta, Indonesia, bears the highest proportion of the older adult population countrywide, comprising nearly 16% of the national older adult demographic [1]. The foreseeable future posits this vulnerable demographic as one of the triple burdens in Indonesia, attributed to diminished economic productivity, escalating health ailments, and the indispensable need for caregivers [2,3].

Older adult caregivers, such as family members, friends, or volunteers, provide care and support for the older adult. They play an essential role in maintaining the health and well-being of older adults, especially in low-resource settings where formal health services are limited or inaccessible [3]. However, older adult caregivers may face various challenges and difficulties in caring for the older adult. A study found that older adult caregivers often have low knowledge and positive attitudes toward these issues and that their knowledge and attitudes affect their health-seeking practices and decision-making for the older adult [4]. Therefore, it is essential to understand the knowledge, attitudes, and practices of older adult caregivers on the health status of the older adult and how they influence the quality of care and outcomes for the older adult [5,6].

Several studies have explored the knowledge, attitudes, and practices of older adult caregivers regarding mental illness [4], aging [7], and advance care planning [8]. However, limited attention has been given to the role of Community Health Workers (CHWs) and community-based programs in supporting caregivers in rural or resource-constrained settings like Indonesia [9,10]. Community-based long-term care (LTC) faces challenges due to a shortage of volunteers and insufficient government support for programs such as Posyandu Lansia [10]. Additionally, He & Tang emphasize the issue of systemic fragmentation in Indonesia's health system [9]. This indicates that CHW engagement can be better structured to improve sustainability and address the critical gap in the integration of health services at the community level in bridging these care silos.

CHWs play a crucial role in assessing and caring for the older adults in this region. Their engagement is indispensable for delivering essential health services and education to caregivers and older adults [11]. CHWs serve as a liaison between healthcare providers and consumers in rural and urban communities, facilitating culturally appropriate health and prevention education, referrals for a broad spectrum of health and social services, and aid in navigating the health services system and coordinating care. The impact of CHW interventions has demonstrated potential in reducing health inequities for underserved populations, especially in rural areas where access to care remains problematic [12]. The pivotal role of CHWs underscores the imperative for policy interventions and program strengthening to enhance older adult care.

Despite the extensive research on the knowledge, attitudes, and practices of older adult caregivers, there remains a significant gap in understanding how these factors influence the quality of care and health outcomes for older adults in low-resource settings like Ngestiharjo, Bantul, and Yogyakarta. Following discussions with the local CHWs, several critical points emerged regarding the health status of older adults to support physical health, independence, mental well-being, and proper nutrition.

Our study seeks to fill the gap by investigating caregivers' knowledge, attitudes, and practices in Ngestiharjo, Bantul, and Yogyakarta. Additionally, we aim to elucidate the role of CHWs in this setting, providing critical insights for policy decisions and enhancing programs targeting older adult care. By unveiling these nuanced perspectives, our research aspires to significantly improve health education programs for caregivers and CHWs and ameliorate the quality of life and health outcomes for older adults in Ngestiharjo, potentially providing a model for similar rural settings across Indonesia. This will also prioritize developing the roles of caregivers and CHWs, addressing gaps in awareness of health-related schemes and chronic disease management among older adults living in remote areas.

METHODS

A mixed-method study was conducted from April to June 2023. The quantitative method employed a cross-sectional approach, while the qualitative one used a descriptive approach. Quantitative data collected from 253 older adult caregivers using a pretested questionnaire were analyzed by descriptive analysis. The inclusion criteria for this study were caregivers of the elderly who lived at home with the elderly, lived in Ngestiharjo and were over 18 years old. The exclusion criteria for this study were elderly caregivers who were sick. This target sample size was determined based on the sample size calculation [13], which suggests a sample of 354 for a population of 4000. The method of sampling employed for respondent selection was systematic random sampling. The selected respondents are distributed across 12 hamlets in the Ngestiharjo urban village. The number of samples from each hamlet was adjusted according to the population proportion, using a proportional allocation strategy to ensure that the selected sample was representative.

A questionnaire was developed to understand older adult caregivers' knowledge, attitudes, and practices toward older adult care and to discern the role of Community Health Workers (CHWs). The questionnaire involved three sections. The first section covered sociodemographic information containing age, gender, marital status, education, and primary occupation collected through interviews with the older adult or their caregivers. The second section examined participants' knowledge of older adult care. It comprised nine domains and twenty-five items. The nine domains evaluated knowledge about older adults' physical exercise, sleep quality, risk of falling, hygiene, circulation, smoking, consumption, social, and depression. Participants were asked to answer questions and judge whether statements were true or false.

Each correct response scored 1 point, and an incorrect response or "don't know" scored 0 points. Interpretation of knowledge from the results of a mean score close to 1 means knowledge is getting better; conversely, if the mean score is close to 0, knowledge worsens. The third section examined participants' attitudes towards older adult care. The attitude towards older people is measured by Kogan's Older People Scale [13,14]. Participants were asked to rate every question on a 5-point Likert scale of 1 (strongly disagree) to 5 (strongly agree)—the higher point represented by the more positive attitude. The fourth section examined participants' older adult care practices. The practice section involved seven questions to evaluate whether the participants have completed these seven physical and mental nursing practices, such as making the proper diet for the nutritional needs of the older adult, often cleaning the environment where the older adult lives, worrying about the risk of diseases that will attack the older adult, often paying attention to the activities and behavior of the older adult at home, supervising the older adult to take medicine on time, paying attention to changes in the emotions of the older adult, and often communicating with the older adult and providing psychological assistance. Each question in this section had two answers—whether they did it or not. The participants could get one score for every practice they completed. The total score ranged from 0 to a maximum of 7. Before data collection, we trained CHWs to collect the data and piloted the questionnaire with 20 respondents (Figure 1a). This pilot aimed to gather feedback on the questions and language used and to make necessary improvements. CHWs assisted data collection in this study in Ngestiharjo, Bantul, Yogyakarta. This is because the CHWs understand the needs and problems the older adults of Ngestiharjo, Bantul, and Yogyakarta face, making it easier for older adult families to ask questions.

In addition to the quantitative data collected from caregivers, we conducted a qualitative study through focus group discussions (FGD). The qualitative approach was used to complement the quantitative results by exploring the perspectives of CHWs on caregiving practices and healthcare access in the community. The focus group discussions provided rich, contextual data, which were thematically analyzed to triangulate with the quantitative findings from caregivers. This thematic analysis followed a deductive approach, where the transcripts were analyzed verbatim, and critical themes about the research objectives were identified. The involvement of CHWs provided valuable insights that enhanced the interpretation of

the quantitative data and highlighted the broader role of community health workers in supporting caregiving efforts in rural settings. The data collection process commenced on June 4th, 2023, after receiving ethical clearance from the Ethics Commission of the Faculty of Medicine, Public Health and Nursing, Gadjah Mada University (Ref No. : KE/FK/0582/EC/2021).

Figure 1. Data collection preparation in Ngestiharjo Urban Village. (a) Briefing for CHWs regarding the questionnaire before fieldwork. (b) CHWs conducted interviews with respondents.

RESULTS

Caregivers sociodemographic

The results of the mixed-methods data collection with the quantitative study were collected from 253 older adult caregivers using pretested questionnaires. FGDs involved seven CHWs, with representatives from each of the twelve hamlets from rural and urban locations. Findings were grouped into three main topics: Sociodemographics of cadres, Health status of older adult, and user access to health services.

Table 1 displays the sociodemographic profile of the respondents. Most caregivers in the study were over 50 years old (46.6%). Regarding gender distribution, females represented a larger fraction at 67.2%, and most were married (75.5%). The most common occupation was housekeeping, accounting for 34.8% of the respondents.

Table 1. Sociodemographic of respondents

Characteristic	n	%
Age		
<30 years old	24	9,5
31-50 years old	111	43,9
>50 years old	118	46,6
Gender		
Male	83	32,8
Female	170	67,2
Marital status		
Married	191	75,5
Single	37	14,6
Widow	24	9,5
Widower	1	0,4
Main occupation		
Housekeeping	88	34,8
Unemployed	25	9,9
Private sector employee	26	10,3
Entrepreneur	35	13,8
Civil servant	7	2,8
Military/Police	2	0,8
Laborer	40	15,8
Retiree	20	7,9
Daily worker	4	1,6
Other	6	2,4

Health status of the older adult

Based on the results of research in Table 2 conducted on 253 respondents using nine domains and 25 items, it was found that the majority of respondents had knowledge that still needs attention related to signs of depression, with a mean knowledge score was 0.53, physical exercise with a -

mean knowledge score was 0.56, sleep quality with a mean knowledge score was 0.73 and risk of falling with a mean knowledge score was 0.79. Respondents' knowledge regarding sleep quality (0.73) and risk of falling (0.79) is better than their knowledge regarding physical exercise (0.56) and signs of depression (0.53). This aligns with the CHWs' statements, which noted that caregivers already understand that older adults with illnesses are highly vulnerable to the risk of falls and sleep disorders.

"Yes, the caregivers often feel confused because the older adult they are caring for is very passive. Even though they understand that this can be dangerous—such as the risk of falling out of bed or experiencing frequent sleep issues—their passivity still makes caregiving challenging. For instance, the older adult often has trouble sleeping at night, which leaves them feeling drowsy during lunchtime." (CHW D, Women).

Table 2. Older adult health practice knowledge

Characteristic	Mean score*
Physical exercise	0.56
Sleep quality	0.73
Risk of falling	0.79
Hygiene	0.96
Circulation	0.96
Smoking	0.96
Consumption	0.92
Social	0.94
Depression	0.53

**The mean Score ranges from 0 to 1, with 1 indicating perfect knowledge.*

The total mean attitude score of the respondents was 82.53 (SD 6.78) out of 125. Among all the respondents, the highest score was 103, and the lowest was 54. Table 3 summarizes the results for each question in the attitude section. Regarding attitude towards disease care, the respondents showed moderate confidence in various care activities. This aligns with the community health worker's statement when interviewing older adult caregivers.

"For those with severe dependence, she can't do anything,she already wears pampers so everything depends on her child, even for bathing she has to be carried by her partner. For those with dementia, he has forgotten who bathed him, with family members not realising that the one taking care of him is his son.." (CHW E, Women)

"If it's my own experience, it's because I take care of two elderly people at my mother and father's house. At the time of corona, my mother and father had to go to the geriatric routine every month because of the corona, so it was only my husband and I who consulted, for example, if my father had any complaints, I suggested it to the doctor and just took the medicine." (CHW D, Women)

Table 3. Attitude to older adult health

Characteristic	Mean (SD)*
The older adults should live in exceptional residences	2.58 (0.92)
The older adult should live integrated with the young	3.71 (0.78)
The older adults are different	3.32 (0.81)
The older adults are no different from anyone else	3.20 (0.85)
Older adults are unable to change	3.30 (0.89)
Older adults are capable of new adjustment	3.29 (0.85)
Older adults grow wiser with advancing age	3.17 (0.90)
Wisdom does not come with advancing age	3.00 (0.96)
The older adult bore others with their stories	2.87 (0.90)
It is nice when older adult speak about their past	3.47 (0.82)
The older adults are happy to be cared for	3.84 (0.76)
Are you willing to care for the older adult	3.85 (0.59)
Getting older, have a good relationship with older people	3.44 (0.83)
Neighborhoods are nice when integrated with the older adult	3.05 (0.91)
The older adults are irritable, grouchy, and unpleasant	3.26 (0.92)
The older adults are cheerful, agreeable, and good-humored	3.41 (0.68)
Older adults are always prying into the affairs of others	3.22 (0.97)
Older adults should have more power in society	3.22 (0.78)
Older adults should be more pay attention to personal appearance	2.83 (0.92)
The older adults are clean and neat	3.84 (0.63)
The older adult makes others feel ill at ease	3.49 (0.83)
The older adult are relaxing to be with	3.35 (0.76)
The older adult needs a check-up routine for health	2.46 (0.80)

*The attitude score ranges from 1 to 5.

The total mean practice score of the respondents is 25.63 (SD 4.14) out of 35. Among all the respondents, the highest score is 35, and the lowest is seven. Table 4 summarizes the results for each question in the practice section. Most respondents have good practices regarding older adult care, especially room cleaning. This aligns with the community health worker's statement when conducting interviews with older adult caregivers regarding proper diet or nutrition for the older adult at home.

"The economic situation is also right, so what is eaten in the family is for the older adult too, sometimes the needs of the older adult are not the same as our needs, for example cooking Santen, while the older adult does not eat Santen so that is the economic obstacle in the family to set aside finances for the older adult themselves That means there must be separate funds for the older adult." (CHW E, Women)

Table 4. Practices of older adult care

Characteristic	Mean (SD)
Proper diets	2.37 (1.16)
Clean the living environment	4.08 (0.86)
Concerned about the disease situation	3.89 (1.00)
Pay attention to the behavior and activity	4.15 (0.81)
To take medicine on time	3.99 (1.06)
The emotional changes	3.48 (1.02)
Provide psychological help	3.66 (1.06)

Access to health service users

Respondents received the most health-related information from health workers (49%), print media (newspaper or magazine) (20%), and CHWs (18%). Caregivers described the primary source of health information. As one community health worker said:

“The CHWs are like friends to the older adult and provide a lot of health information to the older adult. So many older adult people are closer to CHWs than to older adult caregivers.” (CHW E, Women)

Children have a large role (42%) in health service decision-making. Based on the caregiver's statements when interviewed by the community health worker, older adults are very dependent on their family or children, especially in accessing health facilities. As one community health worker said:

“The older adults are dependent on their caregivers/children and cannot drive so they cannot come to the Posyandu if there is no one to accompany them”. (CHW E, Women)

"There is only one Posyandu in each hamlet and it is far from the older adult's house." (CHW W, Women)

When asked about the type of health insurance used, the caregivers explained that they used health insurance from the Government, namely recipients of contribution assistance (*Penerima Bantuan Iuran*/PBI). As one CHW said:

"Most of the health insurance they have, for example, JKN PBI from the government, is free." (CHW E, Women)

"If there are older adult people/older adult families who don't have insurance, the CHWs usually help convey it to the hamlet to find JKN PBI guarantees for treatment." (CHW D, Women)

DISCUSSION

This inquiry into older adult caregivers' knowledge, attitudes, and practices in Ngestiharjo, Bantul, and Yogyakarta offers nuanced insights with tangible implications for public health programs to bolster older adult care. A key finding is the evident knowledge gap among caregivers, particularly in recognizing signs of depression, understanding the importance of physical exercise, and managing sleep quality and fall risks for older adults. This knowledge deficit potentially impedes providing holistic care to older adults, underscoring the urgency for tailored educational interventions. These could include localized training programs for caregivers, spearheaded by CHWs, who are identified as crucial conduits of health information in this study. Such educational initiatives can be modeled after successful interventions from other regions and tailored to address the unique

socio-cultural dynamics of Ngestiharjo, Bantul, and Yogyakarta.

Sociodemographic characteristics of older adult caregivers

The sociodemographic characteristics of older adult caregivers play an important role in understanding the context of older adult care in Ngestiharjo. Research findings reveal that older adult caregivers come from diverse educational backgrounds, with some having low levels of education or even being illiterate [15]. This variability can create challenges in communicating effectively and providing care for older adults, as demonstrated by the longer time required for interviews and the need for clarification [16].

In addition, older adult caregivers' occupations are diverse, with housework and unemployment being common. Their employment may affect their availability and ability to care for older adults. In some cases, the caregivers may be the sole caregivers or rely on help from other family members, so it is essential to consider the caregiver's availability and capacity in the care process [17].

Living together is also an important aspect to consider. The research highlights cases of older adult individuals living with dementia and the challenges faced in providing care to them. The role of caregivers, often family members, is very important in maintaining the well-being of these older adult individuals [18]. Based on the sociodemographic results of older adult caregivers regarding age, education, and occupation, it is necessary to propose to the government policy guidelines or pocketbooks in caring for older adults, the output of which is that these caregivers can independently care for their older adult families. This is because the Government has limited resources, both human resources and budget; it also requires socialization from health workers to caregivers to handle older adult people well and care for them (current guidelines from the Ministry of Health are for older adult individuals).

Older adult health status

The priority diseases identified in this study, such as hypertension, joint pain, and depression, are common health problems among older adults in Ngestiharjo. This aligns with the general health profile of older adult people worldwide. The high prevalence of these conditions emphasizes the need for comprehensive and targeted education and health care for older adults in this region [19]. Older adult caregivers' knowledge of older adult care is essential in addressing the health needs of the older adult population [20]. Findings suggest that, while caregivers of older adults may be knowledgeable in some domains, there are areas where knowledge is lacking. For example, signs of depression, physical exercise, sleep quality, and fall risk are areas where knowledge still needs to be improved. This knowledge gap can hinder the ability of caregivers to provide adequate care and support for older individuals. Addressing these gaps through policy changes is crucial to reducing the socioeconomic vulnerability of households caring for older adults with chronic conditions [21].

Attitudes of older adult caregivers

This research measures the attitudes of older adult caregivers using the Kogan Older People Scale. Results show that, on average, respondents have moderately positive attitudes towards older adult care. However, variations in attitudes exist among caregivers. These attitudes are essential because they can influence the quality and effectiveness of the care provided. Understanding and addressing variations in attitudes can be key to improving care practices [22-24], highlighting that negative caregiver attitudes can significantly affect older adults' well-being, particularly when strained family dynamics. This study adds to the literature by showing that tailored interventions focusing on caregiver education and emotional support are needed to foster positive caregiving attitudes.

Practices of older adult caregivers

Another critical aspect is the practices of older adult caregivers in providing care for the older adult. The results showed that most caregivers demonstrated good practices regarding older adult care, emphasizing cleaning the room. This shows a positive trend in providing physical care to older adults. However, economic aspects also influenced caregiving practices, as some caregivers mentioned challenges related to meeting the special dietary needs of older adults due to economic constraints [25].

Access to health services

Access to health information and services is fundamental to quality care for older adults [26]. This research highlights the role of health workers, print media, and village heads in disseminating health information. Additionally, the involvement of children in health care decision-making emphasizes the importance of family dynamics in older adult care [27]. Geographic and financial factors related to healthcare visits pose challenges for older adults, especially in rural areas. Reliance on caregivers for transportation to health facilities further emphasizes the crucial role of caregivers in ensuring access to health services for older adults [28].

Study strengths and limitations

This study provides valuable insight into the knowledge, attitudes, and practices of older adult caregivers in Ngestiharjo, revealing the complexities and challenges they face in providing care for the elderly. A mixed-methods approach allows for a thorough understanding of the context of care. However, there are limitations to consider. The study focused on a specific region, and findings may not be generalizable to other regions. Additionally, this study relies more on self-report data, which can be susceptible to bias.

Implications and future research

The findings of this study have several implications. First, this study highlights the need for targeted health education programs for caregivers of older adults, focusing on areas where knowledge is lacking, such as knowledge on physical exercise and depression. Improving the knowledge and attitudes of caregivers can improve the quality of care provided to older adults. Second, a deeper understanding of caregiver attitudes and their influencing factors can help design more effective interventions. This could include training to promote positive attitudes towards aged care. Regarding attitudes towards disease care, respondents showed moderate confidence in various care activities, such as the need for regular health checks, older adult associations, and older adult health education sessions to improve attitudes towards their disease care. Third, given the economic challenges some caregivers face in older adult care, there is a need to consider efforts that can assist in meeting the basic needs of older adult people, such as an appropriate diet.

Additionally, the social impact of the study's findings emphasizes the broader role of caregiving in society. As this study has shown, caregivers in rural and socio-economically disadvantaged areas often bear the dual burden of providing care and managing financial strains. This resonates with findings from [21], highlighting that informal caregiving systems, particularly in low- and middle-income countries, are often stretched to their limits. Governments and policymakers need to provide more structured support systems, such as community-based care services and disability benefits, to alleviate the burden on caregivers. The lack of formal support leaves families vulnerable, especially in cases where caregivers also manage their health issues or have other family responsibilities. Strengthening the role of CHWs in this capacity can bridge these gaps by providing caregivers with the necessary resources and education.

Furthermore, this study contributes new insights by identifying the social dynamics in caregiving for older adults, particularly in rural Indonesia. Family members, often women, are central to caregiving but face significant challenges balancing care with their needs [24]. This highlights the need for more family-centered policies that consider the emotional and psychological burden of caregiving. Supporting caregivers improves the quality of care for older adults and enhances the overall well-being of families and communities. Programs that provide financial and educational support to caregivers could help mitigate the negative impacts on caregivers' health and livelihoods.

However, while offering in-depth insights, the study focused on a specific geographic locale, limiting the generalizability of the findings to other regions with differing socioeconomic and cultural contexts. The reliance on self-reported data may also introduce a degree of response bias, potentially skewing the understanding of the actual attitudes and practices among caregivers. Future research could mitigate these limitations by adopting a multi-site approach to capture a broader spectrum of caregiver experiences across different regions in Indonesia and employing mixed methods to triangulate self-reported data with objective

measures. Moreover, exploring the long-term impact of health education programs on caregiver knowledge and practices could provide valuable insights into the effectiveness of such interventions, thereby informing more nuanced and impactful public health strategies for enhancing older adult care.

CONCLUSION

This investigation illuminates pivotal insights into older adult caregivers' knowledge, attitudes, and practices in Ngestiharjo, Bantul, and Yogyakarta, unearthing a notable knowledge deficit in crucial domains of older adult care. The findings accentuate the indispensable role of CHWs in bridging this knowledge gap, thus underscoring the necessity for tailored educational interventions. Moreover, the sociodemographic diversity among caregivers and the economic hurdles they encounter elucidate the need for a comprehensive policy framework encompassing accessible informational resources, financial aid schemes, and community-based support networks. The highlighted significance of family dynamics in healthcare decision-making for the older adult underscores the imperative for family-centric health education programs. These programs could foster collaborative care decisions and practices, potentially enhancing the quality of older adult care in this region.

REFERENCES

1. Badan Pusat Statistik. Statistik Penduduk Lanjut Usia 2022. 2022. BPS. Available from: [Website].
2. Bloom ED, Jimenez E, Rosenberg L. Social Protection of Older People. PGDA Working Paper 83. 2011.
3. TNP2K. Situasi Lansia di Indonesia dan Akses terhadap Program Perlindungan Sosial: Analisis Data Sekunder. 2020. Available from: [Website].
4. Gabra RH, Ebrahim OS, Osman DMM, Al-Attar GST. Knowledge, attitude and health-seeking behavior among family caregivers of mentally ill patients at Assiut University Hospitals: a cross-sectional study. Middle East Current Psychiatry. 2020;27(1):10.
5. Riffin C, Wolff JL, Butterworth J, Adelman RD, Pillemer KA. Challenges and approaches to involving family caregivers in primary care. Patient Education and Counseling. 2021;104 (7),1644-1651.
6. SCNOVA. Major Challenges To Expect When Caring For The Elderly. 2023. Available from: [Website].
7. Cadmus EO, Adebusoye LA, Owoaje ET. Attitude towards ageing and perceived health status of community-dwelling older persons in a low resource setting: a rural-urban comparison. BMC Geriatrics, 2021;21(1):454.
8. Park EJ, Jo M, Park M, Kang, SJ. Advance care planning for older adults in community-based settings: An umbrella review. International Journal of Older People Nursing. 2021;16(5):e12397.
9. He AJ, & Tang VFY. Integration of health services for the elderly in Asia: A scoping review of Hong Kong, Singapore, Malaysia, Indonesia. Health Policy. 2021;125(3):351–362.
10. Pratono AH & Maharani A. Long-Term Care in Indonesia: The Role of Integrated Service Post for Elderly. Journal of Aging and Health. 2018;30(10):1556–1573.
11. Jiang W & Yang H. Health spillover studies of long-term care insurance in China: evidence from spousal caregivers from disabled families. International Journal for Equity in Health. 2023;22(1):191.
12. Berini CR, Bonilha HS, Simpson AN. Impact of Community Health Workers on Access to Care for Rural Populations in the United States: A Systematic Review. Journal of Community Health. 2022;47:539–553.
13. Flores R. Critical Synthesis Package: Kogan's Attitudes Toward Old People Scale (Kogan OP Scale). MedEdPORTAL. 2016;12:10325.
14. Runkawatt V, Kerdchuen K, Tipkanjanaraykha K, Ubolwan K, Tawetanawanich Y, Nasirin C, Win ML. Kogan's Attitude Toward Old People: Evaluation of validity and reliability assessment among nursing students in Thailand, Myanmar, and Indonesia. Asian Journal for Public Opinion Research, 2016;3(3):145–155.
15. Wajnberg A, Soones TN, Smith KL, Russell D, Ross JS, Federman A. Identifying Sociodemographic Characteristics Associated With Burden Among Caregivers of the Urban Homebound: The Importance of Racial and Relationship Differences. Gerontology and

Geriatric Medicine. 2016;2.

16. Putri YSE, Putra I, Falahaini A, Wardani IY. Factors Associated with Caregiver Burden in Caregivers of Older Patients with Dementia in Indonesia. International Journal of Environment, Research and Public Health. 2022;19(19).
17. Naing MZ, May SY, Aung MH. Caregiver burden from caring for dependent elderly in Yangon, The Republic of the Union of Myanmar. Makara Journal of Health Research. 2020;24(3).
18. Monin JK, Levy B, Doyle M, Schulz R, Kershaw T. The impact of both spousal caregivers' and care recipients' health on relationship satisfaction in the Caregiver Health Effects Study. Journal of Health Psychology. 2019;24(12):1744-1755.
19. World Health Organization. Ageing and health. 2023. Available from: [Website].
20. Maitimoe MDR, Halim MS. Family Caregiver's Quality of Life of Elderly Parent with Alzheimer's Disease. ANIMA Indonesian Psychological Journal. 2019;34(2).
21. Mayston R, Lloyd-Sherlock P, Gallardo S, Wang H, Huang Y, et al. A journey without maps—Understanding the costs of caring for dependent older people in Nigeria, China, Mexico and Peru. PLOS ONE. 2017;12(8):e0182360.
22. Kim E, Bolkan C. Attitudes toward aging as a psychological resource among caregivers of persons living with dementia. Geriatric Nursing. 2022;44:60-68.
23. Luchesi BM, Alexandre TD, de Oliveira NA, Brigola AG, Kusumota L, Pavarini SC, Marques S. Factors associated with attitudes toward the elderly in a sample of elderly caregivers. International Psychogeriatrics. 2016;28(12): 2079-2089.
24. Almira L, Hanum L, Menaldi A. Relationship with children and the psychological well-being of the elderly in Indonesia. SAGE Open Medicine.2019;7:2050312119836026.
25. Kuramoto Y, Nabeshima H, Khan MSR, Kadoya Y. The Association of Caregivers; Socio-Economic Conditions with Family Caregiving Norms: Evidence from China. Behavioral Sciences. 2023;13(5):362.
26. Bastani P, Mohammadpour M, Samadbeik M, Bastani M, Rossi-Fedele G, Balasubramanian M. Factors influencing access and utilization of health services among older people during the COVID−19 pandemic: a scoping review. Archives of Public Health. 2021;79(1):190.
27. Knipping D, Garnett A, Jiang B. Access and use of services by caregivers of older adults: a scoping review of cultural and linguistic diversity. Journal of Applied Gerontology. 2023;42(7):1672-1686.
28. Yan E, Lai DWL, Sun R, Cheng ST, Ng HKL, Lou VWQ, Fong D, Kwok T. Typology of family caregivers of older persons: a latent profile analysis using elder mistreatment risk and protective factors. Journal of Elder Abuse & Neglect.2023;35(1):34-64.