
ANALYSIS OF KNOWLEDGE LEVEL AND LONELINESS OF THE ELDERLY TO IMPROVE BASED INTERVENTION

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ABSTRACT

The elderly is someone more than or equal to 55 years old with a process of physical, biological, cognitive, psychological, economic, and social role changes in society. The main psychological problem in the elderly is loneliness, and feelings of isolation because they feel different from other people's circumstances. The purpose of the study was to determine the level of loneliness and the level of knowledge about loneliness in the elderly in Peniwen Village. This type of research is quasi-experimental with a one-group pretest-posttest design. The research sample amounted to 30 people with the sampling technique, namely the total sampling system. The research instrument used the De Jong Gierveld Loneliness questionnaire and a pretest-posttest related to knowledge about loneliness. Based on the results of the questionnaire, 29 (96.67%) respondents experienced moderate loneliness and 1 (3.33%) respondent experienced severe loneliness. In the pre-test results, there were no respondents who answered 10 post-test numbers correctly. After being given counseling, there was an increase in value as shown by 20 (66.70%) respondents answering 10 post-test numbers correctly. Based on the Wilcoxon test, a significance level value of $p=0.000$ or <0.05 was obtained, which means that there is a difference between the knowledge of respondents before counseling

LLDIKTI Wilayah X

493

and after counseling about loneliness. The conclusion is that most of the elderly of Peniwen village experience moderate levels of loneliness and there are differences in knowledge before and after counseling about loneliness in the elderly.

Keywords: Elderly, Level of Knowledge, Loneliness

INTRODUCTION

An elderly person is someone who has an age of more than or equal to 55 years (WHO, 2013). Changes that occur can be in the form of physical, biological, cognitive, psychological, economic, and social roles in society. Physical changes cause health problems in the elderly, such as visual impairment, balance, and others (Segita et al., 2021). Psychological changes in the elderly can occur due to changes in the role and physical ability of the elderly in carrying out activities, for themselves and activities in socializing with the surrounding community (Badan Kependudukan dan Keluarga Berencana Nasional, 2022). In addition, the elderly also have feelings of loss, pressure, and negative stigma from others (Malikal Balqis & Sahar, 2019).

In general, psychological problems that often occur in the elderly are loneliness, feelings of isolation from others because they feel different from other people's circumstances (Pachana, 2015). If not handled quickly and appropriately, psychological problems can lead to disturbances in body balance and physical condition (Muntholib et al., 2021). The Elderly is the final cycle of human life, which is often characterized by living conditions that are not following expectations, resulting in mental or psychological disorders (Handayani & Oktaviani, 2018). This can lead to health problems in the elderly that are different from normal adults (Sari & Leonard, 2018). Previous research proves that the prevalence of loneliness at the age of more than 60 years is around 16%-35% of the elderly population in the UK (Brehm et al., 2002).

The relationship between loneliness and physical and mental health is often reported, even leading to an increased risk of mortality. This needs attention to reduce loneliness in the elderly community. Social-based interventions can make the elderly feel supported and re-socialized by creating a community or a place to chat with each other (Probosuseno, 2007) (Hebert, 2007) (Nordqvost, 2009).

The elderly is an advanced stage of a life process characterized by a decrease in the body's ability to adapt to stress from the environment (Effendi, 2009). Aging is a biological process that cannot be avoided. The aging process occurs naturally. It can cause physical, mental, social, economic, and psychological problems (Septiningsih & Na'imah, 2012).

According to Brehm (2002), there are two dimensions of loneliness, namely Emotional loneliness and Social loneliness. Emotional loneliness or emotional isolation occurs due to the lack or absence of a strong personal relationship. Emotional loneliness occurs due to the loss (or absence) of an intimate affectionate figure. Emotional loneliness can be seen through several things such as not having close friends, experiencing feelings of emptiness, missing the pleasure of companionship with others, feeling that the environment of friends and relatives is too limited, longing to have other people around him, and sometimes feeling that he is rejected.

Social loneliness, also known as social isolation, occurs because a person feels dissatisfied or lacking in social relationships, namely friends and acquaintances. For

example, when a family moves to a new neighborhood but has no known neighbors at all. Individuals who experience social loneliness will feel boredom and passivity. Social loneliness can be seen through how many reliable relationships a person has. Social loneliness is experienced by someone who has few friends who feel close enough and reliable (Brehm et al., 2002).

Loneliness can also be classified into two, namely Transient loneliness and Transitional loneliness. Transient loneliness is a brief and occasional feeling of loneliness that individuals experience when their social life is quite decent. For example, when hearing a song or expression that reminds me of a loved one who has gone far away. Transitional loneliness is when individuals who have previously been satisfied with their social life become lonely after experiencing disruptions in their social network (for example, the death of a loved one, divorce, or moving to a new place) (University of York, 2015).

The level of knowledge of the elderly is one of the factors associated with the level of loneliness. Although the higher knowledge is not followed by a high level of loneliness (Esti Nur Janah et al., 2021). This level of knowledge is related to various internal and external factors related to loneliness so that they understand how to overcome the situation of loneliness that is being felt. Therefore, the level of knowledge of the elderly regarding loneliness is something that needs to be known. Based on the explanation above, it can be seen that mental health problems, such as loneliness, are prone to occur in the elderly. The research objective of this study was to determine the level of knowledge and level of loneliness regarding loneliness in the elderly in Peniwen Village.

RESEARCH METHOD

This research is a quasi-experimental study with a one-group pretest-posttest

design. The number of research samples was 30 elderly people who were determined using the total sampling system technique. The inclusion criteria in this study were respondents aged ≥ 55 years who were physically healthy, actively moving, actively participating, and able to communicate well. The exclusion criteria are the elderly aged over 90 years, and physical and mental conditions that do not allow interactive communication.

The research instruments used were a development questionnaire from the De Jong Gierveld instrument and a pretest-posttest questionnaire. The De Jong Gierveld Loneliness instrument is a questionnaire used to measure loneliness scale. The questionnaire we used was the development of a modified De Jong Gierveld questionnaire and had conducted reliability and validity tests on the questionnaire before the study was conducted. This questionnaire has 11 items and is composed of 6 emotional loneliness items and 5 social loneliness items. Meanwhile, the pretest and posttest questionnaires were used to determine the respondents' level of knowledge about loneliness before and after the intervention.

The intervention activities carried out in this study are providing health education about loneliness in the elderly. The provision of health education was carried out at the Ringinpitu Hamlet Hall, Peniwen Village, and was attended by 30 respondents. Providing health education is done by counseling methods to all respondents. The speaker at this intervention was a student of the Faculty of Medicine, Universitas Ciputra Surabaya. This intervention aims to enable the elderly to accept and be grateful for what they currently have and not expect or demand something they don't have so that the elderly can be happier with the life they are currently living without significant loneliness.

After the data were collected, the data were analyzed using a comparative

technique, namely the Wilcoxon Signed Rank Test. This research has passed the ethical test at the Health Research Ethics Commission of Universitas Muhammadiyah Malang (KEPK UMM) with No. E.5.a/036/KEPKUMM/II/2023.

RESULTS AND DISCUSSION

Based on the results of the study, the following is the distribution of respondent characteristics.

The age characteristics in this study

varied, so the age group was divided into 4 groups. The age groups in this study are based on WHO (2013), as follows: 1) Early elderly (elderly), namely the age group 55-65 years. 2) Young old (young-old), namely the age group 66-74 years. 3) Old elderly (old), which is the age group 75-90 years. 4) Very old (very old), which is the age group of more than 90 years. In this study, 5 people were 70 years old or included in the high-risk elderly category.

Distribution Frequencies Respondents

Table 1. Distribution of Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
Age		
55-65 years	22	73,0
66-74 years	7	23,0
75 - 90 years	1	4,0
Gender		
Men	2	6,7
Woman	28	93,3
Last Education		
Not in school	9	30,0
Elementary School	16	53,3
Junior High School	3	10,0
Senior High School	2	6,7

Based on the results of the research obtained from a total of 30 respondents, 28 people were woman and 2 people were men . Research results from the Ministry of Health in 2010, show that there are more elderly women than men. The number of older women - is higher than men. This is in line with the higher life expectancy of women compared to men, which is 77.2 years for woman life expectancy and 74.2 years for men life expectancy.

In the characteristics of the last education, the majority of respondents had graduated from elementary school as much as 53%. Even as many as 30% of respondents did not graduate from elementary school. Based on the research of Yu Chen, et. al

(2014) and Wu et. al (2010) states that the level of education can affect a person's way of thinking in managing his thoughts and feelings including loneliness, as well as problems that occur due to the physical and social loneliness he experiences (Chen et al., 2014a) (Wu et al., 2010). Based on the results of the De Jong Gierveld Loneliness questionnaire, it was found that most respondents experienced moderate loneliness or had a score of (3-8). In addition, one respondent experienced severe loneliness or had a score of (9-10). Loneliness is one of the unpleasant feelings felt when lacking in the quantity and quality of social relationships. Loneliness does not always take the form of objectively isolating oneself from social



Distribution Frequencies Degree of Loneliness

Table. 2 Characteristics Based On Degree Of Loneliness

Characteristics	Frequency (n)	Percentage (%)
Moderate lonely	29	96,7%
Severe lonely	1	3,3%

activities. But it needs to be emphasized that not all people who are alone always feel lonely, and vice versa, not all people who are crowded do not feel lonely (Pachana, 2015).

Loneliness is gradually becoming a problem in public health, especially in the elderly. The results of this study are supported by the results of previous research which states that the prevalence of loneliness at the age of more than 65 years is 16%-35% of the community-dwelling elderly population in the UK. This number is up to 50% higher than those aged over 80 years, while severe loneliness occurs between 5% and 13% of the general population (Pachana, 2015).

Loneliness is a feeling of distress that a person feels when facing a situation where there is a gap between expected social relationships and existing reality (Shovestul et al., 2020). Based on existing literature, loneliness is very common among the elderly. High levels of loneliness in old age are generally associated with the departure of a spouse, fewer social relationships, and health problems. Loneliness is one of the most prominent aspects of the stereotypical image of the elderly (Schoenmakers et al., 2012).

Loneliness experienced by the elderly is caused by several factors. These factors can come from the self (internal) or from outside (external). These include participation in social activities (social roles), personality, and psychological responses. (Goodman et al., 2015).

However, other research results statistically show different things that in 2014 the age group that tends to experience loneliness is the elderly group. Whereas in

2018 young adults tended to be the ones who experienced the most loneliness. So these findings indicate that the experience of loneliness is not limited to old age but can occur at any age. (Hawkey et al., 2022).

The phenomenon of loneliness that occurs in the elderly in Peniwen Village is a psychological problem. This is indicated by reduced activities in caring for children, reduced friends or relationships due to lack of activity outside the home, lack of activity so that free time increases, the death of a spouse, abandoned children because they pursue higher education outside the city or leave home to work, children have grown up and formed their own families (Septiningsih & Na'imah, 2012). However, there is evidence to suggest that this concept is not always true. That is because an individual can have many social connections but still experience subjective feelings of loneliness, or conversely be objectively isolated but not experience loneliness (Hawkey et al., 2022).

Some risk factors for loneliness and social isolation in older people include family dispersal, decreased mobility, and income, loss of loved ones, and poor health. It is thought that social changes including reduced intergenerational living, greater geographic mobility, and less cohesive communities also contribute to higher levels of loneliness in the older population (Fakoya et al., 2020).

Based on a study conducted in China, it was found that loneliness had a significant association with an increased incidence of depression in the elderly population (Wang et al., 2017). In addition to impacting mental health, loneliness also has an indirect link to physical health in the elderly which ultimately contributes to increased morbidity



and mortality. In previous studies, there are several physical diseases that can arise due to the indirect impact of loneliness, namely, dementia-Alzheimer, hypertension, cardiovascular disease, diabetes, metabolic syndrome, and migraine. Significant mediators between loneliness and these diseases are high stress, smoking history, physical inactivity, and poor sleep duration or quality in older age groups (Christiansen et al., 2016) (Tilvis et al., 2011) (Thurston & Kubzansky, 2009).

After reviewing these studies, it can be said that loneliness is not a mental problem that can be underestimated, given the impact it can have. Sometimes loneliness is very difficult to recognize because there are many dimensions. A person can experience loneliness because they are socially isolated. Based on this, elderly people in rural areas can be facilitated with video or audio communication tools to communicate with their families who live in urban areas (Chopik, 2016). In another study, it was found that loneliness was negatively correlated with social support, which means that social support has a good impact on reducing loneliness in the elderly. To reduce loneliness, organizing local group activities to promote social integration would be helpful. In this case, groups of teenagers or adults who are still able to work and can be independent can help the elderly voluntarily

to reduce the level of loneliness of the elderly (Chen et al., 2014b).

or physically well but experience loneliness emotionally. A previous research states that elderly people who experience loneliness such as living alone or being left to live in a different place with their children can result in depression (Sutinah & Maulani, 2017).

One study showed that the use of technology can help overcome the problem of loneliness that is common among the elderly.

In a literature that is further explained, the social support in question can be in the form of expanding social networks or getting emotional support during a crisis in life whether it is from friends or family, getting physical assistance in doing tasks, and can also be information or education on topics that are mental health problems by people who understand more, in this case, medical personnel (Montero-López et al., 2019). In previous research, it was shown that activities involving social networks caused the level of mental health of the elderly to be better than before the activity (Wartiningsih et al., 2022). However, another study stated that family support in the form of family emotional support, such as showing empathy, attention, encouragement, personal warmth, love, or emotional support is important to support the health of the elderly (Eltrikanawati, 2022).

Distribution Pre-Test and Post-Test

Table 3. Distribution Based on Pre-Test And Post-Test Results

Total Correct Questions	Pre Test		Post Test	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
10	0	0%	20	66,70%
5-9	30	100%	10	33,30%
< 5	0	0%	0	0%

Table 3 is the result of the pre-test and post-test which describes the respondents'

knowledge about loneliness. Based on Table 3, 10 pre-test questions were obtained, all of



which were 0% correct, then after provision of health education, an increase from 0% to 66.70% was obtained. In the total correct questions totaling 5 to 9 pre-test questions, 30 respondents answered correctly 100% and there was a decrease in the post-test answers, namely 33.30%, meaning that there was an increase in elderly knowledge after being given health education interventions seen from the pre-test and post-test.

Based on the results of the pre-test questionnaire, it was found that none of the respondents managed to work on the

questions with all the correct results. All respondents took the pre-test with the correct number value in the range of 5-9 correct numbers. After the pre-test and health education intervention, respondents were given post-test questions about loneliness.

The results of the above research show an increase in most of the post-test questions, this means that the intervention activities carried out in the form of counseling can increase the level of knowledge of the elderly in overcoming loneliness in the future.

Bivariate Analysis

Table 4. Comparative analysis results of pre and post test

Variabel	Negative Ranks	Positive Ranks	Mean Rank	Asymp. Sig (2 tailed)
Pre test	0	29	15,00	0,000
Post test				

Based on the results of the comparative analysis through the Wilcoxon test, there are 29 positive data, which means that there are 29 respondents who have increased knowledge about loneliness after being given health education. The average increase is 15.00. In addition, the Asymp. Sig. (2-tailed) value of 0.000 or <0.05 , which means there is a difference between the pre-test and post-test results. So it can be concluded that there is an effect of health education about loneliness given to the elderly on the level of knowledge.

Based on the results of the pre-test on the elderly in Peniwen related to knowledge about loneliness, it was found that almost all of them had low knowledge about loneliness and its aspects. After health education, their knowledge rose significantly. So it can be concluded that knowledge of various internal and external factors related to loneliness is needed for the elderly so that they understand how to overcome the situation of loneliness that is being felt, such as seeking entertainment, telling what is experienced to

the closest person and actively participating in elderly activities in Peniwen Village. Providing health education can increase knowledge so that changes in the attitude of the elderly occur (Juliasih et al., 2022).

Loneliness is a psychological problem that occurs in the elderly. This is due to several factors, such as loss of family and friends, to reduced body function. Coping strategies to overcome loneliness are one of the needs of the elderly. If the problem of loneliness felt by the elderly is not resolved, it will affect their physical health. So the elderly need coping strategies that can overcome psychological problems and improve their physical function (Akhter-Khan et al., 2022). One intervention that can overcome loneliness in the elderly is group-based activities. These activities provide space for the elderly to have a wider social network in the elderly (Yanguas et al., 2018).

CONCLUSION

The conclusion of this study is that most respondents experience moderate



loneliness, but there is one person experiencing severe loneliness. In addition, there are differences in knowledge before and after being given health education about loneliness in the elderly so it is hoped that the elderly can overcome feelings of loneliness with increased knowledge. In this case, social-based interventions are needed to target loneliness and social isolation in the elderly in further research.

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