

***EXECUTIVE SUMMARY*****THE EFFECT OF ELDERLY COGNITIVE CARE ON COGNITIVE  
FUNCTION AND PHYSICAL ACTIVITY FOR ELDERLY IN  
JETAK PUBLIC HEALTH CENTER OF TUBAN REGENCY****By: Hyan Oktodia Basuki**

Aging or aging process can occur in all human beings during their life and may effect in some changes to the function of the human body. The changes in organ function and body system that occur to person, will affect the derivation in physical ability, mental, social spiritual, intellectual, fulfillment of daily needs or physical activity and memory. One of the effects of decreased function of organ is the decrease of brain function caused by the brain atrophy, therefore it can lead to the degenerative diseases to the elderly, that is disruption to the cognitive function and it will affect the physical activity of the elderly.

The projected number of elderly (60 years) in Indonesia in 2014 was estimated about 207.93 millions , and in 2035 will be estimated reaching up to 481.987.000 inhabitants. The increase in number of elderly in Indonesia significantly makes Indonesia comes into the top 5 countries that has the largest population of elderly in the world. The increase in number of elderly is also directly proportional to the problems of elderly, including the decrease of cognitive function and physical activity. This accident is not only found in old people over 60 years, but also can attack people aged 40 years.

This research used “quasi experimental”. This quasi experimental design used to find the casual relationship with the involvement of research in manipulation of independent variable. This type of research is “Pre-Post Test Design” is a study that reveals a cause and effect relationship by involving a group of subject. The subject group was observed a prior to intervention, then observed again after intervention. The population of this study was 79 elderly who have decreased of the cognitive function and physical activity in Puskesmas Jetak Tuban.

Sampling using in this study was non probability sampling method with purposive sampling technique. The subject was divided into inclusion and exclusion criteria. Inclusion criteria was the elderly with decreased cognitive function and physical activity, elderly with the age around 60-74 years old, elderly who can read and write, elderly with minimum education level of primary school (SD), and elderly who is willing to be respondent. Exclusion criteria is the elderly people who faced the blindness and deafness, elderly who has the severe mental disorder and elderly with the total care (elderly with physical problem that require the total care such as paralysis and stroke). the variables in this study consist of independent elderly cognitive care and dependent variable in the form of cognitive function and physical activity of elderly.

Obtained as a result of 31 (100%) of the respondents who are members of the intervention group had normal cognitive function pretest values of 0 (0%) of the respondents be posttest 2 (6.4%) of the respondents. The value of mild cognitive function pretest of 6 (19.4%) of respondents into 10 posttest (32.2%) respondents. The value of cognitive functioning are pretest of 18 (58%) of the respondents be posttest 15 (48.4%) respondents. The value of cognitive function weight pretest of 7 (22.6%) of the respondents be posttest 4 (13%) of the respondents. The results of a pretest and posttest value of the intervention group it can be concluded that before and after following the activities of the ECC some elderly experience increased cognitive function.

Results of the 31 (100%) of the respondents who are members of the control group had normal cognitive function value pretest of 0 (0%) of the respondents be posttest 2 (6.4%) of the respondents. The value of mild cognitive function pretest of 7 (22.6%) of the respondents be posttest 6 (19.4%) respondents. The value of cognitive functioning are pretest of 16 (51.6%) of the respondents be posttest 16 (51.6%) of the respondents. The value of cognitive function weight pretest by 8 (25.8%) of the respondents be posttest 7 (22.6%) of the respondents. The result value from the control group it can be concluded that before and after following the given booklet ECC with routine, a small percentage of the respondents experienced an increase in cognitive function.

Results of the 31 (100%) of the respondents who are members of the intervention group had a normal physical activity pretest values of 0 (0%) of the respondents be posttest 7 (22.6%) of the respondents. The value of physical activity light pretest of 29 (93.6%) of the respondents be posttest 23 (74.2%) respondents. The value of physical activity are pretest of 2 (6.4%) of the respondents be posttest 1 (3.2%) respondents. The value of physical activity weight pretest and posttest did not experience a change of 0 (0%) of the respondents. The results of a pretest and posttest value of the intervention group it can be concluded that before and after following the activities of the ECC fraction elderly experience increased physical activity.

Results of the 31 (100%) of the respondents who are members of a control group of normal physical activity has a value of pretest and posttest did not experience a change of 0 (0%) of the respondents. The value of physical activity light pretest and posttest unchanged by 28 (90.3%) respondents. The value of physical activity are pretest and posttest did not experience a change of 3 (9.7%) respondents. The value of physical activity weight pretest and posttest did not experience a change of 0 (0%) of the respondents. The result value from the control group it can be concluded that before and after following the given booklet ECC with the routine, all of the respondents experienced no change or decrease against increase in physical activity.

Activities elderly cognitive care, can be implemented well because it gets the support and cooperation of the elderly as well as health workers in Jetak Public Health Center of Tuban Regency. Elderly cognitive care is an important technique, not only aims to maintain the sensation of elderly to memory, identity of people, place and time, but also can provide a good effect on elderly people who experience decreased cognitive function and physical activity.

**ABSTRACT****THE EFFECT OF ELDERLY COGNITIVE CARE ON COGNITIVE FUNCTION AND PHYSICAL ACTIVITY FOR ELDERLY IN JETAK PUBLIC HEALTH CENTER OF TUBAN REGENCY**

*Hyan Oktodia Basuki<sup>1</sup>, Joni Haryanto<sup>2</sup> and Tiyas Kusumaningrum<sup>3</sup>*  
<sup>1, 2, 3</sup> *Faculty of Nursing, Airlangga University, Surabaya, East Java, Indonesia*  
[hyancassava@gmail.com](mailto:hyancassava@gmail.com), [joni.h.unair@gmail.com](mailto:joni.h.unair@gmail.com), [tiyas-k@fkp.unair.ac.id](mailto:tiyas-k@fkp.unair.ac.id)

**Abstract:** **Background,** The process of aging causes various health problems namely the physiological changes of the elderly. The increase in number of elderly is directly proportional to the problems of elderly, including the decreased cognitive function and physical activity. This phenomenon is most commonly found in people over the age of 60 years, but also can attack the age of 40 years.

**Methods,** This study used quantitative research with quasi experimental pre-posttest design. The Sampling method uses non probability sampling with purposive sampling. The sample of this research was 62 elderly, divided into treatment and control groups in Puskesmas Jetak Tuban. The questionnaire in this research used MMSE for cognitive function and Index katz for physical activity. The research was conducted from March to April 2018.

**Results,** Data were analyzed by used wilcoxon sign rank test and *Mann Whitney*. The result of the study obtained significant values of cognitive function and physical activity variables in intervention group, pre and post intervention, the elderly cognitive care had a calculated value  $Z = -4.32$  and  $Z = -3.94$  with significant value  $\alpha = 0.00$ . This result mean if value of p value  $\leq 0.05$ , then the hypothesis is accepted, this means that there is significant difference of elderly cognitive care to cognitive function and physical activity of elderly in Puskesmas Jetak Tuban.

**Conclusion,** there is an increase in physical activity and cognitive function in the elderly, after cognitive treatment given to the elderly. This intervention can be used as a treatment for the elderly against a decline in cognitive function and physical activity.

**Key Words:** *Elderly Cognitive Care, Cognitive Function, Physical Activity, Elderly*

**ABSTRAK**

**PENGARUH *ELDERLY COGNITIVE CARE* TERHADAP FUNGSI KOGNITIF DAN AKTIVITAS FISIK LANSIA DI PUSKESMAS JETAK KABUPATEN TUBAN**

*Hyan Oktodia Basuki*<sup>1</sup>, *Joni Haryanto*<sup>2</sup> and *Tiyas Kusumaningrum*<sup>3</sup>  
<sup>1, 2, 3</sup> *Fakultas Keperawatan, Universitas Airlangga, Surabaya, Jawa Timur, Indonesia*

[hyancassava@gmail.com](mailto:hyancassava@gmail.com), [joni.h.unair@gmail.com](mailto:joni.h.unair@gmail.com), [tiyas-k@fkp.unair.ac.id](mailto:tiyas-k@fkp.unair.ac.id)

**Abstrak:** **Latar Belakang,** Proses penuaan menyebabkan berbagai masalah kesehatan yaitu perubahan fisiologis lansia. Meningkatnya jumlah lansia berbanding lurus dengan masalah yang dimiliki oleh lansia, termasuk menurunnya fungsi kognitif dan aktivitas fisik. Kejadian ini paling sering ditemukan pada orang yang berusia lebih dari 60 tahun, tetapi juga dapat menyerang usia 40 tahun. **Metode,** Jenis penelitian menggunakan penelitian kuantitatif dengan quasi eksperimental *pre-posttest* desain. Metode pengambilan sampel menggunakan *nonprobability sampling* dengan *purposive sampling*. Sampel penelitian berjumlah 62 lansia, yang dibagi menjadi kelompok perlakuan dan kontrol di Puskesmas Jetak Kabupaten Tuban. Kuesioner dalam penelitian ini menggunakan MMSE untuk fungsi kognitif, dan Indeks Katz untuk aktivitas fisik. Penelitian dilakukan dari Maret sampai dengan April 2018. **Hasil,** Hasil uji statistik dengan menggunakan *wilcoxon signed rank test* dan *Mann Whitney* didapatkan nilai signifikan kelompok intervensi fungsi kognitif dan variabel aktivitas fisik, sebelum dan sesudah diberikan intervensi *elderly cognitive care* memiliki nilai hitung  $Z = -4,32$  dan  $Z = -3,94$  dengan nilai signifikan  $\alpha = 0,00$ . Hasil ini berarti jika nilai  $p \text{ value} \leq 0,05$ , maka hipotesis diterima, artinya terdapat pengaruh *elderly cognitive care* terhadap fungsi kognitif dan aktivitas fisik lansia di Puskesmas Jetak Kabupaten Tuban. **Kesimpulan,** Terdapat peningkatan fungsi kognitif dan aktivitas fisik pada lansia, setelah diberikan perawatan kognitif lansia. Intervensi ini dapat digunakan sebagai penatalaksanaan untuk lansia terhadap penurunan fungsi kognitif dan aktivitas fisik.

**Kata Kunci:** *Elderly Cognitive Care, Fungsi Kognitif, Aktivitas Fisik, Lansia*