
The Correlation between Stress Level and Degree of Depression in the Elderly at a Nursing Home in Lhokseumawe in the Year 2017

Correlation
between Stress
Level and
Depression

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Yuziani

*Division of Pharmacology, Medical Faculty, Universitas Malikussaleh,
Lhokseumawe, Aceh, Indonesia*

Meutia Maulina

*Division of Histology, Medical Faculty, Universitas Malikussaleh, Lhokseumawe,
Aceh, Indonesia*

Abstract

Purpose – The objective of this research is to know the correlation of stress level with the degree of depression in the elderly at a nursing home in Lhokseumawe in the year 2017.

Design/Methodology/Approach – This research is analytic using a cross-sectional approach with a total sampling method. The total number of samples was 55 respondents.

Findings – The results showed that the elderly in a Lhokseumawe nursing home at average are at mild stress level to medium degree of depression. Pearson correlation test results show that there is a correlation between stress level and degree of depression in elderly in the Lhokseumawe nursing home in 2017 with medium strong relationship ($r = 0.406$; $p = 0.002$).

Research Limitations/Implications – We expect that the elderly living in the orphanage avoid negative thinking about themselves and the future, eliminating feelings of guilt or regret about past mistakes, taking adequate rest and maintaining a diet to avoid stress so as to prevent the onset of depression.

Originality/Value – In addition the study increases the theoretical understanding of the correlation between stress level and degree of depression in elderly at nursing home.

Keywords Stress level, depression degree, elderly, nursing home

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1. Introduction

The number of elderly people in Indonesia in 2006 was recorded at approximately 19 million people with life expectancy of 66.2 years. The number of elderly people in 2010 increased to 24 million people, in 2011 decreased at the amount of 20 million, and in 2020 is estimated to increase up to 28.8 million people with life expectancy of 71 years. The number of elderly



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people in 2008, in Indonesia, was recorded that about 10% of the total population suffered from mental disorders and stress. The high level of stress is generally caused by economic pressure or poverty, family, and surrounding environment.

When a person enters old age, there are various changes physically, mentally, and socially. Naturally the process of human development from the early period until the old period is a series of facing reality and experiencing various changes until the person entering the old period. These changes will probably put some individuals of this age in the wrong focus which will of course become the source of accumulated stress and frustration.

Stress can affect everybody, children, adults, and elderly people. Stress is a reaction or response to psychosocial stressors in the form of mental stress or life burden. Psychosocial stressors in elderly life under any circumstances may cause changes in their life, and in return, it is forced them to make adaptations or adjustments to keep it up. Not all people are able to adapt and overcome the stressor which may result stress, anxiety, and depression.

Stress in the elderly period is mainly caused by five factors, namely, (1) the condition of physical health decrease in which the aging process can lead to structural and physiological declines in old age such as sight, hearing, lung system, and bone joint; (2) working environment or workload that are not supported by physical and psychical condition; (3) family situation such as lack of attention or conflicts in the family; (4) uncomfortable environment surrounding he lives; and (5) psychological reaction to the accumulation of stress that can lead to depression.

Stress can cause negative effects such as high blood pressure, dizziness, sadness, difficult concentrating, unable to sleep as usual, too sensitive, depressed, and others. Diseases that can be caused by stress are stroke, coronary heart, amnesia, and mental disorders (Hidayah, 2011). Besides stress, elderly people also often experience depression as the results of diseases they suffer from.

Some elderly people prefer living in nursing homes rather than with their family in big cities. It is because they need environment that cope with their condition. The elderly people need patient friends who understand their condition. They need friends to chat, family visit, nice greeting. Moreover, they will be very happy when the surrounding hears their advices. Thus, those ideal situations can reduce symptoms of stress and prevent the occurrence of depression.

2. Method

The type of this research is descriptive using a cross-sectional approach. The research location is *Panti Jompo* Darussa'dah and An-Nur in Lhokseumawe City. The research was conducted from February to September 2017. The technique of collecting data is total sampling technique that requires the sample fulfilling the inclusion and exclusion criteria with an amount of 55 samples. The data were taken in *Panti Jompo* Darussa'adah 41 samples and in *Panti Jompo* An-Nur at the amount of 14 samples. The research instrument is used the Depression Anxiety Stress Scale Questionnaire (DAAS) with the correlation analysis on the level of the hierarchy of stresses in depression using Pearson correlation with confident interval of 99% (degree of significance 0.01).

3. Results and discussion

3.1. The description of respondents' stress level

Result of research on 55 elderly people in two nursing houses is as shown in Table 1.

The results showed that the average score of stress, based on DAAS questionnaire, was 24.57 which means that elderly people in nursing home of Kota Lhokseumawe were at mild stress level. The mild stress level reflects that the elderly living in *Panti Jompo* have good

support from environment such as the familiarity among other elderly people in Panti. However, it can also be due to the pattern of individuals who have good adjustment related to themselves.

Stress is a normal physical response to a condition that threatens a person's life or disturbs life balance in some way, for example when a person suffers from illness, the body will perform an automatic defense known as a fight reaction or stress reaction.

The factors that cause stress are divided into two factors: (1) Internal factors which are sourced from themselves through diseases they suffer from. Illness can lead to changes in psychological function of a person who suffer from it. Such changes can affect a person's life which can cause stress. (2) External factors originate from the family. Stress in the family can be caused by some conflicts in the family, such as behavior that is not in accordance with expectations, desires and opinions that cannot be united. Therefore, the family can be a potential influence for stress.

3.2. The description of respondents' depression level

Results from 55 elderly in nursing home are as shown in Table 2.

The results showed the average depression score based on DAAS questionnaire was 14.69. It means that elderly people in nursing home of Kota Lhokseumawe are at medium degree depression. In general, the depressed elderly are marked by an unresolved sedentary mood, impaired function in daily activities, and may have a desire or attempt to suicide (Alexopoulos, 2005; Lunen Feld *et al.*, 2007). In the elderly period, symptoms of depression are more common occurring in people with chronic illness, cognitive impairment, and disability (Lunen Feld *et al.*, 2009; Mood Disorders Society of Canada, 2010). Difficulties in concentration and executive function of elderly depression will improve after depression is resolved. The elderly depression disorder may resemble cognitive impairment such as dementia, therefore, the two mentioned need to be differentiated (Traywick, 2007; WHO, 2010).

The depressed elderly person often shows complaints of varied disguised physical pains, anxiety, and slow thinking (Lunen Feld *et al.*, 2009; Mood Disorders Society of Canada, 2010). Changes in depressed elderly person can be recognized from physical changes, thinking changes, feeling changes, and behavioral changes (Mood Disorders Society of Canada, 2010). Depressive disorders are often present in the elderly with medical or neurologic disease. This needs to be addressed because depression worsens morbidity and increases mortality. Previous research has shown that elderly people with medical illness are twice as likely to be at risk for depression than those without medical illness (Licinio and

Variable	Average	Median	Modus	SD	Minimum	Maximum
Stress score	24.87	26	27	5.464	9	35

Source: Primary data (2017).

Table 1.
Average of Stress
Score based on
DAAS

Variable	Average	Median	Modus	SD	Minimum	Maximum
Depression score	14.69	15	13	5.865	2	26

Source: Primary data (2017).

Table 2.
Average of
Depression Score
based on DAAS

Wong, 2005). The diagnosis of depression with comorbid medical or neurologic diseases is established when the disease has occurred before the onset of depressive symptoms (Alexopoulos, 2005).

Symptoms of depression often coincide with cognitive decline and dementia; in addition, major depression and cognitive impairment in the elderly may develop into dementia within a few years after the onset of depression. It may increase the risk of Alzheimer's disease (Alexopoulos, 2005).

3.3. Pearson correlation test result

The results of the correlation test between stress level and depression level of elderly people in nursing home obtained the following results as shown in Table 3.

The result of statistical test of correlation between stress level and depression level of elderly people is positive relationship with value (r) positive of 0.406 and significant value (p value) 0.002 ($p < 0.01$) with medium strength.

Stress is one of the factors that trigger depression in the elderly. The stress that is often experienced by elderly in nursing home is due to the changes in emotional condition physiologically and also mental deterioration that can inhibit the activities of daily life. Reduced physical and mental abilities can also lead to an inability to perform the normal role of life. Changes in emotional states affect a change in motivation which is one of the symptoms of depression (Aikman and Mary, 2001).

Many stressors affect the changes in the life of the elderly, especially those living in the *Panti Jompo*, away from the family and having low socio-economic level. In accordance with Kaplann's opinion that depression is one of the mood disorders characterized by a loss of feelings of control and subjective experience of severe suffering. Mood is a pervasive internal emotional state of a person, and not affective, the expression of the emotional content of the moment (Kaplan, 2003).

Role change in the elderly is also one of the stressors. Stressor in elderly people is influenced by several factors including body and psychology health, and social environment. In the social environment of the elderly living in *Panti Jompo*, both those living there forced by the family by their own initiative will lead to the role of elderly in the *Panti Jompo* differently from the previous environment. This input will be influenced by residual stimuli such as internal and external factors that the more mature they are, the more mature a person in thinking and doing. External factors such as environment surrounding the *Panti Jompo* can affect the development and behavior of people as an adaptive social part that involves both internal and external. This will cause the elderly experiencing both adaptive and maladaptive role change. The occurrence of adaptation process with role change in elderly living can provide adaptive and maladaptive response. If the elderly provide maladaptive response, it can cause excessive worries resulting in stress that cause anxiety and depression occur in the elderly ranging from moderate to mild depression (Keliat, 1992; Lenze *et al.*, 2001).

Variable	Pearson Correlation Test	<i>P</i>
Stress score	0.406	0.002
Depression score		

Source: Primary data (2017).

Table 3.
Pearson Correlation
Test

Stress in the elderly can also be caused by the length of stay in a nursing home. The longer the elderly live in the home, the higher the stress level will be (McDougall *et al.*, 2007). Nuryanti *et al.* (2012) reported that the elderly who lived in the *Panti Jompo* for 0–5 years experienced a mild depression, eight elderly while depression was three elderly, different from the elderly who occupy for 6–10 years that suffer from moderate depression, two elderly. It is possible that the length of inhabiting in the *Panti Jompo* makes them bored. As a human self-adjusting system can be described holistically (bio, psycho, and social) as a whole that has input, control, feedback processes and output (output/yield). Different rates of depression are due to different adaptations of the elderly among the physical and mental conditions of the elderly. Elderly who cannot adapt to officials or other elderly can lead to emotional changes in the elderly themselves. This can trigger anxiety and continuous anxiety leads to depression (Nuryanti *et al.*, 2012).

Stress cannot be separated from distress and depression because each other is interrelated. Stress is a physical reaction to life problems experienced, and when the function of the body disturbs organ, it is called distress, while depression is a psychological reaction to the stressor happened (Hawari, 2008). Stress can lead to an emotional impact of chronic release of norepinephrine (noradrenaline) so that depression occurs; individuals often use their emotional state to evaluate stress. Therefore, emotional reactions can emerge stress (Rasmun, 2010).

4. Conclusion

The conclusion of this research is that there is a correlation between stress level and degree of depression in the elderly in a nursing home of Lhokseumawe in 2017.

References

- Alexopoulos, G.S. (2005). "Depression in the Elderly". *Lancet*, Vol. 365, pp. 1961–1970.
- Aikman, G.G. and Oehlet, M.E. (2001). "Geriatric Depression Scale Long Form Versus Short Form". *Jurnal Penuaan dan Kesehatan Mental*, Vol. 22, No. 3, pp. 63–70.
- Departemen Kesehatan RI. (2009). *Data Prevalensi Depresi di Dunia dan Indonesia*. Departemen Kesehatan Republik Indonesia, Jakarta.
- Departemen Kesehatan RI. (2012). *Cara Hidup sehat pada lansia*. Departemen Kesehatan Republik Indonesia, Jakarta.
- Depkes RI (2013). "Lansia". Available: <http://www.depkes.go.id/downloads/Buletin%20Lansia> [accessed 10 October 2016].
- Hawari, D. (2008). *Manajemen Cemas dan Depresi*. Balai Penerbit Fakultas Kedokteran Universitas Indonesia, Jakarta, pp. 33–66.
- Hidayah, N. (2011). "Stress Pada Lansia Menjadi Factor Penyebab dan Akibat Terjadinya Penyakit". *Journal of Health Sciences*, Vol. 6, No. 2.
- Indriana, Y. (2010). *Gerontologi: Memahami Kehidupan Usia Lanjut*. Penerbit Universitas Diponegoro, Semarang, pp. 77–99.
- Kaplan, S. (2003). *Sinopsis Psikiatry: Ilmu Pengetahuan Perilaku Psikiatri Klinis*. Binarupa Aksara, Jakarta.
- Keliat, B.A. (1992). *Gangguan Konsep Diri*. EGC, Jakarta.
- Lenze, E.J, Rogers, J.C., Martire, L.M., Mulsant, B.H., Rollman, B.L., Dew, M.A., Schulz, R. and Reynolds III, C.F. (2001). "The Association of Late-Life Depression and Anxiety with Physical Disability: A Review of the Literature and Prospectus for Future Research". *American Journal of Geriatric Psychiatry. Journal of Depression*, Vol. 9, pp. 135–137.

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- Licinio, J. and Wong, M. (2005). *Biology Depression: From Novel Insights to Therapeutic Strategies* (Vol. 1). Wiley-VCH, Weinheim.
- Lunen Feld, B., Gooren, L.J.G., Morales, A. and Morley, J.E. (2007). *Textbook of Men's Health and Aging* (2nd ed.). Informa Health Care, United Kingdom.
- McDougall, F.A., Matthews, F.E., Kvaal, K., Dewey, M.E. and Brayne, C. (2007). "Prevalence and Symptomatology of Depression in Older People Living in Institutions in England and Wales". *Jurnal Penuaan*, Vol. 19, pp. 36–33.
- Mood Disorders Society of Canada. (2010). Depression in elderly, Consumer and Family Support (n.d) La Societe Pour Les Trouble de L'Humeur du Canada
- Nur, D.N. (2013). "A Systematic Review: Group Counselling for Older People with Depression". In *2nd International Seminar on Quality and Affordable Education*, Jakarta, pp. 455–456.
- Nuryanti, T., Indarwati, R. and Hadisuyatmana, S. (2012). *Hubungan Perubahan Peran Diri Dengan Tingkat Depresi Pada Lansia Yang Tinggal Di UPT PSLU Pasuruan Babat Lamongan*. Research Report. Fakultas Keperawatan, Universitas Airlangga, Surabaya.
- Puspasari, S. (2009). "Hubungan Kemunduran Fisiologis dengan Stres pada LanjutUsia di Kelurahan Kaliwiro Semarang". Available: <http://digilib.unimus.ac.id/gdl.php?> [accessed 16 March 2016].
- Rasmun. (2010). *Pengertian Stres, Sumber Stres, dan Sifat Stresor* (1st ed.). Sagung Seto, Jakarta, pp. 9–26.
- Traywick, L. (2007). *"Depression in the Elderly"*. University of Arkansas, Division of Agriculture.
- WHO. (2010). *Depression*. World Health Organization, Geneva, Switzerland.

Corresponding author

Yuziani can be contacted at yuziani@unimal.ac.id