



## Elderly care givers behavior associated with physical exercise implementation among elderly with hypertension<sup>☆</sup>



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### KEYWORDS

Elderly;  
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### Abstract

**Objective:** Aging is a natural process that will be experienced by everyone, and during the aging period there will be a decrease in body function especially in cardiovascular function so that it will cause health problems such as hypertension. Hypertension is a health problem that is generally found in the elderly and the need for appropriate treatment such as the implementation of physical exercise for the elderly and the role of the family to help the elderly overcome this problem. The purpose of this study was to determine the behavior of elderly caregivers with the implementation of physical exercise in the elderly with a hypertension health problem.

**Method:** This research uses descriptive correlational design. The sample size was 108 respondents. Data analysis used Chi-Square test.

**Results:** The results of this study indicated that the behavior of elderly caregiver affects the implementation of physical exercise in the elderly with hypertension ( $p$ -value < 0.001; OR = 4.781).

**Conclusions:** The results of this study indicate that the behavior of elderly caregivers influences the implementation of physical exercise in the elderly with hypertension. The results of this study are expected to provide input to community nurses as providers of nursing care, one of them is nursing care providers for families can work with family members as caregivers, especially in the elderly with hypertension health problems to motivate families to do effective treatment so that elderly hypertension can exercise physical according to the prescribed recommendations.

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## Introduction

The number of elderly has been increasing between 2015 and 2030 as many as 55.7% of the total world population. Sustainable Development Goals (SDGs) state that in the year 2050 the numbers of elderly in the world will as many as 2.1 billion people.<sup>1</sup>

Those increasing number also occurred in Indonesia. Indonesian population aged over 60 years in 2015 as many as 21,688,967 people. In 2030, an estimated number of elderly reaches 296,405,100 people.<sup>2</sup> The increase in the number of elderly is due to the increase of health service to society, and the welfare of the society is evenly distributed.<sup>3</sup>

The elderly have health problems that will decrease their productivity. The health problems in the elderly were caused by increasing age and had a lot of loss (multiple losses).<sup>4,5</sup> A decreased physical function such as cardiovascular cause elderly susceptible to hypertension disease so depend on others.<sup>4,6</sup>

Hypertension still becomes a health problem in Indonesian. The population of Indonesia who suffers from hypertension as many as 25.8% of all populations. The elderly age 65–74 years old have hypertension as many as 57.6% and age over 75 years as many as 63.8%.<sup>7</sup>

Hypertension cases are evenly distributed throughout the public health center and increasing every year. In 2013, recorded 19,275 cases of hypertension, in 2014. Amounted to 47,772 cases of hypertension and in the latest data in 2015 amounted to 66,764 cases.<sup>8</sup>

Elderly who have health decline require families to maintain their health. The family also as a major source to help its members when they get sick, so the family can encourage elders to achieve a healthy life.<sup>9,10</sup>

## Method

This research used a descriptive correlation research design with a cross-sectional approach. The research data was conducted in Cimanggis public health center Depok City. The respondents were 108 hypertensive elderly outpatients. Sampling was taken by purposive sampling method. This research has passed the ethical test and applied three ethical principles consisting of: respecting human dignity and prestige, paying attention to welfare and goodness, and justice. The questionnaires used in this study consisted of behavioral questionnaires (knowledge, attitude, skills) and the perception of the care giver about the implementation of physical exercise in elderly hypertension.

Data were analyzed using analysis and statistical software. Bivariate analysis identified the relationship between elderly care giver behavior and the implementation of physical exercise in the elderly with hypertension.

## Results

Table 1 shows that gender of elderly care giver consisting of women (77.8%) and men (22.2%). Age of elderly care giver was adult (30.5%). Most of the elderly care giver was in secondary education level. The elderly care giver behavior consisting of good (54.6%) and poor (45.4%).

**Table 1** Characteristic of elderly care giver in Depok, June 2017 ( $n = 108$ ).

Characteristic	%
<i>Gender</i>	
Male	22.2%
Female	77.8%
<i>Age</i>	
Adolescent	6.4%
Young adult	24.8%
Adult	30.5%
Elderly	8.5%
<i>Education</i>	
No school	4.6%
Primary education	18.5%
Secondary education	57.4%
College	19.4%
<i>Behavior</i>	
Good	54.6%
Poor	45.4%

Table 2 shows that there is a relationship between elderly care giver behavior with the physical exercise implementation in elderly with hypertension. The care giver who has good behavior affects as many as 51 elders (86.4%) to do physical exercise. It concludes that there is a significant correlation between behavior of the offender by doing physical exercise at elderly hypertension with  $p$ -value = 0.001 ( $p$ -value < 0.05). The good behavior in elderly care giver has a chance 4,781 times for the elderly to do physical exercise.

## Discussion

The results showed that there is a relationship between elderly care giver behavior with the implementation of physical exercise in elderly hypertension. Good behavior on elderly care giver has a chance 4,781 times in elderly hypertension to do physical exercise.

The results of this study are in line with the research conducted by<sup>11</sup> states that the behavior of the care giver affects the atmosphere of care to the elderly. Good behavior will cause good care for the elderly, and poor behavior will affect not optimal treatment in the elderly, even have a risk of violence against the elderly.

The research conducted by<sup>12</sup> explained that the families who give some attention to clients would affect the family psychology in caring for family members.

The research conducted by<sup>13</sup> explains that directly care giver support will affect better health condition among the elderly than the others support. A good behavior that given to the elderly improve and affect the health of the elderly.

The research conducted by<sup>14</sup> states that family support has a relationship with elderly health improvement so that the elderly can feel protected and safer.

There is a significant correlation between the behavior of elderly caregiver with physical exercise implementation in elderly with hypertension. The results of this study are expected to provide input and consideration to solve the

**Table 2** The relationship between elderly care giver behavior and physical exercise implementation among elderly with hypertension in Depok, June 2017 ( $n = 108$ ).

Behavior	Physical exercise		Total
	Yes	No	
Good	86.4%	13.6%	100%
Poor	57.1%	42.9%	100%
OR	4,781 (1,876–12,188)		
<i>p</i> value	0.0001		

problems of hypertension in the elderly by increasing elderly hypertensive knowledge about treatment.

### Conflict of interests

The authors declare no conflict of interest.

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