

Social Determinants of Dementia Among Older Adults in Samarinda's Urban Area

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ARTICLE INFO	ABSTRACT
<p>ORCID ID Author 1: https://orcid.org/0000-0002-1465-1221 Author 2: https://orcid.org/0000-0001-7077-4579 Author 3: https://orcid.org/0000-0003-2368-9616 Author 4: https://orcid.org/0000-0002-6628-315X</p>	<p>Improving the quality of health and welfare of the population has an impact on increasing the number of lives in Indonesia. As a result, the number of elderly people and their proportions is increasing. Dementia is a condition where cognitive decline is so severe that it affects daily activities and social interactions. This condition of cognitive decline usually begins with a decrease in memory or memory abilities. Dementia that occurs among the elderly is caused by several factors, namely lifestyle, cognitive activities, family support, Activity Daily Living (ADL), self-esteem, quality of life, smoking behavior, knowledge, physical activity and sleep quality. Several previous studies have shown results relating to living in rural areas and dementia. This study aims to assess the correlation social determinant of Dementia Among Older Adults living in rural areas in Samarinda. This research uses a Cross Sectional research design, and Purposive Sampling is used as a sampling technique, with sample calculation using the Lameshow Formula and a sample size of 106 people is obtained which will be carried out in April until June 2024, apart from that it also uses the Spearman Rank Test for variables that use ordinal scale. The result shown that all of social determinants had strong correlation to dementia among older adults in Samarinda's Urban Area. Lifestyle and cognitive activities have a very strong correlation with dementia among older adults. Providing motivation to increase self-esteem and adequate family support is a good prevention for the elderly in the urban area of Samarinda.</p>
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1. Introduction

By 2030, it is predicted that at least 1 in 6 people worldwide will be elderly (WHO, 2022). Indonesia has entered the phase of an aging population structure. In 2050, it is predicted that the 1.4 billion people in the world aged over 60 years will become 2.1 billion people. Since 2021, around 1 in 10 residents are elderly. Approximately 51.81% of the elderly population consists of women, which shows a superior contribution to the number of elderly people, while the number of elderly men is 48.19% (Badan Pusat Statistik, 2022). In an era of ongoing global development, dementia has become an urgent health problem and has a broad impact on communities throughout the world. Every year, the number of people affected by dementia continues to increase (Saras, 2023). One of the non-communicable disease conditions that is commonly found in old age is dementia. This dementia is a condition where cognitive decline is so severe that it affects daily activities and social interactions. This condition of cognitive

decline usually begins with a decrease in memory or memory abilities (Suryatika & Pramono, 2019).

According to the World Health Organization, dementia is currently ranked 7th as a cause of death and is a major factor in dependency in the elderly globally. Currently, dementia affects approximately 55 million people worldwide, with more than 60% of those affected living in low- and middle-income countries. The aging population is expected to increase the number of people suffering from dementia to 78 million by 2030 and 139 million by 2050. Every year, nearly 10 million new cases of dementia occur (WHO, 2022). In 2019, the number of Indonesians experiencing dementia reached 1.2 million. Projections show this number will increase to 2 million in 2030 and 4 million in 2050 (Alzheimer, 2019). There are several risk factors that often occur in elderly people suffering from dementia, such as lifestyle, cognitive activities, family support, daily living activities (ADL), level of depression, self-esteem, smoking behavior, quality of life, knowledge, physical activity and sleep quality in elderly people (Kemenkes RI, 2023). Dementia that occurs among the elderly is caused by several factors, one of which is lifestyle. A person's lifestyle is their daily routine or activities. With a good diet, rest and physical activity such as exercise (Agustia et al., 2014). This is in line with a study carried out by (Sabia & Manoux, 2023) who in their research examining healthy living behavior and memory loss found that individuals with healthy living behavior could slow down memory decline 10 years longer than individuals who had an unhealthy lifestyle. Avoiding alcohol and cigarette consumption supported by consuming healthy food and maintaining social relationships can help a person prevent dementia (Orgeta et al., 2019).

Another factor in the emergence of dementia in the elderly is cognitive decline during the aging process. cognitive is more difficult to recall, less able to make decisions and acts too slowly. This decline occurs due to factors including lack of physical exercise, pollutants, brain damage, level of education and the presence of chronic diseases such as diabetes, heart disease, stroke and Parkinson's (Sauliyusta & Rekawati, 2016). Indicators of successful aging are defined as the absence of chronic diseases, no physical functioning difficulties, no depressive symptoms, intact cognitive function, social support, and social participation (Oktaviani et al., 2022). The family can be a good listener for them to tell stories and fulfill their needs. The family is the main source of social support, consisting of parents, spouse and siblings (Marlinda et al., 2020). The people closest to people suffering from dementia are their families. However, families often face a variety of problems when providing care for a person with dementia, including problems related to the person's physical, mental, and social needs, as well as their dietary needs (Suryani et al., 2022). These changes in physical function can basically disrupt the Activities of Daily Living (ADL) of the elderly (Nurlan & Eny, 2021). Lack of Daily Living Activities (ADL) is a risk factor for chronic disease or what is called dementia (Sari et al., 2022). 10% to 15% of elderly people aged 65 years and over who live with their families suffer from depression, a common mental problem and is a psychiatric disorder that is felt in the elderly, namely depression (Hartutik & Nurrohmah, 2021). Depression is a change that occurs in a person's emotional functioning system which is characterized by feelings of sadness, decreased appetite, feelings of hopelessness, poor sleep patterns, and changes in behavior (Rosmaharani et al., 2021).

The detrimental effects of smoking are not only limited to brain damage, but can also affect overall health, especially in the elderly who are already vulnerable to various diseases (Putri Dafriani, 2019). Elderly smokers are more susceptible to various health problems such

as heart disease, stroke and chronic obstructive pulmonary disease (COPD) (Jayanti et al., 2023). Dementia itself has a very significant impact on the quality of life of the elderly and their families. This disease often requires intensive and ongoing treatment, which can be a heavy financial and emotional burden on families. It is estimated that the economic costs of dementia in Indonesia reach IDR 144 trillion per year. These costs include various aspects such as medical care costs, long-term care costs, as well as lost productivity on the part of both the patient and the family who have to allocate time and resources to care for dementia patients (Maghfuroh et al., 2023).

Several previous studies stated that there is a relationship between people living in cities and the incidence of dementia (Liu et al., 2021). From various reviews of previous studies, the determinant factors contained in this study are life style, cognitive activity, family support, daily living activity, self-esteem, and quality of life. This is the basis for conducting a study on risk factors for dementia in urban communities in Samarinda.

2. Method

Cross sectional was conducted in this study. The population in this study were all patients at Atma Husada Psychiatric Hospital. This hospital was chosen because it is in the central area of Samarinda city and is a Type A hospital which has the highest population of dementia patients in the elderly compared to other hospitals. Purposive sampling was conducted for outpatient in this hospital and 106 older adults as respondents. The design of this study was to assess the relationship between Cognitive Activities, Lifestyle, Family Support, Daily Living Activities (ADL), Level of Depression, Self-Esteem, Quality of Life, and Smoking Behavior with the incidence of dementia in the elderly at RSJD Atma Husada Mahakam Samarinda.

Data collection in this study was conducted using seven questionnaires corresponding to the variables being examined, namely: the dependent variable dementia, which was measured using the Mini Mental State Examination (MMSE) consisting of 11 items, with score categories of 24–30 (normal cognitive function), 18–23 (mild dementia), and 0–17 (severe dementia); and the independent variables, which included: (1) Lifestyle, measured using the Fantastic Lifestyle Checklist (FLC) with 25 items (score 0–34: needs improvement, 35–54: fair, 55–69: good, 70–84: very good, 85–100: excellent); (2) Cognitive activity, assessed using the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) with 16 items (score <3.65: low cognition, >3.66: adequate cognition); (3) Family support, measured by the Perceived Social Support Family Scale (PSS-fa) with 20 items (score 20–33: low, 34–47: moderate, 48–60: good); (4) Daily activities, assessed using the Katz Index with 6 items (score 5: mild dependence to score 0: total dependence); (5) Self-esteem, measured using the Rosenberg Self-Esteem Scale with 10 items (score ≤25: low, 26–35: moderate, >35: high); and (6) Quality of life, measured using the WHOQOL-OLD questionnaire with 21 items (score <56: low, 56–87: moderate, >88: high), where a higher score indicates a better quality of life.

Bivariate analysis using the Spearman Rank statistical test and the Multinomial logistic Regression test was used to obtain odds ratioa (OR) values for variables with more than 2 categories. The significant test was carried out using a significance limit (α) = 0.05. The Spearman Rank test can evaluate how close the relationship is between the independent and dependent variables because the data used has an ordinal scale.

3. Result and Discussion

3.1 Result

Univariate analysis describes the characteristics of age, gender, education, employment, dependent and independent variables. Table 1 show about characteristics respondents.

Table 1. Descriptive characteristics of the sample

Characteristics	Frequency (n)	Percentage (%)
Age (Years)		
60 – 64	17	16.0
65 – 69	22	20.8
70 – 74	23	21.7
75 – 79	22	20.8
80 – 84	14	13.2
85 – 90	8	7.5
Sex		
Female	43	40.6
Male	63	59.4
Education		
Elementary School	37	34.9
Junior High School	20	18.9
Senior High School	29	27.4
Associate's Degree/Bachelor's Degree	13	12.3
No Formal Education	7	6.6
Occupation		
Housewife	36	34.0
pension	48	45.3
Private Employee	3	2.8
Non-job	18	17.0
Businessman	1	0.9
Dementia		
Normal	20	18.9
Light	30	28.3
Moderate	34	32.1
Heavy	22	20.8
Lifestyle		
Needs Improvement	6	5.7
Fair	21	25.5
Good	43	40.6
Satisfactory	16	15.1
Perfect	20	18.9
Cognitive Activity		
Low Cognitive	65	61.3
High Cognitive	41	38.7
Family Support		
Good	25	23.6
Enough	55	51.9
Not enough	26	24.5
Activity Daily Living (ADL)		
Fully Independent	20	18.9
Minimal Dependence	12	11.3
Slight Dependence	17	16.0
Moderate Dependence	24	22.6
Heavy Dependence	7	6.6

Maximal Dependence	16	15.1
Completely Dependent	10	9.4
Self-Esteem		
High	23	21.7
Moderate	41	38.7
Low	42	39.6
Quality of Life		
Bad	2	2
Currently	20	28
Good	50	47
Very good	24	23

Note: N=106. Missing values and proxy participants were excluded.

Source: Primary Data, 2024

The descriptive characteristics of the sample are presented in Table 1. Based on table 1, the highest number of respondents was in the 70 - 74 year age range, 23 elderly with a percentage of 21.7% and the lowest number was in the 85-90 age range, 8 elderly with a percentage of 7.5%. With male gender, there are 63 elderly people with a percentage of 59.4%, while there are 43 elderly people with female gender, with a percentage of 40.6%. With elementary school education, there are 37 elderly people with a percentage of 34.9%, while the lowest number are elderly people who do not go to school, namely 7 elderly people with a percentage of 6.6%. The highest number of respondents was in the work of elderly people who had retired as many as 48 seniors with a percentage of 45.3% and the lowest number was in entrepreneurial work as many as 1 senior with a percentage of 0.9%. It is known that those who experience dementia in the elderly show that out of a total of 106 elderly there are 34 (32.1%) elderly who experience moderate dementia, there are 30 (28.3%) elderly who experience mild dementia and there are 22 (20.8%) elderly who experience severe dementia and there were 20 (18.9%) elderly who did not have dementia or were normal. It was found that there were 6 elderly people with a very good lifestyle category (5.7%), 21 elderly people with a fairly good lifestyle category (19.8%), 43 elderly people with a good lifestyle category with a percentage of (40.6%), there are 16 elderly people in the adequate lifestyle category with a percentage of (15.1%), and there are 20 elderly people with a lifestyle that needs improvement with a percentage of (18.9%).

The description of the characteristics of elderly people shows that there are 83 elderly people with high cognitive activity with a percentage of (78.3%) and 23 elderly people with cognitive activity with a percentage of (21.7%). It was also found that those who had sufficient family support were 55 elderly (51.9%). Then those who had less family support were 26 elderly (23.6%), and good family support were 25 elderly (23.6%). Respondents at RSJD Atma Husada Mahakam Samarinda who were moderately dependent were 24 elderly (22.6%). Then those who have a total of 20 elderly (18.9%), the lightest dependent are 17 elderly (16.0%), the heaviest dependent are 16 elderly (15.1%), the lightest dependent are 12 elderly (11.3%), the total dependent are 10 elderly (9.4%) and 7 elderly (6.6%) dependent on weight. It shows that out of 106 respondents there were 2 people (2%) who had a poor quality of life, 30 people (28%) had a moderate quality of life. 50 people (47%) have a good quality of life, and 24 people (23%) have a very good quality of life. Shows that of the 106 respondents there were 37 people (35%) who did not smoke, 10 people (9%) were light smokers, 19 people (18%) were moderate smokers, 20 people (19%) were heavy smokers and 20 people (19%) as a very heavy smoker.

We can see the correlation between each independent variable and the dependent variable in the table 2.

Table 2. Related factors to Dementia by Spearman Rank

	Dementia			Total	P-Value	CC
	Normal	Mild Dementia	Severe Dementia			
Lifestyle						
Perfect	19 (63.3%)	7 (23.3%)	4 (13.3%)	30 (100%)	0.000	0.466
Satisfactory	125 (68.7%)	47 (25.8%)	10 (5.5%)	182 (100.0%)		
Good	7 (87.5%)	1 (12.5%)	0 (0.0%)	8 (100.0%)		
Fair	0 (0.0%)	2 (5.4%)	35 (94.6%)	37 (100.0%)		
Needs Improvement	0 (0.0%)	1 (20.0%)	4 (80.0%)	5 (100.0%)		
Total	151 (57.6%)	58 (22.1%)	53 (20.2%)	262 (100.0%)		
Cognitive Activity						
High Cognitive	152 (76.4%)	19 (9.5%)	28 (14.1%)	199 (100.0%)	0.000	0.598
Low Cognitive	0 (0.0%)	38 (60.3%)	25 (39.7%)	63 (100.0%)		
Total	152 (57.6%)	57 (21.8%)	53 (20.2%)	262 (100.0%)		
Family Support						
Good	56 (48.3%)	29 (25.0%)	31 (26.7%)	116 (100.0%)	0.000	0.323
Enough	37 (42.5%)	28 (32.2%)	22 (25.3%)	87 (100.0%)		
Not enough	59 (100.0%)	0 (0.0%)	0 (0.0%)	59 (100.0%)		
Total	152 (58.0%)	57 (21.8%)	53 (20.2%)	262 (100.0%)		
Activity Daily Living (ADL)						
Fully Independent	63 (77.8%)	7 (8.6%)	11 (13.6%)	81 (100.0%)	0.000	0.441
Minimal Dependence	35 (71.4%)	14 (28.6%)	0 (0.0%)	49 (100.0%)		
Slight Dependence	32 (80.0%)	8 (20.0%)	0 (0.0%)	40 (100.0%)		
Moderate Dependence	11 (32.4%)	7 (20.6%)	16 (47.1%)	34 (100.0%)		
Heavy Dependence	3 (14.3%)	10 (47.6%)	8 (38.1%)	21 (100.0%)		
Maximal Dependence	0 (0.0%)	5 (31.3%)	11 (68.8%)	16 (100.0%)		
Completely Dependent	8 (38.1%)	6 (28.6%)	7 (33.3%)	21 (100.0%)		
Total	152	57	53	262		

	(58.0%)	(21.8%)	(20.2%)	(100.0%)		
Self-Esteem						
High	2 3.8%	3 5.7%	0 0.0%	5 5.2%		
Moderate	78 81.3%	13 13.5%	5 5.2%	96 100.0%		
Low	72 63.7%	41 36.3%	48 20.2%	161 100.0%	0.000	0.469
Total	152 58.0%	57 21.8%	53 20.2%	262 100.0%		
Quality of Life						
Very good	82 (73.9%)	29 (26.1%)	0 (0.0%)	111 (100.0%)		
Good	70 (69.3%)	17 (16.8%)	14 (13.9%)	101 (100.0%)		
Currently	0 (0.0%)	11 (22.0%)	39 78.0%	50 (100.0%)	0.000	0.548
Bad	152 (58.0%)	57 (21.8%)	53 (20.2%)	262 (100.0%)		
Total	82 (73.9%)	29 (26.1%)	0 (0.0%)	111 (100.0%)		

n = 106 Sampel. Correlation coefficient(CC), Odds Ratio (OR). Missing values and proxy participants were excluded.

Source: Primary Data, 2024

Based on table 2, it shows the results of the analysis, the majority of elderly people with good lifestyles are 30 with a percentage of 69.8% and suffer from moderate dementia. Table 3.8 shows the results of the Spearman rank statistical test with a P-value of 0.000 or $P < 0.05$, which means that H_0 was rejected with a correlation coefficient of 0.635, thus a strong correlation was found between lifestyle and prevalence and the number of dementia cases. And there is a very strong level of correlation strength with the direction of the variable relationship being positive, which means that if the elderly have a low lifestyle, dementia patients become more common.

The results of the analysis also showed that 20 elderly people experienced low cognitive level, with a percentage of 30.8% experiencing moderate dementia. Table 2 shows the results of the Spearman rank test. The results of the Spearman rank statistical test show a P-value of 0.00 or $P < 0.05$, which means H_0 is rejected. The result of the correlation coefficient value is 0.608, therefore, it can be concluded that there is a strong relationship between cognitive activity and the incidence of dementia in the elderly and there is a very strong level of correlation strength with the direction of the relationship being positive, meaning that if the elderly experience low cognitive level, the more the rate of dementia is also high.

Based on the table, the results of the Spearman Rank Test with a total of 106 elderly respondents showed that the majority of elderly people experienced family support in the sufficient category, 27 elderly people (49.1%) and experienced moderate dementia. The p-value is 0.001 which indicates that the results are statistically significant because they are below the specified significance level ($p < 0.05$). The results of the Spearman Rank Test obtained a Coefficient Correlation value of 0.430, which means that there is a fairly strong link/relationship between the variable family support and dementia which has a positive

direction, meaning it is in the same direction, meaning that if the elderly who have less family support increase, the incidence will also increase. dementia in the elderly.

The results of the Spearman Rank Test with a total of 106 elderly respondents showed that the majority of elderly people experienced activity daily living (ADL) in the moderately dependent category, 18 elderly people (75.0%) and experienced moderate dementia. Spearman Rank Test analysis was carried out to analyze the relationship between activity daily living (ADL) and dementia in the elderly at RSJD Atma Husada Mahakam Samarinda. Showing that the results of the Spearman Rank Test obtained a p - value of 0.001, the results were statistically significant, because it was lower than the specified significance level ($p < 0.05$), so that at that time H_0 was rejected and H_1 was accepted, namely that there was a significant relationship between activity daily living (ADL) with dementia in the elderly at the Atma Husada Mahakam Mental Hospital in Samarinda. The results of the Spearman Rank Test obtained a Coefficient Correlation value of 0.424, which means a positive correlation, or a relationship in the same direction as the definition of daily activities (ADL), has been shown between the variables of daily activities (ADL) and dementia. Elderly people who rely heavily on activities of daily living (ADL) usually have a higher risk of developing dementia.

The results of the analysis also showed that the majority of elderly people experienced low self-esteem, 16 elderly people with a percentage of 38.1% and experienced moderate dementia. The table shows the results of the Spearman Rank analysis, with a p value of 0.001 or $p < 0.05$, which means H_0 is rejected and the Correlation Coefficient value is 0.364. So there is a significant correlation between self-esteem and the incidence of dementia and there is a fairly strong level of correlation strength with the direction of the variable relationship being positive, which means that if the elderly have low self-esteem, the incidence of dementia in the elderly increases.

3.2 Discussion

Elderly people who have a very good lifestyle ($OR=1.47$) have a greater chance of having a normal condition and not suffering from dementia compared to those who have other lifestyles. In research conducted by (Jia et al., 2023) individuals who lived healthy lives in their youth experienced slower memory decline compared to individuals who did not live healthy lives in their youth, which in other words experienced faster memory decline compared to people who lived live healthy in his youth. Based on research conducted by (George & Hemachandra Reddy, 2019), the use of antioxidants in randomized clinical trials in AD patients was also critically assessed. concluded that healthy eating habits, regular exercise, as well as a better lifestyle can delay the development of dementia and reduce the risk of Dementia in elderly individuals and reverse subjects with mild cognitive impairment to a non-dementia state.

Findings from research that has been conducted, there are 83 elderly people with high cognitive activity with a percentage of (78.3%). Elderly people who have low cognitive activity ($OR=0.62$) have a smaller chance of not suffering from dementia compared to elderly people who have high cognitive activity. In research conducted by (Wulandari et al., 2020) the application of brain gym had a more significant influence on the level of dementia in old age. Brain gym activities can stimulate the brain to harmonize various functions such as movement functions, respiratory functions and intellectual thinking functions. Daily activities related to

dementia (Yan et al., 2024). Study was conducted in Malaysia show the result that needed special treatment to reduce dementia that focuses on education, physical as well as social aspects (Nasaruddin et al., 2025).

This study shows that the majority of respondents have sufficient family support, namely 55 (51.9%). Elderly people who have sufficient family support (OR=1.26) have a greater chance of not suffering from dementia compared to elderly people who have low family support. Family support is very important, and families can get informational, evaluation, instrumental and emotional help from each other (Zahara & Anastasya, 2021). A person's ability to handle difficulties and achieve high levels of self-confidence, drive, and happiness in life is greatly enhanced by family support (Wiraini et al., 2021). According to research (Sulistyaningsih & Wijayanti, 2020) internal elements, such as age or stage of development, level of education or knowledge, emotional and spiritual aspects, are the elements that cause the most problems. Family habits and the way the family offers help are examples of external elements. According to researchers' findings from the PSS - Fa questionnaire, the majority of elderly people feel that the family does not have a role in the healing process from an illness, where the role of the family really helps the elderly in the healing process, such as respecting and appreciating parents, providing affection and giving time. as well as being attentive, patient and wise towards the behavior of the elderly. As is the role of the family in providing space and comfort for the elderly to live together. Families should not view the elderly as a burden. Apart from providing food and supporting them in meeting their basic needs such as traveling on holiday and taking care of financial obligations, families can also remind and accompany elderly people to health services regularly (Maulidah, 2022).

Elderly people who carry out their daily activities completely independently (OR=9.64) have a greater chance of not suffering from dementia compared to elderly people who depend on other people to carry out their daily activities. Activity Daily Living (ADL) is a technique used to assess an individual's capacity to carry out daily tasks independently. This helps in identifying the vulnerabilities of elderly people who need care, and one method is to evaluate ADL using the Katz Index (Fadila, 2023).

According to research (Sari et al., 2022), it was found that the majority of elderly people who experienced activity daily living (ADL) partial dependence/moderate dependence were 28 elderly people (46.7%). It is found that most of the elderly require help from family members as they are unable to perform daily tasks on their own. As they get older, they face a number of problems, such as deterioration in physical condition (disability), decreased vision, exercise intolerance, and a decline in social status, memory, and other cognitive abilities.

The majority of elderly people in the urban area of Samarinda City have low self-esteem (39.6%). Elderly people who have moderate self-esteem (OR= 0.11) have a smaller chance of not suffering from dementia compared to elderly people who have high self-esteem. According to researchers' findings from the Rosenberg Self-Esteem questionnaire, the majority of elderly people feel that they do not have good abilities so they have nothing to be proud of, they always feel like they have failed in doing a job and some elderly people feel like they are useless parents. These risk factors are consistently felt by the elderly and have many impacts on the elderly, such as decreased physical and psychosocial function which has an impact on their self-assessment. Self-esteem is very important for the elderly because the elderly want to feel

respected, accepted, valuable and recognized for the elderly that they get from other people (Sigalingging et al., 2020).

Mental disorders such as dementia are becoming more common among older people. These physical and mental limitations increase the burden of health and social care as well as the quality of life of older people (Agusrianto et al., 2023). In this study, elderly people who have a moderate quality of life (OR=2.37), have a greater chance of not suffering from dementia compared to elderly people who have a poor quality of life. Quality of life is an individual's perception of their position in life, both seen from the cultural context and value system. where they live and live which is related to their life goals, hopes, standards and focus which includes several aspects at once, including aspects of physical, psychological, social and environmental conditions in everyday life. Problems that include quality of life are very broad and complex including physical health problems, psychological status, level of freedom, social relationships and the environment in which they live (Aisyiah et al., 2022).

The limitation of this study is Dementia influenced by many interacting risk factors, such as age, genetics, education, comorbidities (hypertension, diabetes), lifestyle, and environment. It is difficult to isolate the influence of a single risk factor because of these complex interactions. The study was cross-sectional in nature so it could not show a definitive cause-and-effect relationship between risk factors and dementia, and it was difficult to observe the development of dementia in the long term. This research is expected to have a positive impact in providing input for making policies related to risk factors that correlate with dementia in the elderly, particularly in urban areas.

4. Conclusion

Lifestyle and cognitive activity have a very strong correlation with the incidence of dementia. Family support, daily living activities (ADL), self-esteem, and quality of life have a fairly strong correlation with dementia in the elderly in the urban area of Samarinda. Recommendations from this study are providing motivation and social support in the form of a social approach in the form of socialization or gathering with elderly patients regarding risk factors that will impact the elderly, especially dementia, depression and self-esteem as well as a psychological approach in the form of an educational approach or gathering with elderly patients with the aim of supporting them. elderly and received several complaints so that the elderly felt satisfied. It is hoped that this approach will also be carried out with the family to support the elderly not to feel alone and to feel appreciated.

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