

Determinants of the Utilization of Elderly Integrated Healthcare Center Services in the Kassi Kassi Health Center Working Area of Makassar City

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ABSTRACT

The number of elderly people in Indonesia is expected to increase from 26.83 million (9.92%) in 2020 to 63.32 million (19.9%) in 2045. Judging from the risk of disease that will be experienced by the elderly and its effect on the dependency ratio of the elderly population, then the government provides integrated healthcare center services for the elderly. The Kassi-Kassi Health Center has the highest number of elderly people in Makassar City, but an average of <70% indicates that the elderly are still less active in utilizing the posyandu. This study aims to analyze the determinants of the utilization of elderly integrated healthcare center services at the Kassi Kassi Health Center in Makassar City. The method used in this research is quantitative with a type of analytic survey and cross-sectional design. The research sample was 110 elderly people in the Kassi Kassi Health Center working area. Data were analyzed by Chi-square test. The results of the analysis showed that knowledge ($p=0.000$), healthcare beliefs ($p=0.019$), and illness perception ($p=0.050$) were related to the utilization of elderly integrated healthcare center services. Meanwhile, the availability of health facilities ($p=0.186$), distance ($p=1.000$), and waiting time ($p=0.702$) were not related to the utilization of elderly integrated healthcare center services. So it can be concluded that knowledge, beliefs, and perceptions of pain are related to the utilization of elderly integrated healthcare center services at the Kassi Kassi Health Center in Makassar City.

Keywords: Utilization, elderly integrated healthcare center, health center

INTRODUCTION

Developments in the health sector, especially those related to health services, have a positive effect on increasing life expectancy (1). Blum's theory states that the degree of health is influenced by 4 factors, namely behavior, environment, health services, and genetics. Health services are kind of activities to maintain or improve health status which is carried out individually or jointly through preventive efforts, diagnosis, therapy, disease recovery, injuries, and physical and mental disorders within an organization. The development of good health services will help improve public health status, including increasing life expectancy. Life expectancy is an indicator of successful development in the health sector. The impact of the improvement in life expectancy shows that more people are categorized as elderly. The Elderly is an individual who is over 60 years old (2). Efforts to improve the welfare of the elderly are contained in Law No. 43 of 2004 concerning the Implementation of Efforts to Improve the Welfare of the Elderly (called Undang-Undang No 43 Tahun 2004 tentang Pelaksanaan Upaya Peningkatan Kesejahteraan Lanjut Usia) which includes several things, one of those is the provision of health services for the elderly. One of the provisions of health services for the elderly is the elderly integrated healthcare center which is run by the technical implementation unit of the health service, namely the health center with integrated healthcare center cadres in their working area.

The Central Bureau of Statistics (called Badan Pusat Statistik) stated that the number of elderly people in Indonesia has increased every year due to an increase in life expectancy (3,4). The elderly population, which was 18 million (7.56%) in 2010, is estimated to reach 26.83 million (9.92%) in 2020 and 63.32 million (19.9%) in 2045 (5). A large number of elderly people has both positive and negative effects. The positive effect is that the elderly can live a healthy, active, and productive life. And it will have a negative effect if many elderly people have bad health problems which can have an impact on increasing health service costs, disability, and loss or decrease in income (6). An increase in the number of elderly people needs to be accompanied by the provision of adequate and better health services in terms of quantity and quality. The availability of services that are easily accessible, convenient, and effective in helping to improve the health of the elderly.

The rising elderly population can change health epidemiology status, such as morbidity due to increasing degenerative diseases. Degenerative diseases in the elderly occur because degenerative cells in the body are less functioning, so they can affect the immune system (7). The most common chronic diseases among the elderly are cardiovascular disease, osteoporosis, and dementia. Diseases that many elderly suffer from include hypertension, stroke, DM (diabetes), heart disease, and rheumatoid arthritis (8). According to the Central Bureau of Statistics, the increasing number of elderly people also affects the burden on caregivers. If the dependency rate is high, many age groups are unproductive, it will affect the development of human resources and many people will face difficulties (5). This increase elderly population must be handled properly, lest the increase in the number of elderly people has a negative impact.

The risk of disease that may be suffered by the elderly and its impact on the dependency ratio of the elderly population, the government should consider strategies to enable the elderly to play a role in the development and formulate programs (9). An Elderly integrated healthcare center is a type of health service in the form of an integrated service post for the elderly in an exclusive area that has been mutually agreed upon and run by residents (10). Activities such as therapy, health counseling, gymnastics, disease prevention services, and health promotion are activities carried out at the elderly integrated healthcare center (11). An Elderly integrated healthcare center is a health service that is easily accessible to the elderly because all its activities are directly carried out in the community and assisted by health center workers or cadre's help.

Many factors influence a person in utilizing or using health services. According to Susanti's research in 2020, unutilized integrated healthcare centers for the elderly can be influenced by several factors, such as work, motivation of the elderly, the role of cadres, distance from home, and health conditions (12). According to Nganro et al., in 2021 there is a correlation between the knowledge and attitudes of the elderly towards using integrated healthcare centers (13). According to Zulaikha & Miko in 2020, the determinants of elderly integrated healthcare center utilization include family support, the role of the elderly, the role of health workers, and the role of the executive (14). In this study, several variables will be examined in the utilization of elderly integrated healthcare center services are six variables, which are knowledge, healthcare beliefs, availability of health facilities, distance, waiting time, and illness perception. Knowledge, healthcare beliefs, and illness perception are related to the individual itself, while the availability of health facilities, distance, and waiting time are related to integrated healthcare center services.

South Sulawesi Province ranks 6th in the distribution of the highest elderly population in Indonesia with 1 million people (15). The number of elderly people in South Sulawesi is 11.24% higher than the percentage of elderly people in Indonesia, which is 9.78% (16). Makassar is one of the cities that has a fairly high number of elderly people in South Sulawesi. The working area of the health center with the highest number of elderly people in Makassar City is the Kassi Kassi Health Center. Kassi Kassi Health Center has 12 integrated healthcare centers from 6 sub-districts. The number of elderly people in Bonto Makkio Sub-district was registered 98 people, Kassi Kassi Sub-District 100 people, Tidung Sub-District 106 people, Mapala Sub-District 105 people, in Bantabantaeng Sub-District 102 people, and Karunrung Sub-District 102 people. Based on the data, information was obtained that the average attendance of the elderly in the working area of the Kassi Kassi Health Center was <70%. The elderly are said to be active if they take advantage of integrated healthcare center health services when 70% or ≥ 8 times attend in one year. Based on the description and explanation above, this study aims to analyze the determinants of the utilization of elderly integrated healthcare center services at the Kassi Kassi Makassar Health Center, namely knowledge, healthcare beliefs, availability of health facilities, distance, waiting time, and illness perception.

METHOD

This research is quantitative research with the type of analytic survey using a cross-sectional design. This research was conducted in the working area of the Kassi Kassi Health Center in Makassar City with six sub-districts namely Mappala Sub-District, Kassi Kassi Sub-District, Bontomakkio Sub-District, Tidung Sub-District, Karunrung Sub-District, Banta-Bantaeng Sub-District. The time of research was conducted from April to September 2022. The population was the elderly who were registered at the integrated healthcare center in the working area of the Kassi Kassi Health Center in Makassar City. The target sample was elderly patients who visited the elderly Integrated healthcare center in the working area of the Kassi Kassi Health Center in Makassar City.

The sample number count obtained 110 samples which were taken from six sub-districts using a proportional stratified random sampling technique, it is sampling based on the proportion of elderly people from each sub-districts. This technique is used due to the number of the elderly population in each sub-districts can be known and the population number of each sub-districts is dissimilar. The number of the samples collected from each area is described as follows: 18 samples for Mappala Sub-District, 25 samples for Kassi Kassi Sub-District, 15 samples for Bontomakkio Sub-District, 15 samples for Tidung Sub-District, 19 samples for Karunrung Sub-

District, and 18 samples for Banta-Bantaeng Sub-District, so that a total of 110 samples were collected. Data collection was carried out by direct interviews using a questionnaire. The questionnaire used is an adaptation of previous studies that have tested the validity and reliability. Data were analyzed using descriptive univariate to describe the characteristics of the respondents and to confirm the value of each variable. After that, it was continued with bivariate analysis to determine the relationship between each independent variable with the utilization of elderly integrated healthcare center services. The data that has been analyzed is presented in the form of a frequency distribution table accompanied by interpretation.

RESULTS AND DISCUSSION

An overview of the characteristics of address, gender, age, last education, occupation, and insurance of the 110 elderly respondents in this study are shown in table 1 as follows:

Table 1. Frequency distribution of the characteristics of the respondents

Characteristics of Respondents		Frequency (n)	Percentage (%)
Address	Mappala Sub-District	18	16,4
	Kassi Kassi Sub-District	25	22,7
	Bontomakkio Sub-District	15	13,6
	Tidung Sub-District	15	13,6
	Karunrung Sub-District	19	17,3
	Banta-Bantaeng Sub-District	18	16,4
Gender	Male	32	29,1
	Female	78	70,9
Age	< 70 years	83	75.5
	≥ 70 Years	27	24.5
Last education	Ungraduated School	1	0.9
	Elementary School	7	6,4
	Junior High School	11	10
	Senior High School	32	29,1
	Bachelor Degree	59	53,6
Occupation	Unemployed	3	2,7
	Housewife	50	45.5
	Pensionary	48	43,6
	Self-employed	7	6,4
	Civil servant/military/police	2	1,8
Insurance	BPJS PBI	60	54.5
	BPJS Non-PBI	50	45.5

Source: Primary data, 2022

Based on table 1, most respondents came from Kassi Kassi Village with 25 people (22.7%), while the fewest were from Bontomakkio Village and Tidung Village with 15 people each (13.6%). This shows that the elderly population in the working area of the Kassi Kassi Health Center is more in the Kassi Kassi Sub-District. Based on gender characteristics, the majority of respondents

were female 78 people (70.9%), and the rest were male 32 people (29.1%). This shows that the elderly population in the working area of the Kassi Kassi Health Center is mostly female elderly. Based on age characteristics, more respondents aged <70 years were 83 people (75.5%), and the rest ≥70 years were 27 people (24.5%). This shows that the elderly population in the working area of the Kassi Kassi Health Center is more in the young elderly category (60-69 years), only 24.5% are in the middle elderly category (70-79 years) and old elderly (≥80 years). Concerning recent education, the most graduates were 59 bachelors (53.6%), and the least ungraduated school with 1 person (0.9%). These results indicate that the elderly in the working area of the Kassi Kassi Health Center on average have a higher education with a bachelor's degree, and the second most education as much as 29.1% have a high school education. Based on occupation, the most were housewives as many as 50 people (45.5%), and the least were civil servants/military/police as many as 2 people (1.8%). The elderly in the working area of the Kassi Kassi Health Center work more as housewives because the elderly are dominated by females, the second most jobs are pensionary. Based on the type of insurance, the most were BPJS PBI as many as 60 people (54.5%) and the rest were BPJS Non-PBI as many as 50 people (45.5%). Almost all the elderly in the working area of the Kassi Kassi Health Center already have health insurance in the form of BPJS (known as Badan Penyelenggara Jaminan Sosial or National Health Insurance System). The kind of insurance that has the most is BPJS PBI (Recipient Of Government Assistance or called Penerima Bantuan Iuran), slightly more than non-PBI BPJS participants. With BPJS ownership, it will make it easier for the elderly in the working area of the Kassi Kassi Health Center to be able to take advantage of the available health services.

The distribution of univariate analysis results shows the number of frequencies and percentages of each research variable. The frequency distribution is based on the independent variables studied, namely knowledge, healthcare belief, availability of health facilities, distance, waiting time, and illness perception. While the frequency distribution of the dependent variable is the utilization of elderly integrated healthcare center services. The frequency distribution based on the independent variables and dependent variables studied is shown in table 2 as follows:

Table 2. Frequency Distribution of Variables Researched on Respondents

Variable	Frequency (n)	Percentage (%)
Knowledge		
Sufficient	51	46,4
Insufficient	59	53,6
Healthcare Beliefs		
Sufficient	105	95,5
Insufficient	5	4,5
Availability of Health Facilities		
Sufficient	6	5,5
Insufficient	104	94,5
Distance		
Close	104	94,5
Far	6	5,5
Waiting Time		
On-time	101	91,8
Delayed	9	8,2
Illness Perception		
Positive	76	69,1
Negative	34	30,9
Utilization Of Elderly Integrated Healthcare		

Variable	Frequency (n)	Percentage (%)
Center Services		
Sufficient	80	72,7
Insufficient	30	27,3

Source: Primary data, 2022

Based on table 2, it was found that out of 110 respondents, 51 respondents (46.4%) had sufficient knowledge and 59 respondents (53.6%) had insufficient knowledge. The results show that the elderly in the working area of the Kassi Kassi Health Center have more knowledge that is less related to the elderly integrated healthcare center. In the variable of healthcare beliefs, 105 respondents (95.5%) felt sufficient belief about health services and 5 respondents (4.5%) rated them as insufficient. Almost all the elderly have a good belief in health services at the elderly Integrated healthcare center. As for the variable availability of health facilities, 6 respondents (5.5%) considered that the available health facilities were sufficiently complete and 104 respondents (94.5%) considered that health facilities were incomplete. These results indicate that the availability of integrated healthcare center health facilities in the working area of the Kassi Kassi Health Center is still in the incomplete category and almost all the elderly assess it as incomplete. Furthermore, on the distance variable, 104 respondents (94.5%) said that health services were close and easy to reach and as many as 6 respondents (5.5%) assessed that the distance to the integrated healthcare center was far. These results indicate that it is easy for the elderly to access posyandu in the Kassi-Kassi Health Center work area. Geographically it is located in the city, so it is close to settlements plus the many available vehicle access.

In the waiting time variable, 101 respondents (91.8%) rated the service at the elderly integrated healthcare center on time and 9 respondents (8.2%) thought the service was delayed. Almost all of the elderly rated the services of the elderly integrated healthcare center in the working area of the Kassi Kassi Health Center as fast and timely. Then on the variable illness perception, as many as 76 respondents (69.1%) had a positive perception and as many as 34 respondents (30.9%) had a negative perception. This shows that most of the elderly in the working area of the Kassi Kassi Health Center have a positive perception of illness, so this can be an encouragement for the elderly to take advantage of health services, in this case, integrated healthcare center, so they can resolve and fulfill their health needs. In the utilization variable, 80 respondents (72.7%) sufficiently utilized the services of the elderly integrated healthcare center and as many as 30 respondents (27.3%) did not utilize the services of the elderly integrated healthcare center at the Kassi Kassi Health Center. These results indicate that most of the elderly in the working area of the Kassi Kassi Health Center sufficient to utilize the services of the elderly integrated healthcare center. Of all the variables examined based on the frequency distribution it was found that the majority of respondents had a positive assessment of good health services belief, close distance, timely service, and positive perceptions of illness. Meanwhile, most of the respondents had insufficient knowledge and considered that the availability of integrated healthcare center health facilities was lacking.

After this, bivariate analysis was continued to determine the relationship of each independent variable with the utilization of elderly integrated healthcare center services. Statistical test results that describe the relationship between variables of knowledge, healthcare beliefs, availability of health facilities, distance, waiting time, and illness perception with integrated healthcare center utilization are presented in table 3 as follows:

Table 3. The Results Of The Relationship Test Between Variables

Variable	Utilization of Elderly Integrated Healthcare Center Services				Total		p-values
	Sufficient		Insufficient		N=110		
	n=80	%	n=30	%			
Knowledge							
Sufficient	48	94,1	3	5,9	51	100	0.000
Insufficient	32	54,2	27	45,8	59	100	
Healthcare Beliefs							
Sufficient	79	75,2	26	24,8	105	100	0.019
Insufficient	1	20	4	80	5	100	
Availability of Health Facilities							
Sufficient	6	100	0	0	6	100	0.186
Insufficient	74	71,2	30	28,8	104	100	
Distance							
Close	75	72,1	29	27,9	104	100	1,000
Far	5	83.3	1	16,7	6	100	
Waiting Time							
On-time	74	73,3	27	26,7	101	100	0.702
Delayed	6	66,7	3	33,3	9	100	
Illness Perception							
Positive	60	78.9	16	21,1	76	100	0.050
Negative	20	58,8	14	41,2	34	100	

Source: Primary data, 2022

The test results above $p = 0.000$ (<0.05) show that knowledge is related to integrated healthcare center utilization. Elderly people with sufficient knowledge use the Integrated healthcare center more, namely 48 respondents, (94.1%), and only 3 respondents (5.9%) as insufficient. On the other hand, there are 32 respondents (54.2%) of the elderly with sufficient knowledge who use it, this number is slightly more than the insufficient with 27 respondents (45.8%). The results of the cross table above explain that respondents who have a lot of sufficient knowledge utilize integrated healthcare centers and conversely. Insufficient knowledge about the elderly integrated healthcare center causes a lack of understanding about the use of the elderly integrated healthcare center, which may have an impact on their health efforts. By following the integrated healthcare center agenda, the elderly can get advice on healthy lifestyles so they can resolve their health problems and limitations of the elderly.

Octaviani's research in 2016 at the Pandak II Health Center in Bantul showed that there was a correlation between knowledge and integrated healthcare center utilization (17). Kristiana's research in 2021 also shows a significant relationship between the knowledge of the elderly and the use of the integrated healthcare center at the Selemadeg Barat Health Center, Tabanan Regency (18). Knowledge has different strengths and levels (19). The knowledge level motivates them to act logically, in other words, the right knowledge leads to the right action. If the knowledge about the integrated healthcare center is good, it will arouse the desire of the elderly to go there. The results of Purwaningsih's 2020 research show that there is a significant influence (difference) between the knowledge of the elderly before being given health education (pretest) and the knowledge after being given health education (20). So the health center must increase

socialization, especially with the elderly and their families about elderly integrated healthcare center services. The active role of cadres is needed to provide health knowledge to the elderly and their families so that they can support the elderly to attend the integrated healthcare center.

The results of table 3 above also illustrate that out of 110 respondents, elderly people who have sufficient beliefs about health services, 79 respondents (75.2%) make use of integrated healthcare center services and there are 26 respondents (24.8%) unutilized it. Meanwhile, there were 4 respondents (80%) who had insufficient beliefs in health services and didn't utilize integrated healthcare center services, and only 1 respondent (20%) had sufficient utilization of it. The cross table above explains that many respondents who have a good belief in health services use integrated healthcare centers, while many respondents who have insufficient belief in health services do not utilize integrated healthcare centers. The results of this analysis indicate that the better the respondent's belief in health services, the higher the utilization of integrated healthcare center services. The statistical result $p=0.019$ confirms that there is a relationship between healthcare beliefs and the utilization of integrated healthcare center services for the elderly. The belief in this study is the suitability of the desired service expectations with what is needed, as well as the attitude of officers and cadres who provide services. Arianto's 2020 research states that the role of cadres is related to community beliefs and motivation in utilizing the elderly Integrated healthcare center (21). Another study, Nova in 2019, related to patient belief in health services also greatly affects a patient interest in treatment (22). A good individual's belief or trust in the service can encourage or motivate him to take advantage of the service. Therefore, the role of cadres is needed to convince the elderly and their families to take advantage of integrated healthcare centers through positive communication, good service, providing psychological support, and building confidence.

Statistical results obtained $p=0.186$ (> 0.05) confirm that the variable availability of health facilities is not related to the utilization of the elderly integrated healthcare center. 100% of the elderly think that the sufficient availability of health facilities utilize the services of the elderly integrated healthcare center. However, of the 104 respondents who assessed the availability of health facilities as insufficient, 71.2% also utilized integrated healthcare center services, and only 28.8% did not utilize integrated healthcare center services for the elderly. The cross table above explains that only a few respondents who rated the availability of health facilities as sufficient utilized integrated healthcare centers. While respondents rated the availability of facilities as insufficient, many of them continued to utilize integrated healthcare center services. This shows that there is no interaction between the availability of health facilities and the utilization of health services at the elderly Integrated healthcare center. In line with Amelia's results in 2019 which stated that there was no relationship between the availability of facilities at the integrated healthcare center and the utilization of the integrated healthcare center for the elderly (23). In contrast to the results of Ake Langingi et al in 2020 where the availability of facilities is correlated with the utilization of elderly posts (24). Lawrence Green explained that health facilities are one of the factors that support a person's behavior. From the study findings, although almost all respondents stated that integrated healthcare center facilities were incomplete, most of them still used integrated healthcare center services, this shows that there is no correlation between sufficient facilities and integrated healthcare center utilization. Even so, the health center and integrated healthcare center should equip health facilities so that the elderly feel satisfied and comfortable so that they can increase their interest to attend the integrated healthcare center.

The elderly rated that the close distance health facilities utilizing the services of the elderly integrated healthcare center were sufficient as much as 72.1% and insufficient as much as 27.9%. Meanwhile, 83.3% of the respondents who assessed the distance to health facilities were far away utilized integrated healthcare center services, and 16.7% unutilized them. The cross table above

explains that many of the respondents who rated the distance of the close integrated healthcare center made good use of it and similarly those who rated that it was far. This shows that there is no relationship between distance and the utilization of elderly integrated healthcare center services at the Kassi Kassi Health Center where the value of $p = 1.000 (> 0.05)$. Integrated healthcare center for the elderly is close and easily accessible to the community so this does not affect its utilization. The results of Ashraf et al in 2015 stated that the closer the distance to a healthcare provider, the faster customers will receive services (25). Health service choices are said to be influenced by distance. This was reaffirmed by Nugraha, N et al in 2016 that distance affects access to health services (26). However, in this study, there was no correlation between distance and integrated healthcare center utilization because the location is in the city, and vehicle access is easy for the elderly, so far distances are not an obstacle. These results are in line with Aryantiningih's 2014 study where the variable distance to the elderly's home was not related to integrated healthcare center utilization (27).

Assessment of waiting time from 110 respondents shows that time waiting for timely services as much as 73.3% utilized the services of the elderly integrated healthcare center and 26.7% unutilized them. Meanwhile, 66.7% of the elderly who rated the waiting time for services as delayed continued to utilize integrated healthcare center services, and 33.3% unutilized them. Respondents who rated it as on-time used the integrated healthcare center, however, many respondents who assessed that it was delayed also do the same so no correlation was seen. The results of the bivariate analysis gave rise to a $p\text{-value}=0.702 (> 0.05)$. These results prove that there is no correlation between waiting time service and utilization of elderly integrated healthcare center services at the Kassi Kassi Health Center. The length of time patients wait for health services is a definition of waiting time, respondents feel the waiting time for integrated healthcare center services is not long, moreover, they are not in a hurry and have more free time. Marissa's 2021 research also states the same thing, that there is no relationship between waiting time and utilization of health services (28).

Statistical results obtained $p\text{-value}=0.050 (<0.05)$ on the illness perception variable. This suggests that there is a relationship between the perception of illness and the utilization of integrated healthcare center services for the elderly at the Kassi Kassi Health Center in Makassar City. The table above explains that of the 110 respondents, the elderly who had a positive perception of illness were 78.9% utilizing the services of the elderly Integrated healthcare center, and 21.1% unutilized them. Meanwhile, 58.8% of respondents who had a negative perception of illness used integrated healthcare center services, and 41.2% unutilized them. These results explain that many respondents who have positive perceptions of illness utilize integrated healthcare center services, while respondents who assess negative perceptions of illness do not utilize it so a correlation is seen. Illness perception is the individual's perception of the concept of illness, the actions to be taken when sick, and the need to seek medical services. The perception of illness was assessed from the respondent's opinion regarding the respondent's susceptibility to illness which occurs more easily when they are in the old age phase. Perceived disease severity is an elderly assessment of the severity of the disease that is felt when entering old age. This perception encourages the elderly to use available integrated healthcare center services. These results were also stated in the 2016 research by Purwadi et al the perception of health and illness influences the utilization of integrated healthcare center services for the elderly in Imogiri, Bantul (29).

CONCLUSION

This study concludes that there is a relationship between knowledge ($p=0.000$), healthcare

beliefs ($p=0.019$), and illness perception ($p=0.050$) with the utilization of elderly integrated healthcare center services in the working area of the Kassi Kassi Health Center in Makassar City. Besides, there is no relationship between the availability of health facilities ($p=0.186$), distance ($p=1.000$), and waiting time ($p=0.702$) with the utilization of elderly integrated healthcare center services in the working area of the Kassi Kassi Health Center in Makassar city. This shows that a good knowledge of the elderly regarding integrated healthcare center services for the elderly can increase its utilization. Regarding healthcare beliefs, the better the belief in integrated healthcare center health services, the higher the utilization of integrated healthcare centers by the elderly. Likewise, illness perception will encourage the elderly to utilize the available integrated healthcare center services. The utilization of elderly integrated healthcare center services in the working area of the Kassi Kassi Health Center in Makassar City is closely related to knowledge, healthcare beliefs, and illness perceptions of the elderly.

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