

# The Role of Continuing Education on Elderly Memory: Islamic Perspective

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**Abstract. Background:** Important aspects that will have an impact on the quality of life of the elderly, including education and health. Education in the view of Islam functions to change natural development into directed and directed development.

**Aim:** the purpose of this study is to explain the role of continuing education on memory in the elderly from an Islamic perspective.

Method: the methodology used is in the form of library research.

**Results:** the results of this study is that continuing education can delay the decline in memory function in the elderly by increasing brain neuroplasticity.

**Conclusion:** Islam obliges muslims to seek knowledge from the cradle to the grave. Continuing education is very beneficial for the elderly to protective nervous system disorders in the form of neurodegenerative and have an impact on decreasing memory and cognitive functions.

**Keywords:** Education · Elderly Memory and Islamic Perspective

## 1 Introduction

Research on aging in the last century is very important, the increasing number of the elderly population (elderly). Important aspects that will have an impact on the quality of life of the elderly, including education and health. These two aspects are able to increase the capacity of the elderly in social life. The world's population is currently in the aging population era where the number of people aged over 60 years exceeds 7 percent of the total population [1, 2].

Aging in the elderly according to biologists is defined as a process that begins at conception and continues until death [3, 4]. The journey of human life in the adult phase has a maximum level of strength in the function of the body's organs and after that it will experience a gradual decrease in the strength of the function [5]. This is in accordance with the word of Allah in QS Ar Ruum: 54 which means: "Allah, it is He who created you from a weak state, then He made (you) after a weak state become strong, then He

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made (you) after being strong weak (again).) and graying. He creates what He wills and He is All-Knowing, All-Powerful." This verse explains that the strength of the function of human organs from phase to phase.

In the aging process, you will have 13 geriatric syndromes, which include disorders of the neurological system, namely dementia or what we often refer to as memory loss [6]. Crook (1994) reported that with increasing age the likelihood of memory loss increases, this is based on the results of standardized memory test scores which are characterized by a decrease in objective memory performance compared to younger adults [7].

Islam motivates its adherents to always improve the quality of science and knowledge, wheter it's old or young, male or female, rich or poor get the same portion in the view of Islam in the obligation to seek knowledge (education). With the education of the elderly, their memory is still strong, because with the provision of higher education or job achievement and spiritual activities, they can act as a preventive factor for senility [8].

Education can compensate for all types of neurodegenerative and vascular disorders, and also affects brain weight. People who are more educated have more brain weight and are able to deal with cognitive improvements compared to people with low education [9].

## 2 Method

The type of research is library research with a qualitative approach. As for the data collected we used documentation techniques, and for data analysis we used analytical description with three stages; data reduction, data presentation, and conclusion or verification.

## Elderly Memory

With age, the body will experience the aging process, including the brain. The brain will experience many neurological disorders, such as the capacity of the brain to transmit signals and communication will decrease and changes in function will occur, including cognitive function in the form of decreased memory, which is difficult to recall (dementia) so that it makes the biggest fear among the elderly [10–12].

Memory is a place to store knowledge to be recalled. Memory and learning as a basis for individuals to adapt their behavior to the surrounding environment [13]. Memory is related to the nervous system of the brain. The brain has one trillion brain cells with one hundred billion active cells or neurons and nine hundred billion other cells as "glue", supplying and covering the active cells. Each active cell and neuron can form between 2,000 and 20,000 dendrites that are similar to tree branches. Each dendrite receives input from other cells and stores information [14].

One among the most important organs in forming long-term memory is the hippocampus which is located in both the right and left hemispheres of the brain. The hippocampus is an important terminal that receives and filters information, which helps enter that information into memory and transmit it to other parts of the brain. Without the hippocampus, humans might be able to learn, but not remember [15]. In the retrieval stage, or recall, failure often occurs so that forgetting occurs [16]. Forgetting is the loss of the ability to mention or reproduce what has previously been learned. In simple terms, Gulo (1982) and Reber (1988) define forgetting as the inability to recognize or remember something that has been learned or experienced. Easy to forget is the mildest stage and is often experienced by elderly people. Based on statistical data, 39% of people at the age of 50–60 years experience forgetfulness and this figure becomes 85% at the age of over 80 years.

## Continuing Education

Learning and education are important factors in providing participation in society and enabling adults to enjoy positive lives as they age [17]. The learning process can take place at all ages, from infants to the elderly. Without learning, of course humans will not change and develop optimally. The importance of this learning process is also supported by the hadith which states that "Seeking knowledge (learning) is obligatory for every Muslim". This argument shows that Islam places great emphasis on the importance of the learning process. Learning is also an important key in education. The success or failure of education depends on the learning process carried out. Without learning, the educational process will not be realized [18].

The influence of the level of education will affect a person's development. The higher a person's education, the more experiences that affect the way of thinking, behaving, behaving and having expertise or expertise and having a high motivation to learn, showing the same memory abilities as young people than someone with a low level of education [19]. There is empirical evidence the education early in life and in the elderly will reduce cognitive decline. This may even increase neuroplasticity, utilize new brain cells and also support new neural pathways [20, 21].

Dench and Regan (2000) explain the influence of formal and informal learning for the elderly (50 years and over) to enjoy challenges and always keep their brains active. The most common reason for the elderly not to study is a lack of interest and time. It is clear that learning plays an important role in productive aging. Ardelt makes the case for lifelong learning and continuing education for older people in the community to maintain their quality of life by increasing independence, and their coping strategies in those related physical, health, and social areas [22].

The Role of Continuing Education on Elderly Memory: Islamic Perspective Allah SWT says in Surah An-Nahl verse 70, which means: Allah created you, then you died; And some of you are returned to the weakest age (senile), so that he no longer knows anything he used to know. Indeed, Allah is All-Knowing, All-Powerful. Senility cannot be cured, dementia treatment only reduces signs and symptoms and optimizes the abilities that are still owned, things that can be done to minimize the occurrence of dementia by reducing risk factors, and doing lots of learning activities whose function

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is to maintain memory and optimize brain function [23].

It is not only knowledge related to the affairs of the hereafter that is emphasized by Islam, but knowledge related to worldly affairs as well. Because it is impossible for humans to achieve happiness in the future without going through the life of this world [24]. The suggestion to seek knowledge throughout life is in accordance with the expression of the Salaf scholars which reads "Seek knowledge from the cradle to the grave". That education and memory are important aspects that play a role in the quality of life of the elderly. These two aspects are able to increase the capacity of the elderly in social life [25].

Islam also teaches to think by seeking and learning from any source. The Prophet Muhammad once explained the importance of seeking knowledge, as he said: "learn knowledge and teach it to others. Learn what is fardhu and teach it to others. "(HR. Ad Darimi) [26]. Malik Fadjar (1998) argues that formal, non-formal and informal education will only have the potential to be successful if it is carried out in synergy between the three existing Islamic education paths. Formal institutions alone will be limited if they are not supported and strengthened by informal and non-formal education channels [27].

## 3 Results

That education and memory are important aspects that play a role in the quality of life of the elderly. These two aspects are able to increase the capacity of the elderly in social life. Islam motivates its adherents to always improve the quality of science and knowledge, young or old, male or female, poor or rich get the same portion in the view of Islam in the obligation to seek knowledge (education). With the education of the elderly, their memory is still strong, because with the provision of higher education.

There is empirical evidence the education early in life and in the elderly will reduce cognitive decline. This may even increase neuroplasticity, utilize new brain cells and also support new neural pathways. Continuing education has an important role in increasing neuroplasticity which can maintain memory function in the elderly. This is reinforced by the obligation of a Muslim to seek knowledge from birth to death.

## 4 Discussion

In the living world there are two circumstances that will have a profound impact on individuals and society in the stages of the coming decades. The first is that aging is linked to brain and cognitive changes that can limit functional capacity. Second, the impact of changes in aging along with increasing age is always a concern [28]. Among the effects of aging are changes in neurotransmitter and hormone levels that cause a decrease in memory storage such as dementia [6].

Senility cannot be cured, dementia treatment only reduces signs and symptoms and optimizes the abilities that are still owned, things that can be done to minimize the occurrence of dementia by reducing risk factors, and doing lots of learning activities whose function is to maintain memory and optimize brain function [23].

There is empirical evidence the education early in life and in the elderly will reduce cognitive decline. This may even increase neuroplasticity, utilize new brain cells and also support new neural pathways [20, 21]. Continuing education has an important role in increasing neuroplasticity which can maintain memory function in the elderly. This is reinforced by the obligation of a Muslim to seek knowledge from birth to death.

Of course, there are more that play a role in maintaining memory function in the elderly besides education. Gunawan (2021) reports efforts to inhibit dementia (memory decline) in potential elderly through programs designed to cover the needs of the elderly aspects in terms of preventing their dementia, such as physical aspects, social aspects, psychological aspects and spiritual aspects [29].

Spiritual aspects in Islam such as shalat, reading or listening to the Al Quran, fasting etc. This certainly requires a study regarding efforts to prevent memory loss (dementia) in the elderly.

## 5 Conclusion

Elderly is the final phase of human life that experiences physiological changes, changes in psychosocial behavior and cognitive changes in accordance with the letters Arrum: 54 and Gafir: 67. The elderly will experience nervous system disorders in the form of neurodegenerative and have an impact on decreasing memory and cognitive functions according to surah Al- Hajj (22):5 and Yaasin (36):68. Continuing education has an important role in increasing neuroplasticity which can maintain memory function in the elderly. This is reinforced by the obligation of a Muslim to seek knowledge from birth to death. The education here includes formal, non-formal and informal education which can complement and enrich each other.

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## References

- Kementerian Kesehatan RI, Analisis Lansia 2017. Jakarta: Pusat Data dan Informasi Kementerian Kesehatan RI, 2017.
- Badan Pusat Statistik, Statistik Penduduk Lanjut Usia 2020. Jakarta: Badan Pusat Statistik, 2020.
- N. R. Balcombe and A. Sinclair, "Ageing: Definitions, mechanisms and the magnitude of the problem," *Bailliere's Best Pract. Res. Clin. Gastroenterol.*, vol. 15, no. 6, pp. 835–849, 2001, doi: https://doi.org/10.1053/bega.2001.0244.
- 4. A. K. Dahlan, A. S. Umrah, and T. Abeng, "Kajian Teori Gerontologi dan Pendekatan Asuhan pada Lansia," in *Kesehatan Lansia*, Malang: Intimedia, 2018.
- A.B.P. Hasan, Psikologi perkembangan Islami: menyingkap rentang kehidupan manusia dari prakelahiran hingga pascakematian. Jakarta: Raja Grafindo Persada, 2006.
- 6. M. Stanley and P. G. Beare, Buku Ajar Keperawatan Gerontik, Ke-2. Jakarta: EGC, 2007.
- T. H. Crook, "Estimated Prevalence of Age-Associated Memory Impairment Derived From Standardized Tests of Memory Function," *Int. Psychogeriatrics*, vol. 6, no. 1, pp. 95–104, 1994, doi: https://doi.org/10.1017/S1041610294001663.

- 8. N. D. Astutik, "Kognitif, lansia, Kualitas Hidup PENGARUH FUNGSI KOGNITIF TER-HADAP KUALITAS HIDUP LANSIA DI POSYANDU LANSIA SRIKANDI KELURA-HAN GADINGKASRI KECAMATAN KLOJEN MALANG," *J. Keperawatan Malang*, vol. 2, no. 2, pp. 90–94, 2018, doi: https://doi.org/10.36916/jkm.v2i2.29.
- 9. T. L. Larasati, "Prevalensi Demensia di RSUD Raden Mattaher Jambi," J. Unja, 2013.
- G. M. McKhann *et al.*, "The diagnosis of dementia due to Alzheimer's disease: Recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease," *Alzheimer's Dement.*, vol. 7, no. 3, pp. 263–269, 2011, doi: https://doi.org/10.1016/j.jalz.2011.03.005.
- 11. P. A. Potter and A. G. Perry, *Buku ajar fundamental keperawatan: Konsep, proses dan praktik*, 4th ed. Jakarta: EGC, 2005.
- 12. A. Singh-Manoux *et al.*, "Timing of onset of cognitive decline: Results from Whitehall II prospective cohort study," *BMJ*, vol. 344, no. 7840, pp. 1–8, 2012, doi: https://doi.org/10.1136/bmj.d7622.
- 13. L. Sherwood, Human Physiology: From Cells to Systems. Jakarta: EGC, 2011.
- G. Dryden and J. Vos, Revolusi Cara Belajar (The Learning Revolution). Bandung: KAIFA, 2001.
- 15. C. Rose and M.J. Nicholl., &., Accelerated Learning For the 21st Century, Penj. Purwanto, Bandung: Nuansa, cet. ke-4, 2003., Ke-4. Bandung: Nuansa, 2003.
- A.R. Shaleh, Psikologi Suatu Pengantar Dalam Perspektif Islam, Ke-1. Jakarta: Prenada Media, 2004.
- 17. WHO, WHO. Active ageing: A policy framework. 2002, p. 16.
- Khadijah and Nyayu, Psikologi Pendidikan. Palembang. Palembang: Gravindo Telindo press, 2011.
- 19. F. J. Monks, A. M. P. Knoers, and S. R. Haditono, *Psikologi Perkembangan: Pengantar dalam Berbagai Bagiannya*. Yogyakarta: Gadjah Mada University Press, 2001.
- G. M. Boulton-Lewis, "Education and learning for the elderly: Why, how, what," Educ. Gerontol., vol. 36, no. 3, pp. 213–228, 2010, doi: https://doi.org/10.1080/03601270903182877.
- 21. Y. Stern, "What is cognitive reserve? Theory and research application of the reserve concept," *J. Int. Neuropsychol. Soc.*, vol. 8, no. 3, pp. 448–460, 2002, doi: https://doi.org/10.1017/S13 55617702813248.
- M. Ardelt, "Intellectual versus wisdom-related knowledge: The case for a different kind of learning in the later years of life," *Educ. Gerontol.*, vol. 26, no. 8, pp. 771–789, 2000, doi: https://doi.org/10.1080/036012700300001421.
- N. A. Khasanah Muhammad, "Hubungan antara Tingkat Pendidikan dengan Kejadian Penurunan Daya Ingat pada Lansia," *J. Mutiara Med.*, no. Vol 12, No 3 (2012), pp. 150–154, 2012.
- 24. Fakhrul Rijal, "BELAJAR MENURUT PERSPEKTIF AL-QUR'AN," *Handayani*, vol. 6, no. 2, pp. 82–90, 2016.
- L. B. Zahodne, J. J. Manly, A. MacKay-Brandt, and Y. Stern, "Cognitive declines precede and predict functional declines in aging and Alzheimer's disease.," *PLoS One*, vol. 8, no. 9, pp. 1–7, 2013, doi: https://doi.org/10.1371/journal.pone.0073645.
- 26. S. Arifin, "Perkembangan Kognitif Manusia Dalam Perspektif Psikologi Dan Islam," *Tadarus J. UM Surabaya*, pp. 50–67, 2016.
- 27. A.M. Fadjar, Visi Pembaruan Pendidikan Islam, Ke-1. Jakarta: LP3NI, 1998.

- 28. C. Lustig, P. Shah, R. Seidler, and P. A. Reuter-Lorenz, "Aging, training, and the brain: A review and future directions," *Neuropsychol. Rev.*, vol. 19, no. 4, pp. 504–522, 2009, doi: https://doi.org/10.1007/s11065-009-9119-9.
- 29. Gunawan H, "Upaya Perlambatan Demensia Pada Lanjut Usia Potensial Di Panti Pelayanan Sosial Lanjut Usia 'Sudagaran' Banyumas," *skripsi IAIN Purwokerto*, 2021.

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