



## Development of Psychological Well-Being Scale for Indonesian Elderly

Rara Eka Yurika<sup>1</sup>, Casmini<sup>2</sup>

<sup>1</sup>Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Indonesia

<sup>2</sup>Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Indonesia

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[raraekayurika@gmail.com](mailto:raraekayurika@gmail.com)

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### ABSTRACT

This study aims to develop a psychological well-being measurement scale for Indonesian elderly people based on the social, cultural, and religious context that develops in Indonesia. The method used in this research is the exploratory factor analysis method, while the scale development process is based on the scale development procedure according to Cohen & Swerdlik which consists of five stages, namely the conceptualization, test construction, test tryout, analysis, and revision. This research produces three factors that can be used to determine the level of psychological well-being of Indonesian elderly. The three factors are perception factors, integrity factors, and independence factors. The conclusion is that perception, integrity and independence factors can be used as a measuring tool to see the psychological well-being condition of Indonesian elderly.

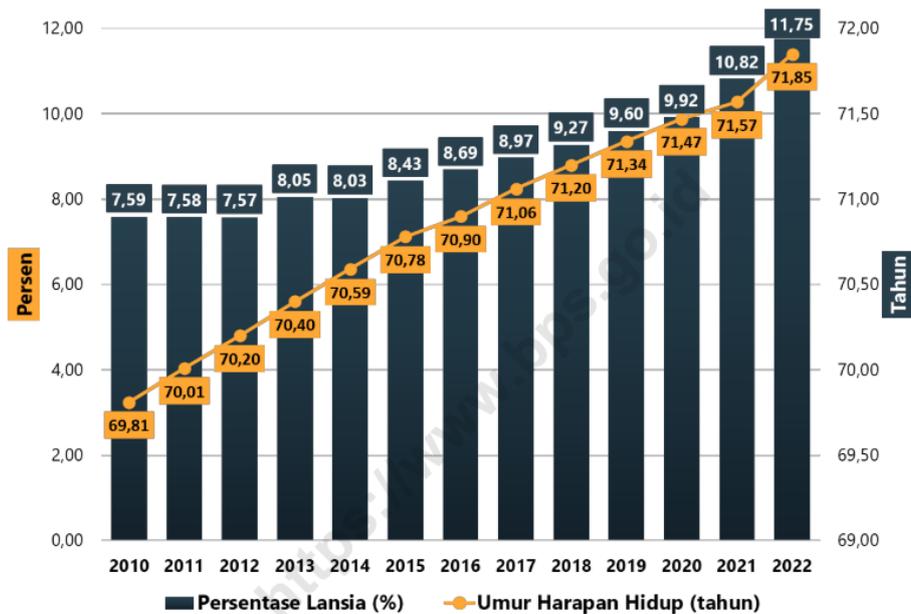
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## Introduction

According to the Law of the Republic of Indonesia Number 13 of 1998 Article 1 concerning Elderly Welfare states that an elderly person is someone who has reached the age of 60 years (sixty) years and over (Welfare of the Elderly, 1998). Individuals who enter the elderly development stage experience many biological, psychological, and social changes (Rizky et al., 2020). Biologically, the elderly experience a decrease in muscle and nerve cell function, which makes them more susceptible to illness, such as cancer, gout, respiratory diseases, diabetes mellitus, and so on (Putra et al., 2019). Psychologically, there are feelings of sadness, exclusion, and lack of optimism (Setiawan, 2023).

Indonesia since 2021 has entered an aging population. This is because Indonesia's elderly population has continued to increase for more than a decade (Statistics, 2023). The following is data on the percentage of the number of elderly people and the life expectancy of the elderly according to the Central Statistics Agency in the 2010-2022 range:

Figure 1. Data on the Percentage of Elderly and Life Expectancy (2010-2022)



The large number of elderly population in Indonesia will lead to a variety of new phenomena caused by problems that occur in the elderly (Bahkruddinsyah, 2016). There are several problems commonly experienced by the elderly including loneliness, isolation from the surrounding environment, helplessness, dependence, lack of confidence, neglect (especially for the elderly with a low economy), and lack of support from the family (Putra et al., 2019). This can lead to depression, which can eliminate desire, happiness, hope, peace of mind, the ability to feel the peace of life, social relationships, and even the desire to enjoy daily life (Putra et al., 2019; Rizky et al., 2020). Some of these problems can affect the mental health of the elderly and cause changes in the level of psychological well-being of the elderly (Rizky et al., 2020).

Based on previous research, it is stated that the level of psychological well-being of individuals tends to decrease in the elderly (Bastos et al., 2023). This decrease in the level of psychological well-being can be caused by various factors such as decreased physical function (Iwano et al., 2022) which results in a decrease in the level of personal growth (Fusi et al., 2022), autonomy and positive relations with others (Azijah et al., 2021). Elderly people who have high levels of psychological well-being are more likely to engage in healthy behaviors, have extensive social networks, and good physical recovery (Iwano et al., 2022).

Individual psychological well-being is influenced by various things, one of which is life experience (Mariska & Anwar, 2019; Handayani & Mustopo, 2022). The life experience of each elderly person is different as a whole. The aspect of the life experience of the elderly is something that needs to be studied further because individual life experiences will be

influenced by various factors such as religion, socio-culture, love, protection, family, socialization and education, economy, and environment (Putri et al., 2019).

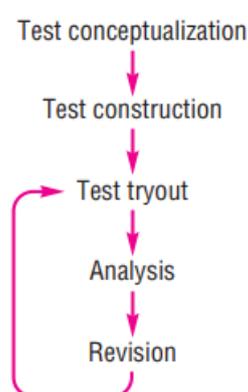
The increasing number of elderly population in Indonesia is a challenge in itself. The vulnerability that occurs in the elderly affects the psychological well-being of the elderly (Bastos et al., 2023). Therefore, there is a need for a scale that is used in assessing the psychological well-being of Indonesian elderly. There is a previous scale that has been developed, namely the PWB scale developed by Ryff (Ryff & Keyes, 1995). However, the scale developed by Ryff is still too general and has not been adapted to the context of the elderly, especially Indonesian elderly.

Based on the above phenomenon, there is a need for an effort to develop a psychological well-being measurement scale for the elderly in Indonesia which is adjusted to religious, socio-cultural, environmental, educational, family, protection, and economic factors that occur in Indonesia. The results of the development of this measurement scale are expected to be a reference for agencies and experts to measure the level of psychological well-being of Indonesian elderly, so that experts can take and consider appropriate actions to increase the level of psychological well-being of the elderly.

## Methods

The method used in this research is exploratory factor analysis (EFA). The respondents of this study amounted to 16 elderly people (2 men and 14 women) living in Budhi Dharma Nursing Home Yogyakarta. There are two criteria for respondents, namely those aged 60 years and over and Muslim. The process of developing this Indonesian elderly psychological well-being scale is based on the procedure proposed by Cohen & Swerdlik (Cohen & Swerdlik, 2009), which is as follows:

Figure 2: Test Development Process Test Development Process



**Figure 8-1**  
**The Test Development Process**

Based on this process, there are five processes used in the development of the psychological well-being scale of Indonesian elderly. The theoretical construct used is based on Ryff's psychological well-being theory which consists of six dimensions, namely self acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1991; Ryff, 1995).

The process of preparing indicators and items of this scale is based on the operational definition of each dimension. The operational definitions of the six dimensions are adapted from Ryff's opinion (Ryff, 1991, 1995; Ryff et al., 1999) as follows:

Table 1. Operational Definition of Psychological Well-Being Dimensions

<i>Dimension</i>	<i>Score</i>	<i>Definition</i>
<i>Self-acceptance</i>	<i>High</i>	<i>Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life.</i>
	<i>Low</i>	<i>Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different from what one is.</i>
<i>Positive relations with others</i>	<i>High</i>	<i>Has warm, satisfying, trusting relationship with others; is concerned about the welfare of others; is capable of strong empathy, affection, and intimacy; understands the give and take of human relationships.</i>
	<i>Low</i>	<i>Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; is not willing to make compromises to sustain important ties with others.</i>
<i>Autonomy</i>	<i>High</i>	<i>Self-determining and independent; is able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards</i>
	<i>Low</i>	<i>Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways.</i>
<i>Environmental Mastery</i>	<i>High</i>	<i>Has a sense of mastery and competence in managing the environment; controls a complex array of external activities; makes effective use of surrounding</i>

		<i>opportunities; is able to choose or create contexts suitable to personal needs and values.</i>
	<i>Low</i>	<i>Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.</i>
<i>Purpose in Life</i>	<i>High</i>	<i>Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.</i>
	<i>Low</i>	<i>Lacks a sense of meaning in life; has few goals or aims, lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning</i>
<i>Personal Growth</i>	<i>High</i>	<i>Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness.</i>
	<i>Low</i>	<i>Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors.</i>

## Results

### Reliability and Validity Test Results

The results of the 48-item validity test found that 38 items were declared invalid, so the number of items that were declared valid was 10 items. The following are the items that have been declared valid:

Table 2. List of Aitem Validity Test Results

Indicator	Item
<i>Self Acceptance</i>	<i>My life is full of regrets.*</i>
	<i>I am aware of changes in my physical strength.</i>
	<i>I feel sad if I remember my past life.*</i>
<i>Positive Relations with Other</i>	<i>I often make negative comments about others.*</i>

<i>Autonomy</i>	My view of myself depends on the views of others.*
	I can resist coercion from others if it is not in line with my life values
	I am resigned to the decision/choice for me made by the people closest to me.*
<i>Environmental Mastery</i>	I can improve the environment around me
<i>Purpose in Life</i>	I have a clear purpose in life
<i>Personal Growth</i>	I can't learn new experiences anymore.*
Note. Scale ranges from 1 (strongly disagree) to 4 (Strongly agree)	
*Reverse-keyed item	

The ten items were subjected to reliability tests. The results of the reliability test on the ten items are:

Table 3. Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.859	10

Based on the results of the reliability test using Cronbach's alpha on the 10 items, it states that the Cronbach's alpha value is 0.859. This shows the value of Cronbach's alpha > 0.50, so the questionnaire is declared reliable or consistent.

#### Exploratory Factor Analysis (EFA) Test Results

The implementation of the exploratory factor analysis test begins with testing the feasibility of a variable. This test was carried out using the KMO test and Bartlett's test, which resulted:

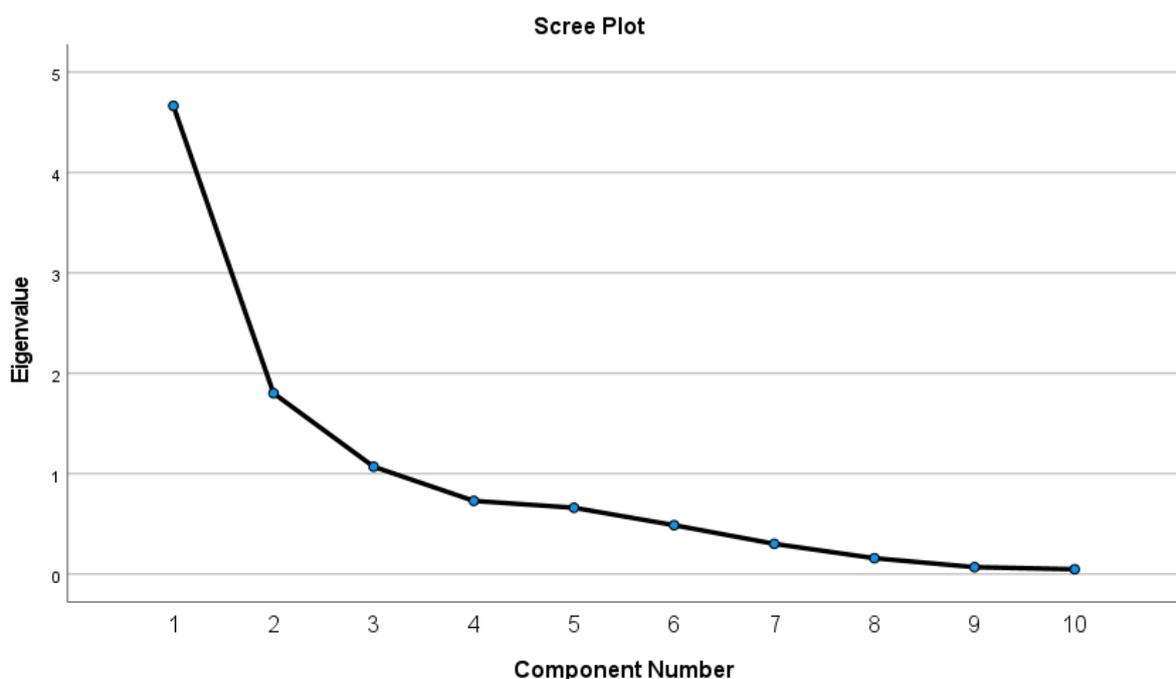
Table 4. KMO and Bartlett's Test Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.559
Bartlett's Test of Sphericity	Approx. Chi-Square	86.080
	df	45
	Sig.	.000

The table shows that the KMO test value is  $>0.50$ , which is 0.559. This shows that the sample used is sufficient to be used in conducting this scale factor analysis test. Bartlett's test in this test is 0.000 which is  $<0.05$ , so that the scale items used are interconnected or interconnected.

Each of the items used in this scale can all be used to explain the factors. The basic assumption is that the items that can explain the factors as a whole have an extraction value  $> 0.50$ . The results of the total sums of squared loading extraction test show that there are 3 variations or factors that can be formed. If analyzed through the initial eigenvalue results, component 1 can explain 46.652% of the variation, component 2 can explain 18.025% of the variation, and component 3 can explain 10.706% of the variation. Therefore, if the three components are summed up, they can explain 75.383% of the variation. The number of factors that can be formed can also be seen from the scree plot as follows:

Figure 3. Scree Plot Test Results



The ten available items were grouped into three factors. The grouping is done using the rotated component matrix test results. The following are the results of the rotated component matrix test:

Table 5. Rotated Component Matrix Test Results

	Rotated Component Matrix <sup>a</sup>		
	Component 1	Component 2	Component 3
SA6	.858		
SA3	.850		
PR12	.808		
PG46		.821	
A19		.789	
EM29		.734	
PL39		.620	
SA2			
A20			.902
A18			.771

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 5 iterations.

The table shows that there are 3 factors formed. Factor 1 is filled by items SA6, SA3, and PR12. Factor 2 is filled by items PG46, A19, EM29, and PL39. Factor 3 is filled by items A20 and A18.

The next testing process is to see the correlation or relationship between each factor. This testing process uses the component transformation matrix test. The basic assumption of the component transformation matrix test is that each component is correlated if the component transformation matrix value is  $> 0.50$ . Based on the test, it is known that the results of the three component values are  $> 0.50$ , so the three components are correlated.

## Discussion

Based on the results of the reliability and validity tests carried out, 10 items of the psychological well-being measurement scale in the elderly were produced. After carrying out the reliability and validity tests, the items were subjected to exploratory factor analysis (EFA) tests. The results of the EFA test are the formation of 3 factors filled by 9 tested items. The three factors were able to explain 75.383% of the variation.

The three factors produced are then given names according to the characteristics of each item. The following is a table of factor analysis test results:

Table 6. Psychological Well-Being Factor Results

Item	Factor
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I feel sad if I remember my past life.* (SA6)	<i>Component 1</i> (Perception)
I am aware of changes in my physical strength. (SA3)	
I often make negative comments about others.* (PR12)	
I can't learn new experiences anymore.* (PG46)	<i>Component 2</i> (Integrity)
I can resist coercion from others if it is not in line with my life values. (A19)	
I can improve the environment around me. (EM29)	
I have a clear purpose in life. (PL39)	
I am resigned to the decision/choice for me made by the people closest to me.* (A20)	<i>Component 3</i> (Independence)
My view of myself depends on the views of others.* (A18)	

Based on the results above, the first factor is named the perception factor. This is based on the theory put forward from Marliani (in Ayu & Widyatno, 2022) which explains that perception is an understanding that results from thinking power and is related to external factors captured by the five senses, memory, and mental power (Akbar, 2015). This perception factor is very influential on the welfare of the elderly, because if the negative perceptions of the elderly are not changed, it will cause unhealthy behavior (Soesanto & Marzeli, 2020). This theory is in line with the characteristics of the items contained in component 1.

The second factor is called integrity. Self-integrity is the value that underlies behavior based on efforts to make himself a person who can be trusted in words, actions, work and has commitment and loyalty to human and moral values (Asrori & Wicaksono, 2021; Yulia et al., 2021). According to Johnson (in Asrori & Wicaksono, 2021), the following are some traits that are always shown by people with high self-integrity, such as realizing that small things are important, being responsible, keeping promises, being honest, being humble, and commitment. The integrity theory describes the characteristics of the items in component 2.

The third factor is labeled independence. Independence is a form of individual freedom to choose, command, control, and determine themselves. Independence is also a skill that individuals have in controlling and regulating their own actions, thoughts, feelings freely and can overcome negative feelings in individuals (Risfi & Hasneli, 2019). This independence includes independence from cognitive aspects (values), emotions and behavior (Sari & Deliana, 2017). Based on the theory that

has been put forward by experts, it can be concluded that the characteristics of the items located in component 3 can be labeled with the name independence.

## Conclusion

The exploratory factor analysis test research conducted on the psychological well-being scale for the elderly in Indonesia resulted in nine items grouped into 3 factors, namely perception, integrity, and independence. The items compiled have been adapted to the cultural, social and religious context of the elderly in Indonesia, so that the results of this measurement scale can be used to measure the level of psychological well-being of the elderly in Indonesia. However, the sample used in testing this scale is very small, so further tests need to be carried out using a larger sample size from various regions in Indonesia with different cultural and social contexts.

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