Journal Of Nursing Practice
https://thejnp.org/
ISSN: 2614-3488 (print); 2614-3496 (online) Vol.7 No.1. October 2023. Page.216-225

The Influence of Elderly Posyandu Management on Health and Quality of Life at the Sinoa Community Health Center in Bantaeng

Samsualam[1*], Andi Tenri Agung[2], Muh. Multazam[3], Haeruddin[4], Andi Nurlinda[5], Yuliaty[6], Haeril Amir[7]
[1,7] Department of Nursing, Universitas Muslim Indonesia, Makassar, Indonesia
[2,3,4,5,6] Department of Public Health, Universitas Muslim Indonesia, Makassar, Indonesia
**Corresponding author: samsu.alam@umi.ac.id*

ABSTRACT
Background: The Elderly Posyandu (integrated healthcare center) at the Sinoa Community Health Center in Bantaeng has an important role in maintaining the quality of life of the elderly in the community. Apart from providing health services, this smallest service unit will also facilitate various non-medical activities so that the elderly have a place to work and be active.
Purpose: This is the researchers' idea to examine whether there is an influence of the Elderly Posyandu program on the quality of life of the elderly in the Sinoa sub-district, Bantaeng.
Methods: This study used a quantitative method with a cross-sectional design. The population of this study was 210 elderly with a total sample of 136 elderly selected by means of proportional stratified random sampling. Data collection was carried out by means of interviews using a questionnaire. The collected data were analyzed using the path analysis test.
Results: Results of path analysis, where the independent variable (predictor) is the Elderly Posyandu variable include extension (X1) and elderly gymnastics (X2), the mediation variable is the elderly health (Y), and the dependent variable (response) is the quality of life of the elderly (Z), show that periodic medical check-up (X3) through the elderly health variable (Y) has the greatest indirect influence on the quality of life of the elderly in the Sinoa sub-district, Bantaeng.
Conclusion: Posyandu management for the elderly is very important because it will affect the quality of life of the elderly. The management in question includes the elderly Posyandu program.

Keywords: elderly gymnastics, elderly posyandu, elderly quality of life, posyandu management

Received August 10, 2023; Revised September 12, 2023; Accepted October 3, 2023
DOI: https://doi.org/10.30994/jnp.v7i1.382

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.7 No.1. October 2023. Page.216-225

BACKGROUND

The life expectancy of the population has an implication for the number of elderly from year to year, according to the World Health Organization (WHO), in 2025 the number of elderly worldwide will reach 1.2 billion people which will continue to increase to 2 billion people in 2050 (World Health Organization, 2022). In China alone, the age range of 60 years old and over will increase from 18.7% to 34.6% by 2050 (Zhang et al., 2022).

The WHO estimates that 75% of the world's elderly population in 2025 will be in developing countries. Based on data from the Central Bureau of Statistics, in 2017 and 2021, there were 8.97% or around 23.4 million elderly in Indonesia. Whereas in 2018, there were 9.27% or around 24.29 million elderly from the entire population of Indonesia (Central Bureau of Statistics, 2021).

The increase in life expectancy and the number of elderly, of course, cannot be separated from the aging process and its problems (Tuty Putri et al., 2015); (Beltrán-Sánchez et al., 2015). The aging process is a physiological process that must be experienced by every individual and this process will be followed by decreases in physical, psychosocial, and spiritual functions (World Health Organization, 2019). In terms of physical functions, there are changes in various body systems, for example, changes in the immune system which tends to decrease, changes in the integumentary system which tends to decrease, changes in the elasticity of the arteries in the cardiovascular system which can make the heart work harder, changes in the metabolic ability which tends to decrease, and changes in the ability to see and hear which also tend to decrease. These decreases in physical functions can cause the inability of the elderly to carry out activities that are classified as heavy (Indahsari et al., 2013). None of these disorders should be considered a normal part of the aging process. The symptoms of these disorders can be very bothersome—and the elderly may need special treatment to minimize and prevent symptoms. As with many other physical and mental health disorders in the elderly, the appropriate way to deal with excessive anxiety care should consider the whole of a person: their home environment, existing support systems or lack thereof, degree of isolation, mobility, degree of independence and ability to manage daily tasks, medical history and current illnesses, and of course, their particular preferences for care. Therefore, the increasing number of elderly needs to be anticipated because it will bring broad implications in the life of families, communities, and the country. The elderly need to get attention in national development. It is necessary to increase the type and quality of health and nursing services, both those carried out by the elderly themselves and by their families or other institutions such as pusat santunan dalam keluarga (pusaka), the Elderly Posyandu, or other assisted care facilities like those in China which need community support (Zhang et al., 2018).

The Elderly Posyandu is a vehicle for services for the elderly, carried out from, by, and for the elderly with an emphasis on promotive and preventive services, without neglecting curative and rehabilitative efforts (Widyaning et al., 2013). In addition, the Elderly Posyandu is also a manifestation of the implementation of government policy self-development programs through health services for the elderly, as a communication forum in the form of the participation of the elderly community, families, community leaders, and social organizations in its implementation, in an effort to increase optimal health levels.

The Elderly Posyandu (integrated healthcare center) at the Sinoa Community Health Center in Bantaeng has an important role in maintaining the quality of life of the elderly in the community. Apart from providing health services, this smallest service unit will also facilitate various non-medical activities so that the elderly have a place to work and be active. Another problem that is also experienced by many elderly is the level of dependence on other people which is quite high. Both at the community health centers and hospitals, it can be seen that

around 70% of the elderly are accompanied by at least 2 escorts. Of course, the root of the problem is the decreases in physical functions. Some of the elderly, when doing something, must be accompanied by their children or grandchildren. These health problems ultimately have an impact on the psychological conditions and social environment of the elderly.

Based on the consideration of the problems explained, the researchers were interested in conducting a study entitled "The Influence of Elderly Posyandu Management on Health and Quality of Life at the Sinoa Community Health Center in Bantaeng".

METHODS

This study used a quantitative method with a cross-sectional design in which the researchers measured the variables once and the variable measurements were carried out at the time of the examination. This study used path analysis path analysis. This study was carried out in January 2023 at the Sinoa Community Health Center in Bonto Macini village, Sinoa sub-district, Bantaeng. This study was carried out using a questionnaire prepared by the researchers with reference to the conceptual framework and variables to be studied in the respondents. This research received ethical approval number.618/A.1/KEP-UMI/III/2023

RESULTS

Characteristic of Respondent

Table 1. Distribution of Respondent Characteristics Based on Age, Gender, Education and Occupation in Sinoa sub-district

Data Characteristics	Interventions	
	n	%
Gender		
Male	57	41.9%
Female	79	58.1%
Total	136	100%
Age		
60-65 years	74	54.4%
66-70 years	29	21.3%
71-75 years	18	13.5%
≥75 years	15	11.1%
Total	136	100%
Employment		
Working	21	15.4 %
Not Working	78	57.4%
Housewife	28	20.6%
Enterpreneur	3	2.2%
Retired	6	4.4 %
Total	136	100%

Based on Table 1. The gender of the respondents was mostly male in the intervention group 62.5% and gender in the control group 56.3%. Most of the respondents in the

intervention group were middle adults (41-60), namely 68.8% and 67.5% in the control group. The education level of the respondents in the intervention group was mostly high school (56.3%) and in the control group, almost half of the respondents (37.5%) were junior high and high school educated. In the intervention group most (68.8%) did not work and in the control group (75%) respondents did not work.

Table 2. The distribution of extension at the Elderly Posyandu is based on statements to the elderly in Sinoa sub-district, Bantaeng

Statement	Never		Sometimes		Often		Always	
	f	%	f	%	f	%	f	%
Health Education provides information about health			8	5.9%	56	41.2%	72	52.9%
Posyandu provides instructions to always attend Posyandu activities for the elderly			10	7.4%	72	52.9%	54	39.7%
Posyandu provides support to the elderly posyandu participants to be active in the elderly posyandu activities			16	11.8%	66	48.5%	54	39.7%
The materials presented are easy to understand			26	19.1%	70	51.5%	40	29.4%
The way to convey the material and media used is easy to understand			25	18.4%	53	39%	58	42.6
The facilities and infrastructure used during activities provide comfort to the elderly			5	3.7%	54	39.7%	77	56.6%
Elderly gymnastics activities are carried out in a particular place for activities	1	0.7%	31	22.8%	49	36%	55	40.4%
The elderly Posyandu organizes gymnastics for the elderly			26	19.1%	79	58.1%	31	22.8%
Posyandu cadres provide guidance and supervision of the healthy exercise program for the elderly			16	11.8%	84	61.8%	36	26.5%
Elderly gymnastics is carried out routinely and regularly	1	0.7%	41	30.1%	72	52.9%	22	16.2%
The Elderly Posyandu cadres motivate all elderly in their environment			4	2.9%	34	25%	98	72.1
The health worker checks the activities of daily activities			26	19.1%	62	45.6%	48	35.3%
The health worker checks nutritional status by weighing and measuring height and recording it on a chart	3	2.2%	37	27.2%	62	45.6%	34	25%
The health worker makes referrals to the community health center if			2	1.5%	24	17.6%	110	80.9%

there are complaints or found problems								
The health worker provides examination of vital signs in the elderly			1	0.7%	36	26.5%	99	72.8%
Administration of drugs is according to complaints			1	0.7%	21	15.4%	114	83.8%
The extend of which you (the elderly) feel that life is meaningful			1	0.7%	54	39.7%	81	59.6%
How well do you concentrate			15	11%	65	47.8%	56	41.2%
You have enough energy to do your daily activities			3	2.2%	80	58.8%	53	39%
How often do you have opportunities for having fun or doing recreation?	2	1.5%	10	7.4%	71	52.2%	53	39%
You do not suffer from chronic disease (illness more than 6 months).	12	8.8	42	30.9%	31	22.8%	51	37.5%
You do not experience complaints / disorders due to disease	1	0.7%	23	16.9%	77	56.6	35	25.7%
You can carry out daily activities without assistance			11	8.1%	47	34.6%	78	57.4%
You enjoy sleeping and resting	8	5.9	16	11.8%	61	44.9%	51	37.5%
You have positive feelings, such as feeling calm and happy			7	5.1%	40	29.4%	89	65.4%
You can remember well.	1	0.7%	20	14.7%	51	37.5%	64	47.1%
You are grateful for life at this time			8	5.9%	31	22.8%	97	71.3%
You have a good relationship with other people					35	25.7%	101	74.3%
You participate in every social activity in your environment, such as the Elderly Posyandu activities			5	3.7%	43	31.6%	88	64.7%
You like a clean place			4	2.9%	30	22.1%	102	75%
You participate in environmental care activities			20	14.7%	24	17.6%	92	67.6%

Correlation Test

Table 3. Table of correlation test between dependent and independent variables

	X1	X2	X3	Y	Z
X1	1	0.592	0.423	0.436	0.442
X2	0.592	1	0.387	0.448*	0.498*
X3	0.592*	0.387	1	0.879*	0.749*
Y	0.436	0.448*	0.879*	1	0.747
Z	0.442*	0.498*	0.749*	0.747	1

From the results of correlation test in Table 2, it can be concluded that the strongest relationship found in the correlation between X3 and Y where the coefficient value is 0.749*

and the weakest relationship found in the correlation between X1 and Y where the coefficient value is 0.436.

Testing Hypotheses 1, 2, and 3

Table 4. Test Results of the Influence of Extension (X1), Elderly Gymnastics (X2) and Periodic Medical Check-up (X3) on the Elderly Health (Y)

Model	Unstandardized and Standardized Coefficients			
	B	Std. Error	t	Sig.
Constant	1.216	1.125	1,081	.282
X1	.021	.060	.340	.734
X2	.155	.067	2,324	022
X3	1,067	058	18,241	.000

Dependent Variable:Y

Testing the first hypothesis, Extension (X1) obtained a t_{count} of 0.540 with a significance of 0.734. Therefore, the Extension (X1) variable has a t_{count} of 0.340 < t_{table} of 1.656 with a significance of 0.734, which means that Extension has no positive and no direct significant influence on the Elderly Health at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing the second hypothesis, Elderly Gymnastics (X2) obtained a t_{count} of 2.324 with a significance of 0.022. Therefore, the Elderly Gymnastics (X2) variable has a t_{count} of 2.234 > t_{table} of 1.656 with a significance of 0.022, which means that Elderly Gymnastics has a positive and significant direct influence on the elderly health at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing the third hypothesis test, Periodic Medical Check-up (X3) obtained a t_{count} of 18.241 with a significance of 0.000. Therefore, the Periodic Medical Check-up (X3) variable has a t_{count} of 18.241> t_{table} of 1.656 with a significance of 0.000, which means that the Periodic Medical Check-up has a positive and direct significant influence on the Elderly Health at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing Hypotheses 4, 5, 6, and 7

Table 5. Test Results of the Influence of Extension (X1), Elderly Gymnastics (X2), Periodic Medical Check-up (X3) and the Elderly Health (Y) on the Quality of Life of the Elderly (Z)

Model	Unstandardized and Standardized Coefficients			
	B	Std. Error	t	Sig.
Constant	6,594	1904	3,462	001
X1	043	.102	.424	.672
X2	.323	.115	2,814	006
X3	.673	.185	3,642	.000
Y	.370	.147	2,522	013

Testing the fourth hypothesis, Extension (X1) obtained a t_{count} of 0.424 with a significance of 0.672. Therefore, the Extension (X1) variable has a t_{count} of 0.424 < t_{table} of 1.656 with a significance of 0.672, which means that Extension has no positive and no direct significant influence on the Quality of Life of the Elderly at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing the fifth hypothesis, Elderly Gymnastics (X2) obtained a t_{count} of 2.814 with a significance of 0.006. Therefore, the Elderly Gymnastics (X2) variable has a t_{count} of 2.814 > t_{table} of 1.656 with a significance of 0.006, which means that Elderly Gymnastics has a positive and direct significant influence on the Quality of Life of the Elderly at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.7 No.1. October 2023. Page.216-225

Testing the sixth hypothesis, Periodic Medical Check-up (X3) obtained a t_{count} of 3.642 with a significance of 0.000. Therefore, the Periodic Medical Check-up (X3) variable has a t_{count} of 3.642 > t_{table} of 1.656 with a significance of 0.000, which means that the Periodic Medical Check-up has a direct positive and significant influence on the Quality of Life of the Elderly at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing the seventh hypothesis, the Elderly Health (Y) obtained a t_{count} of 2.522 with a significance of 0.013. Therefore, the Elderly Health (Y) variable has a t_{count} of 2.522 < t_{table} of 1.656 with a significance of 0.013, which means that the Elderly Health has a positive and direct significant influence on the Quality of Life of the Elderly at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing Hypotheses 8, 9, and 10 with the Sobel Test

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	std. Error	Betas		
1	(Constant)	6,594	1904		3,462	001
	X1	043	.102	.029	.424	.672
	X2	.323	.115	.193	2.814	006
	X3	.673	.185	.408	3.642	.000
	Y	.370	.147	.289	2.522	013

Dependent Variable: Z

Sobel test formula

$$t = \frac{a \times b}{Sab}, \text{where } S_{ab} = \sqrt{b^2Sa^2+a^2Sb^2+Sa^2Sb^2}$$

Information: a = Coefficient of direct influence $X_{n1} \rightarrow Y$

b = Coefficient of direct influence $Y_{n2} \rightarrow Y$

sa = Standard error of coefficient a

sb = standard error of coefficient b

Testing the eighth, ninth, and tenth hypotheses can be described as follows:

Testing the Eighth Hypothesis

To know whether (X1→Y) x (Y→Z) of 0.0077 is significant or not, tested with the Sobel test as follows:

$$Sab = \sqrt{b^2Sa^2+a^2Sb^2+Sa^2Sb^2}$$
$$= \sqrt{(0.370)^2(0.060^2)+(0.021)^2(0.147)^2+(0.060)^2(0.147)^2}$$
$$= \sqrt{0.00049+0.000009+0.000077}$$
$$= \sqrt{0.00057}$$
$$= 0.023$$

Thus the value of the t test is obtained as follows:

$$t = \frac{a \times b}{Sab} = \frac{0.021 \times 0.370}{0.024} = 0.32375$$

The t_{count} of 0.3275 is smaller than the t_{table} of 1.656, which means that the mediation parameter has no significant influence. This means that health education has no influence and is not indirectly significant on the Quality of Life of the Elderly through the Elderly Health variable at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.7 No.1. October 2023. Page.216-225

Testing the Ninth Hypothesis

To know whether coefficient (X2→Y) x (Y→Z) of 0.019 is significant or not, tested with the Sobel test as follows:

Calculate the standard error of the coefficient of indirect influence of X2→Y→Z as follows:

$$Sab = \sqrt{b^2Sa^2+a^2Sb^2+Sa^2Sb^2}$$
$$= \sqrt{(0.370)^2(0.067^2)+(0.155)^2(0.147)^2+(0.067)^2(0.147)^2}$$
$$= \sqrt{0.00062+0.000518+0.000092}$$
$$= \sqrt{0.0012352}$$
$$= 0.035$$

Thus the value of the t test is obtained as follows:

$$t = \frac{a \times b}{Sab} = \frac{0.067 \times 0.370}{0.035} = 0.708$$

The t_{count} of 0.708 is smaller than the t_{table} of 1.656, which means that the mediation parameter has no significant influence. This means that Elderly Gymnastics has no influence and is not indirectly significant on the Quality of Life of the Elderly through the Elderly Health variable at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.

Testing the Tenth Hypothesis

To know whether coefficient (X3→Y) x (Y→Z) of 0.394 is significant or not, tested with the Sobel test as follows:

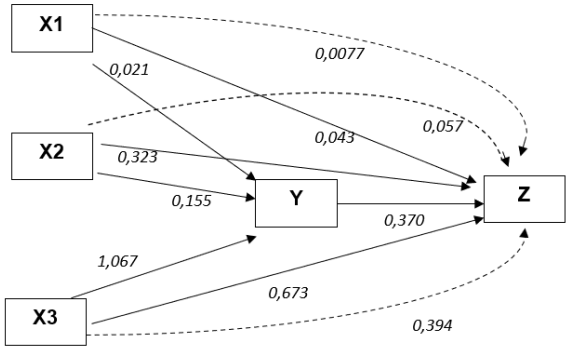
Calculate the standard error of the coefficient of indirect influence of X3→Y→Z as follows:

$$Sab = \sqrt{b^2Sa^2+a^2Sb^2+Sa^2Sb^2}$$
$$= \sqrt{(0.370)^2(0.058^2)+(1.067)^2(0.147)^2+(0.058)^2(0.147)^2}$$
$$= \sqrt{0.00046+0.0246+0.0000725}$$
$$= \sqrt{0.02513}$$
$$= 0.158$$

Thus the value of the t test is obtained as follows:

$$t = \frac{a \times b}{Sab} = \frac{1.067 \times 0.370}{0.158} = 2.468$$

The t_{count} of 2.468 is greater than the t_{table} of 1.656, which means that the mediation parameter has a significant influence. This means that the Periodic Medical Check-up has a positive and significant indirect influence on the Quality of Life of the Elderly through the Elderly health at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng.



DISCUSSION

From the results of hypotheses testing, it is known that Periodic Medical Check-up is the variable that has the greatest influence on the health and quality of life of the elderly with test results showing that Periodic Medical Check-up has a positive and significant influence on the quality of life of the elderly as indicated by the magnitude of t_{count} of 3.642 > t_{table} of 1.656 with a significance of 0.000. This means that, if the Periodic Medical Check-up carried out at the Elderly Posyandu get better, the quality of life of the elderly will also get better. This is in line with a study (Saraisang et al., 2018) revealing that good Posyandu services will be in line with patient satisfaction, and of course influence the frequency of visits to the elderly (Hu et al., 2022). Then Periodic Medical Check-up has a positive and significant indirect influence on performance through the Elderly Health at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng, which is indicated by the magnitude of t_{count} of 2.468 < t_{table} of 1.656. This means that the Elderly Health can play a significant role in mediating the influence of Periodic Medical Check-up on the quality of life of the elderly.

Furthermore, it is also found that the direct influence of Periodic Medical Check-up on the quality of life of the elderly is 0.673. If the elderly health variable is involved as an intervening variable in the form of an indirect influence, the magnitude of the influence of Periodic Medical Check-up on the Quality of Life of the Elderly at the Elderly Posyandu of the Sinoa Community Health Center increases, namely 2.468. So, the existence of the elderly health variable can strengthen the influence of Periodic Medical Check-up on the Quality of Life of the elderly at the Elderly Posyandu of the Sinoa Community Health Center, Bantaeng. This is in line with a study by Lancker 2012 with the results of Periodic Medical Check-up having a significant influence on the quality of life of the elderly (Lancker et al., 2012;Thapa & Dramani Kipo-Sunyehzi, 2022).

CONCLUSION

Extension has no direct positive and significant influence on the elderly health, Elderly Gymnastics has a direct positive and significant influence on the elderly health, Periodic Medical Check-up has a direct positive and significant influence on the elderly health. Then, Extension does not have a positive and direct significant influence on the quality of life of the elderly, Elderly Gymnastics has a positive and direct significant influence on the quality of life of the elderly, Periodic Medical Check-up has a positive and direct significant influence on the quality of life of the elderly. Furthermore, the Elderly health has a positive and significant direct influence on the quality of life of the elderly. Also, Extension has no direct and significant influence on the quality of life of the elderly through the elderly health.

REFERENCES

Badan Pusat Statistik. (2021). Statistik Penduduk Lanjut Usia 2021. https://www.bps.go.id/publication/2021/12/21/c3fd9f27372f6ddcf7462006/statistik-penduduk-lanjut-usia-2021.html.

Beltrán-Sánchez, H., Soneji, S., & Crimmins, E. M. (2015). Past, present, and future of healthy life expectancy. Cold Spring Harbor Perspectives in Medicine, 5(11). https://doi.org/10.1101/cshperspect.a025957.

Hu, W., Li, T., Cao, S., Gu, Y., & Chen, L. (2022). Influence of Nurse-Led Health Education on Self-Management Ability, Satisfaction, and Compliance of Elderly Patients with Chronic Obstructive Pulmonary Disease Based on Knowledge, Belief, and Practice Model. Computational and Mathematical Methods in Medicine, 2022. https://doi.org/10.1155/2022/1782955.

Indahsari, P. N., Agusman, F., & Ekowati, S. (2013). Hubungan Perubahan Fungsi Fisik Terhadap Kebutuhan Aktivitas Hidup Sehari-Hari (Ahs) Pada Lansia Dengan Stroke (Studi Pada Unit Rehabilitasi Sosial Kota Semarang. Jurnal Keperawatan Komunitas, 1(1), 24–32. www.depkes.go.id.

Putri, M. (2018). Determinant Factors To Liveliness Of Elderly In Participating Elderly Integrated Health Post. Jurnal Promkes, 3(4), 32–39.

Saraisang, C. M., Kumaat, L. T., Katuuk, M. E., Studi, P., Keperawatan, I., & Kedokteran, F. (2018). Hubungan Pelayanan Posyandu Lansia Dengan Tingkat Kepuasan Lansia Di Wilayah Kerja Puskesmas Ranomuut Kecamatan Paal Ii Kota Manado (Vol. 6, Issue 1).

Thapa, S. B., & Dramani Kipo-Sunyehzi, D. (2022). Interplay of health literacy, healthcare access and health behaviors with oral health status among older persons. Frontier in Public Health , 3(5), 1–13.

Tuty Putri, S., Anisa Fitriana, L., Ningrum, A., & Sulastri, A. (2015). Studi Komparatif : Kualitas Hidup Lansia Yang Tinggal Bersama Keluarga Dan Panti. 1, 23–29.

Van Lancker, A., Verhaeghe, S., Van Hecke, A., Vanderwee, K., Goossens, J., & Beeckman, D. (2012). The association between malnutrition and oral health status in elderly in long-term care facilities: A systematic review. In International Journal of Nursing Studies (Vol. 49, Issue 12, pp. 1568–1581). https://doi.org/10.1016/j.ijnurstu.2012.04.001.

Widyaning, H., Akademi, P., Estu, K., & Boyolali, U. (2013). Faktor-Faktor Yang Berhubungan Dengan Frekuensi Kehadiran Lanjut Usia Di Posyandu Lansia. In Jurnal Ilmiah Kebidanan (Vol. 4).

World Health Organization. (2019). World Population Prospects 2019.

World Health Organization. (2022). Ageing and health. https://www.who.int/news-room/fact-sheets/detail/ageing-and-health#:~:text=By%202030%2C%201%20in%206,will%20double%20(2.1%20billion).

Zhang, Y., Yeager, V. A., & Hou, S. (2018). The impact of community-based supports and services on quality of life among the elderly in China: A longitudinal study. Journal of Applied Gerontology, 37(10), 1244–1269. https://doi.org/10.1177/0733464816661945.

Zhang, Z., Dong, J., Zhao, C., & Li, Q. (2022). Trends of Healthy Life Expectancy of the Elderly in China in 1994–2015: Revisiting From the Perspective of Morbidity Transition. Frontiers in Public Health, 9. https://doi.org/10.3389/fpubh.2021.774205.