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"Cerdik" Family Assistance with Elderly Blood Pressure in Rw 06 Tlogomas



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Abstract

There are still many elderly who suffer from high blood pressure. The role of the family plays an important role in managing and controlling the blood pressure of the elderly. The aim of this community service was to determine the relationship of "CERDIK" family assistance and the blood pressure of the elderly. The design used a cross sectional, with the population being all elderly people living in RT 04 RW 06 Tlogomas, with a sample of 57 elderly people obtained through accidental sampling. The independent variable in this study is "CERDIK" family assistance, while the dependent variable is blood pressure. The instrument used a questionnaire. The data analysis used Spearman rank. The results showed that the majority of elderly people received good family assistance (52.6%); the majority of elderly people are pre-elderly (57.9%); and the results of statistical tests show that there was no relationship between CERDIK family assistance and elderly blood pressure. It is recommended that future researchers examine forms of family assistance (with family and elderly samples) which are associated with elderly people's blood pressure.

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INTRODUCTION

Hypertension is one of the cardiovascular diseases most often suffered by people (Rokom, 2019). Based on 2022 data, the World Health Organization (WHO) has estimated that worldwide as many as 1.28 billion adults aged 30-79 years suffer from it, the majority of whom live in low- and middle-income countries. The findings also show that an estimated 46% of adults do not know that they have hypertension (WHO, 2022). High blood pressure is triggered by thickened arterial walls, resulting in a buildup of collagen in muscle tissue and causing the arteries to narrow (Widyaningrum et al., 2019). Hypertension is a preventable risk factor and contributes to 13% of deaths (Knott, et al., 2011; Yip, et al., 2013; Okoro & Ngong, 2012).

This disease is associated with unhealthy lifestyles including smoking behavior. Plus, there are genetic elements, certain genders and increasing age that worsen a person's condition (Marleni, 2020; Siregar et al., 2020). High blood pressure is a risk factor for cardiovascular events (Vijver, et al., 2013). Unsatisfactory results in the treatment of hypertension are mostly due to patient non-compliance in taking medication and lack of regular check-ups at health services (Triguna & Sudhana, 2015; Darnindro & Sarwono, 2017).

The family plays an important role in the health of the elderly, including hypertension. Eating arrangements, stress management and physical activity can be conditioned by the family. In line with (Rosland, 2016) which reveals that families have the ability to determine the food consumed and physical activity that is appropriate to the health of the elderly. In this regard, every family is expected to increase knowledge related to the health of the elderly. (Palupi, 2014) added that it is important for families to learn about the hypertension diet issue, namely by managing the foods that are recommended and not recommended for hypertensive elderly people, limiting and avoiding various foods that have an impact on elderly people's cholesterol and blood pressure.

Also agree with (Niman et al., 2017; Romliyadi, 2020) who stated that hypertension sufferers need regular treatment, support from the family, in the form of education, providing health care as a reminder to take medication (PMO) and providing motivation which is very meaningful for the elderly.

Various supports can be provided in an effort to improve the health of the elderly. Family emotional support is very helpful in overcoming elderly stress caused by illness. The support provided by the family will improve the health condition of the elderly. In accordance with (Rosland, 2016) that increased family support is associated with better blood pressure control efforts. This study aims to determine the relationship between CERDIK family assistance and blood pressure in the elderly.

METHOD

CERDIK is the slogan for healthy efforts for the elderly, including checking blood pressure, getting rid of cigarettes, diligently doing physical activity, getting enough rest and managing stress.

He design used a Cross sectional design. The population is elderly people who are at risk of developing hypertension in RT 04 RW 06 Tlogomas, with a sample of 57 elderly people based on accidental sampling technique. The independent variable was intelligent family assistance and the dependent variable was the elderly's blood pressure. An instrument in the form of a questionnaire was used to explore respondents' answers to both variables. The data analysis used Spearman rank.

The activity steps taken were 1). Carry out permits at the research location, 2. Convey the aims and objectives, as well as distribute informed consent to ensure the willingness of the elderly as research samples, 3). Assistance with research questionnaires for the elderly, through structured interview techniques, and researchers writing on answer sheets, 4. Measuring the elderly's blood pressure, 5. Collecting, processing and analyzing data.

RESULT

Tabel 1. Frequency Distribution of Respondents' Characteristics

Variable	frequency	%
Gender		
Man	13	22,8
Woman	44	77,2
Age(year)		
50-55	9	15,8
>55-60	8	14
>60-65	17	29,8
>65-70	14	24,6

>70-75	9	15,8
Education		
No school	6	10,5
elementary school	20	35,1
JUNIOR HIGH S	11	19,3
SENIOR HIGH S	14	24,6
S1	4	7
D3	2	3,5
Living together		
Alone	15	26,3
Husband and Wife	6	10,5
Family	36	63,2
Coffee consumption		
Yes	43	75,4
No	14	24,6
Hard To Sleep		
No	36	63,2
yes	21	36,8
Go to posyandu regularly		
No	28	49,1
Yes	29	50,9
Total	57	100

Based on Table 1, it is known that almost all elderly people are female (77.2%); almost half of the elderly aged >60-65 (29.8); the majority of elderly people live with their families (63.2%); almost all elderly people consume coffee (75.4%); the majority of elderly people do not experience

difficulty sleeping (63.2%); Half of the elderly regularly go to posyandu (50.9%).

“CERDIK” Family Assistance

Based on Table 2, it is known that the majority of elderly people receive family assistance in the good category, 52.6% (30 people).

Tabel 2. Frequency Distribution of Assistance for Elderly Families

Family Assistance	frequency	%
Good	30	52,6
Enough	24	24,1
Not enough	3	5,3
Total	57	100

Elderly Blood Pressure

Based on Table 3, it is known that the majority of elderly people have pre-hypertension, 57.9% (33 people).

Table 3. Frequency Distribution of Blood Pressure in the Elderly

Knowledge	frequency	%
Normal	2	3,5
Pre-Hypertension	33	57,9
Hypertension 1	19	33,3
Hypertension 2	3	5,3
Total	57	100

Tabel 4 Cross Tabulation of Family Assistance with Blood Pressure in the Elderly

Family Assitance	Blood Pressure										P value
	Normal		Pre-Hypertension		Hypertension 1		Hypertension 2		Total		
	f	%	f	%	f	%	f	%	f	%	
Not enough	0	0	2	3,5	1	1,8	0	0	3	5,3	0,757
Enough	1	1,8	14	24,6	8	14	1	1,8	24	42,1	
Good	1	1,8	17	29,8	10	17,5	2	3,5	30	52,6	
Total	2	3,5	33	57,9	19	33,3	3	5,3	57	100	

Based on Table 4, it is known that good family assistance has an impact on the blood pressure of the elderly in the prehypertension category by 29.8%.

The results of the Spearman rank test obtained a p value of 0.757. This data shows that there is no relationship between family assistance and the blood pressure of the elderly in RW 06 Tlogomas Malang.

DISCUSSION

“CERDIK” Family Assistance

Most of the elderly receive CERDIK family assistance in the good category. CERDIK's good family support for the elderly is described as follows, namely that the majority of elderly people receive family attention to maintain stable blood pressure; most families remind the elderly if they

smoke; almost all elderly people care for the elderly by providing food with balanced nutrition; almost the entire family pays attention to the elderly's rest time; Most families accompany the elderly in managing stress and most elderly people are accompanied by their families when doing physical activities.

Family support has a positive impact on forming attitudes that will be good for hypertensive patients in carrying out non-medical or medical therapy. The increasing level of family support creates a caring attitude towards the elderly regarding their health ([Kusumawardana et al., 2017](#)). Apart from providing instrumental support, the family's role is also expected to be an educator for family members. The community service results show that families who have good knowledge of hypertension tend to be more active in providing education to their family members ([Anggreyanti IP, et al., 2020](#)). Apart from that, other research also suggests that families need to increase their knowledge about hypertension in order to be successful in treating family members ([Maytasari & Sartika, 2020](#)).

The education provided by this family will have an impact on increasing the knowledge and attitudes of hypertension sufferers ([Husein et al., 2021](#)).

Elderly Blood Pressure

Most elderly people experience pre-hypertension. This data shows that the majority of elderly people have blood pressure that tends to exceed normal. Various factors that influence abnormal blood pressure are age. Most elderly people who experience hypertension are over 60 years old. As a person gets older, his blood pressure tends to increase. Agree with Riskesdas (2013) which states that hypertension will continue to increase with increasing age (> 45 years); Hypertension often occurs in older people ([Khasanah, 2022](#)). Khasanah also revealed that someone aged ≥ 45 years has 5.5 times the potential to experience hypertension compared to those aged ≤ 45 years. The results of this study are also supported by the results of research which found a relationship between age and hypertension ([Jannah, et al 2016](#); [Khasanah, 2022](#)).

The majority of elderly people who experience hypertension are female. The Indonesian Ministry of Health revealed that men are actually at a 2.3 times

higher risk of developing hypertension than women, however, during menopause, the prevalence of hypertension in women increases. This hormonal influence causes women to have a higher prevalence of hypertension than men ([Choi, et al., 2017](#)).

WHO (2013) adds that there are many factors that contribute to hypertension, namely high consumption of foods that contain lots of salt and fat, minimal consumption of fruit and vegetables, high consumption of alcohol, lack of exercise, and poor stress management. Apart from that, it is also exacerbated by the risk of hypertension complications such as high cholesterol, obesity and diabetes.

Various factors that influence abnormal blood pressure include sociodemographic factors ([Choi, et al., 2017](#); [Bushnik, 2018](#); [Peltzer&Pengpid, 2018](#)), behavior linked to Treatment, and Control of Hypertension in Someone who is obese has the potential to be 2x more likely to experience hypertension than someone who is not obese ([Khasanah, 2022](#)).

The Relationship between Smart Family Assistance and Blood Pressure in the Elderly

Cross tabulation shows that good family assistance has an impact on the blood pressure of elderly people in the prehypertension category. This data shows that intervention from the family helps the elderly in managing their blood pressure. Good family CERDIK assistance is described by caring for the family, reminding the elderly if they are consuming or behaving unhealthy, providing food, caring for them when they are sick, helping to manage the stress of the elderly, reminding the elderly if they are not getting enough rest, and accompanying the elderly when carrying out activities. The results of this study show that family assistance is not related to the blood pressure of the elderly.

Blood pressure is the pressure of blood and is pumped by the heart over the walls of the arteries. Blood pressure consists of systolic (the ventricles contract and eject blood into the arteries) and diastolic (the ventricles relax and the atria drain blood into the ventricles) ([Amiruddin et al., 2015](#)). High and low blood pressure is influenced by many factors, including age, BMI, physical and psychological stress, heredity, coffee consumption, lack of physical activity, gender, unhealthy eating patterns, high salt consumption, smoking, and

caffeine consumption ([Garnadi, Y.2012](#); [Hull, Alison, 1993](#)).

Various research results strengthen the determinants of blood pressure. Aristotle (2018) stated that the majority of elderly men (53.3%) and women (46.7%) had hypertension; More men experience hypertension ([Aristoteles, 2018](#)). [Doren, et al 2024](#) revealed the difference in blood pressure of elderly women and men after being given deep breathing relaxation.

([Musakkar & Djafar, 2021](#)) explain that increasing age changes the structure of large blood vessels into narrow, stiff walls which results in increased blood pressure. Supported by ([Rahmatillah, et al 2020](#)) who found that obesity experiences an increased hormonal system (aldosterone, renin, angiotensin II) so that blood flow and blood pressure increase, blood vessels experience stiffness, resulting in a risk of hypertension ([Rahmatillah, et all, 2020](#)). ([Azzubaidi, et al 2023](#)) agree that they found a link between BMI and blood pressure (pvalue=0.003). Ina, et al (2020) added that genetics is linked to the occurrence of hypertension ([Ina, Stefania J., et al. 2020](#)).

From the theory above alone, we can answer why there is no relationship between family assistance and the blood pressure of the elderly. Family assistance is not a factor that directly influences blood pressure, but can indirectly support the elderly to maintain stable blood pressure, through various CERDIK elderly behaviors.

CERDIK behavior carried out by the elderly, namely checking blood pressure, getting rid of cigarettes, exercising diligently, having a balanced diet, getting enough rest and managing emotions, can be carried out by the elderly with help and support from the family, by providing support, reminding and accompanying the elderly so that they continue to consistently do it CERDIK behavior.

CONCLUSION

There is no relationship between CERDIK family assistance and blood pressure in the elderly (p value 0.757).

SUGGESTION

It is recommended that future researchers examine forms of family assistance (with samples of families and the elderly) which are associated with blood pressure in the elderly.

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CONFLICT OF INTEREST

All authors fully contributed to the community service activity started from making the concept of the activity, managing the tabulation of the data, writing a draft manuscript and publication.

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