The Happiness of the Older Individuals in Indonesia and Its Associated Factors

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Abstract

Indonesia has entered the ageing population phase, marked by the percentage of older individuals exceeding 10 per cent and continuing to rise. Older individuals are more vulnerable to various factors, such as economic non-productivity, declining health conditions, and the need for companionship. Happiness among older individuals is important because productive, healthy, and happy older individuals may become a second demographic dividend for the country's development. By utilising the Happiness Index Survey (SPTK) 2021 data, this study aims to measure the happiness of Indonesian older individuals and identify the sociodemographic, socioeconomic, health, and social engagement factors associated with it. The happiness index for older individuals in Indonesia is estimated to be at 70.54 points, with 49.3 per cent of them having a happiness index above this number, categorised as happy, and 50.7 per cent falling into the less happy category. Binary logistic regression identifies significant factors associated with happiness among older individuals. These include marital status, education level, type of residence, household income, employment status, ownership of old-age security, non-presence of chronic diseases and disabilities, and frequency of communicating with family. Gender is not significantly associated with happiness among older individuals. Various interventions from stakeholders are crucial to enhance the happiness of older individuals, primarily to protect them from vulnerabilities. These include health protection, empowerment, welfare assurance, and social support for older individuals with limited social relationships.

Keywords:

older individual population; factors of happiness; Indonesia; SPTK 2021

Introduction

The primary focus of the health sector's development is to improve the public health status. This is evident in the increasing life expectancy of the Indonesian population, recorded at 69.81 years in 2010 and 71.85 years in 2022 (BPS, 2023b). The increasing life expectancy in Indonesia contributes to the growing population of older individuals, both in absolute numbers and proportion. Additionally, the growing proportion of older individuals is influenced by the declining fertility rates in Indonesia (BPS, 2023a). Older individuals are defined as individuals aged 60 and above (Presidential Regulation No. 88 of 2021). According to the 2020 Population Census (SP2020) results, Indonesia's population of older individuals was 9.78 per cent. By 2022, this percentage had increased to 10.76 per cent. With the proportion of older individuals exceeding 10 per cent of the total population, Indonesia has entered the ageing population phase (BPS, 2022; Kemenkes, 2017). Moreover, older individuals in Indonesia are projected to reach 21.9 per cent or 72.03 million people by the year 2050 (BPS, 2023c).

When a country's population structure predominantly comprises working-age

individuals, it creates a unique opportunity to accelerate economic growth, a phenomenon commonly known as the first demographic dividend. Over time, as the once-dominant working-age population ages, the demographic structure shifts towards an ageing population with a high old-age dependency ratio, signalling the closure of the first window of opportunity. Subsequently, the growing population of older individuals opens the potential for Indonesia to capitalise on a second demographic dividend. However, Lee and Mason (2006) stated that these periods of demographic dividends are windows of opportunity rather than an assured improvement in living standards. In other words, the increasing population of older individuals can bring dividends only if effective and strategic policies are implemented.

To effectively capitalize on this demographic shift, some challenges need to be addressed, mainly the three main factors that make older individuals vulnerable: economic non-productivity, declining health conditions, and the need for companionship (Bloom et al., 2011). The country's economy will thrive if older individuals remain healthy, productive, and capable of contributing to economic growth (Heryanah, 2015). On the other hand, failure to promote healthy ageing will increase the burden on the productive-age population (Heryanah, 2015). Therefore, it is important to focus on improving the quality of life among older individuals, including health and productivity, to empower them and ensure their well-being. This is because health is often a priority among older individuals (World Health Organization, 2017).

One of the Sustainable Development Goals (SDGs) for 2030 is ensuring healthy lives and promoting well-being for all ages (United Nations, 2015). Therefore, older individuals are entitled to assurance of the maintenance of their health, which encompasses not only the absence of specific illnesses or impairments but also physical and mental well-being, social welfare (World Health Organization, 1946), and happiness (Shah et al., 2021). Miret et al. (2014) noted that health levels are correlated with happiness, especially in rich countries. In prospective observational studies, happiness has also been associated with reduced mortality rates, although with varying results (Steptoe, 2019). In the context of older individuals, happiness is considered an essential factor for healthy ageing (Bum et al., 2020). Steptoe (2019) also suggested that unhappiness could be a potential contributor to the risk of diseases. Thus, one effort to promote good health among older individuals is by improving their happiness.

The term "happiness" is frequently employed as an umbrella term to represent a wide range of positive emotional states and experiences. The term is often used interchangeably with "well-being" and "quality of life" (Veenhoven, 2012). Generally, happiness is defined as the extent to which an individual assesses their overall quality of life positively (Veenhoven, 2012). In economics, happiness is synonymous with subjective well-being, satisfaction, utility, well-being, or welfare (Easterlin, 1995). In Indonesia, the concept of happiness is associated with subjective well-being. This happiness encompasses three aspects: evaluation of ten domains of human life (life satisfaction), emotional feelings or conditions (affection), and the meaning of life (*eudaimonia*), represented through a composite happiness index (BPS, 2021).

Based on the latest data from Statistics Indonesia (BPS – *Badan Pusat Statistik*), the happiness index of the population aged 65 and above is lower than that of other age groups (BPS, 2021). It was recorded at 69.47 points, while the happiness index for the age groups of 24 and below, 25 to 40, and 41 to 64 years reached 71.92, 72.39, and 71.42 points, respectively. The happiness index of the population aged 65 and above is also lower than the national happiness index, which reached 71.49 points.
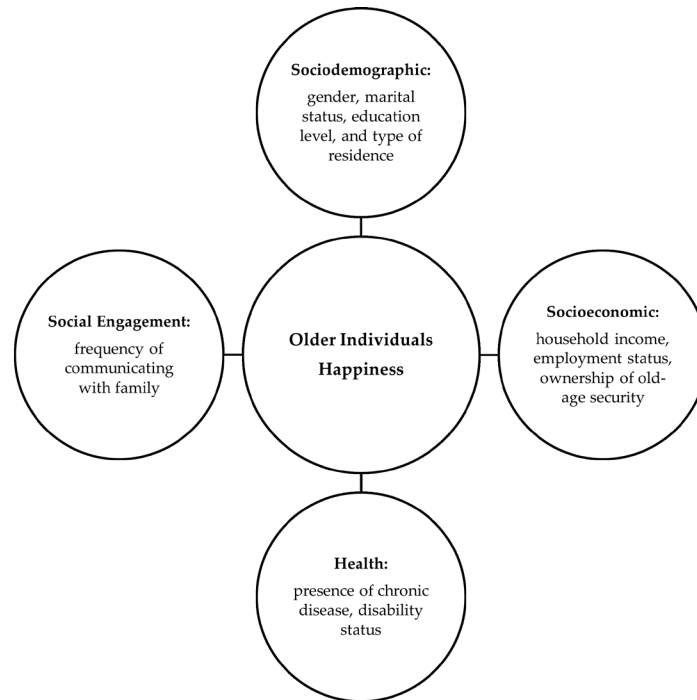
Figure 1. Summary of Potential Factors Associated with Happiness Among Older Individuals

Source: Authors' construction

The happiness index of older individuals that is lower than that of the younger groups shows that they are less satisfied with their quality of life. Since happiness among older individuals impacts various aspects of their future, especially health, it becomes essential to examine the predictors.

One of the happiness theories, namely the Objective List Theory, posits that happiness can be realized by fulfilling various needs, such as material needs, freedom, health, education, knowledge, and friendship (Sen in Seligman & Royzman, 2003). Several studies on happiness determinants have supported this theory. Some state that happiness correlates with health (Nandini & Afiatno, 2020; Rahayu, 2016; Steptoe, 2019). Shah et al. (2021) found that sociodemographic factors such as gender, age, and type of residence are associated with the happiness of older individuals in Malaysia. Furthermore, income, social engagement, emotional support, and handgrip strength are also significantly related to happiness among older individuals. Putri and Prasetyani (2021) stated that income, employment status, age, education, and health are associated with household heads' happiness, proving that the Easterlin paradox[1] does not apply in Indonesia. Employing ordinal logistic regression, Pratiwi and Kasmiantini (2019) found that variables such as age, marital status, employment status, education, satisfaction, economic aspects, health, and religious variables are significantly associated with happiness. Similar results were also found by Rahayu (2016), who stated that determinants of happiness in Indonesia include absolute income, relative income, education, health, and some components of social capital. Another study by Collard and Hayes (2014) found that ownership of savings among the population aged 50 and above is one of the factors influencing happiness.

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1 The Easterlin Paradox is a concept in economics and well-being studies named after the economist Richard Easterlin. It refers to the idea that increasing income does not necessarily lead to increased happiness or subjective well-being.

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Research on the determinants and factors associated with happiness in Indonesia has seen a growing body of work, utilising data from the Indonesian Family Life Survey (IFLS) and the Happiness Index Survey (SPTK - *Survei Pengukuran Tingkat Kebahagiaan*). However, most of these studies focus on the general population (Nandini & Afiatno, 2020; Pratiwi & Kismiantini, 2019; Rahayu, 2016; Rakhmawati, 2024). While a few studies have examined the happiness of older individuals in Indonesia (Ayuningtias, 2019; Dya & Oktora, 2023; Fauziyah et al., 2020; Gunawan et al., 2020; Ningtyas et al., 2018; Sofa, 2017), the literature remains limited in scope and depth on this demographic. This study aims to fill the existing gap by examining factors associated with happiness among older individuals in greater detail. Figure 1 summarizes various potential factors influencing the happiness of older individuals, as identified from theories of happiness and previous studies (Collard & Hayes, 2014; Nandini & Afiatno, 2020; Pratiwi & Kismiantini, 2019; Putri & Prasetyani, 2021; Rahayu, 2016; Seligman & Royzman, 2003; Shah et al., 2021; Steptoe, 2019). These include sociodemographic factors, i.e., gender, marital status, education level, and type of residence; socioeconomic factors, i.e., household income, employment status, and ownership of old-age security; health factors, i.e., the presence of chronic diseases and disability; and the social engagement factors, i.e., frequency of communication with family members.

The definition of happiness based on a single question, as used in some previous studies, has the potential for bias. For instance, in studies utilising IFLS data, happiness was assessed with the question: "Taken all things together, how would you say things are these days? Would you say you are very happy, happy, unhappy, or very unhappy?" (Pratiwi & Kismiantini, 2019; Rahayu, 2016). This single question may lead to bias because the respondent's temporary conditions or feelings when answering greatly influence the response. Veenhoven (2017) further argues that employing multiple questions to evaluate happiness can minimise measurement error as subtle differences in the interpretation of words will balance each other out. In addition, incorporating multiple happiness-related questions spread across the questionnaire can help alleviate contextual bias (Veenhoven, 2017). The current study, therefore, employs a composite measure of happiness produced by BPS. This index serves as the response variable, providing a more robust and comprehensive assessment of happiness.

Method
Data Source
This study utilises secondary data from the 2021 SPTK conducted by BPS. The SPTK is designed to collect data that enables the calculation of the happiness index, which serves as a subjective measurement of development. Following trials conducted in 2012 and 2013, BPS launched the SPTK in 2014, with subsequent surveys conducted in 2017 and 2021 (BPS, 2021). There is a difference in indicators between the 2014 SPTK and the subsequent surveys in 2017 and 2021. The measurement of happiness in 2014 was primarily based on life satisfaction indicators. In subsequent years, Indonesia adopted a happiness framework that aligned with evolving international standards on happiness measurement (BPS, 2021). In addition to life satisfaction, the indicators of emotional experiences (affection) and a sense of purpose or meaningfulness in life (*eudaimonia*) were added. This multifaceted approach provides a more comprehensive understanding of individual happiness.

In 2021, SPTK cover 34 provinces in Indonesia (BPS, 2021). The sampling methodology for SPTK was a stratified two-stage sampling technique. In the first stage, a systematic sampling approach was applied to select 7,500 census blocks, allocated based on

predetermined sample distributions, enabling the survey to offer a representative overview of the state of happiness in the country. In the second stage, ten primary household samples within each selected census block were chosen using a systematic sampling method, with an implicit stratification based on the educational level of the household head. The eligible respondents for the survey were the household heads or their spouses.

In total, SPTK involved 75,000 sampled households in its data collection. Data for the 2021 SPTK were collected from July 1, 2021, to August 27, 2021, with a response rate of 99.5 per cent, involving 74,684 respondents. In the context of this study, individuals aged 60 and above were selected, resulting in 14,935 records available for analysis.

Variables

Derived from the data of the SPTK, a numerical measure depicting respondents' happiness levels, referred to as the happiness index, can be calculated. The happiness index is derived from 19 indicators that fall into three dimensions: life satisfaction, affection, and life meaning (*eudaimonia*) (BPS, 2021). The life satisfaction dimension reflects older individuals' satisfaction levels across various aspects of life. The affective dimension describes the feelings, and *eudaimonia* refers to a meaningful, happy, and quality life. Table 1 provides a detailed breakdown of the dimensions of the happiness index, along with the indicators of each dimension. The happiness index is quantified on a scale ranging from 0 to 100, with a higher index indicating greater happiness.

The happiness index, as the response variable in this study, was converted into a categorical variable for several reasons (see Data Analysis). Our calculation showed that the estimated national happiness index for older individuals is 70.54 points. The histogram of the data indicates that the distribution was normal; therefore, this study adopted the average value as the threshold for categorising the happiness index into two groups: "less happy" (equal to

Table 1.
Components of the Happiness Index

Dimension	Sub-dimension	Indicator
Life satisfaction	Personal life satisfaction	Satisfaction with education
		Satisfaction with employment
		Satisfaction with household income
		Satisfaction with health
		Satisfaction with housing conditions
	Social life satisfaction	Satisfaction with family harmony
		Satisfaction with how time is spent
		Satisfaction with social relationships
		Satisfaction with environmental quality of residence
		Satisfaction with safety conditions
Affection		Feeling joy
		Not feeling worried/anxious
		Absence of stress
Life meaning (*eudaimonia*)		Independence
		Environmental mastery
		Self-development
		Positive relationships with others
		Life purpose
		Self-acceptance

Source: BPS, 2021

Table 2.
Research Variables

Variable		Operational Definition	Category
Response variable			
Happiness		Happiness of the individual, divided into two categories with the national average value as the cut off	1 = Happy (above the national average of happiness among older individuals index) 0 = Less happy (equal to or below the national average of older individuals happiness index)
Explanatory variables			
Sociodemographic	Gender	Gender	1 = Male 0 = Female
	Marital status	Marital status at the time of the survey	1 = Never married 2 = Divorced 3 = Widowed 0 = Married
	Education level	The highest level of education completed	1 = Elementary school or below 2 = Junior high school 3 = Senior high school 0 = Higher education
	Type of residence	The individual's living environment	1 = Urban 0 = Rural
Socioeconomic	Household income	The average total monthly income of the household in the last year	1 = Rp1,800,000 or below 2 = Rp1,800,001 – Rp3,000,000 3 = Rp3,000,001 – Rp4,800,000 4 = Rp4,800,001 – Rp7,200,000 0 = More than Rp7,200,000
	Employment status	Whether the individual is employed in the last week	1 = Employed 0 = Not employed
	Ownership of old-age security	Whether the individual has pension funds and/or personal savings for old age	1 = Yes 0 = No
Health	Presence of chronic diseases	Whether the individual suffers from chronic or long-term diseases as diagnosed by a doctor	1 = Yes 0 = No
	Disability status	Disability is determined as individual experiencing severe or moderate level difficulty in at least one type of difficulty/impairment	1 = Yes 0 = No
Social engagement	Frequency of communicating with family	Frequency of meeting/talking/ communicating with family members	1 = Never 2 = At least once a month 3 = At least once a week 0 = Every day

Note: 0 = Reference category
Source: Authors' construction

or below the average) and "happy" (above the average). This categorisation resulted in 50.7 per cent being classified as less happy and 49.3 per cent as happy, creating a balanced distribution. These two categories were used as the response variable for further analysis.

The analysis also involves ten explanatory variables potentially associated with happiness. These variables represent sociodemographic, socioeconomic, health, and social engagement aspects. Table 2 presents the response variable and explanatory variables corresponding to each aspect, along with their operational definitions.

All variables, excluding education level and disability status, utilise the categorisation provided in the SPTK 2021 questionnaire. The

education level variables were reclassified from ten categories into four categories to simplify the analysis. Meanwhile, disability was determined by examining responses to questions related to difficulties or impairments. The SPTK includes questions on eight types of difficulties or impairments: vision, hearing, walking or climbing stairs, using or moving hands and fingers, memory or concentration, behavioural and/or emotional issues, speaking and/or understanding or communicating, and self-care. The questionnaire categorises difficulty into four levels: severe, moderate, mild, and none. Adopting the measurement of disability from the Washington Group on Disability Statistics (2023), disability is determined as individual experiencing severe or moderate level difficulty in at least one type of difficulty/impairment.

Data Analysis

In addition to converting the happiness index into a categorical variable, this study employs binary logistic regression to identify variables associated with happiness among older individuals. The advantage of using binary logistic regression lies in its flexibility regarding assumptions. Additionally, logistic regression is also preferred because, in some cases, policymakers are more interested in insights into the likelihood of specific outcomes than in precise numerical values of variables. In this context, understanding the likelihood of someone being happy or less happy may be more relevant than knowing the precise value of the happiness index.

Before conducting binary logistic regression, contingency tables and chi-square tests involving the response variable and each explanatory variable were formed. Variables included in the binary logistic regression model were those with a p-value < 0.01 in the chi-square test results. After forming the binary logistic regression model, goodness of fit and significance tests were conducted. The

model's goodness of fit was assessed using the Hosmer-Lemeshow test. Significance tests of the regression coefficients were performed to determine whether the explanatory variables were significantly associated with happiness among older individuals. Simultaneous and partial significance tests were conducted using the G-test and Wald test, respectively (Hosmer & Lemeshow, 2013).

Subsequently, among all variables significantly associated with the happiness of older individuals, the probabilities of feeling happy or less happy may differ among older individuals with different characteristics. According to Hosmer and Lemeshow (2013), regression coefficients in a logistic regression model can be interpreted using the odds ratio, which is obtained by exponentiating the regression coefficients. The odds ratio (OR) in this study indicates the odds of older individuals feeling happy with characteristics represented by a specific category of an explanatory variable compared to the probabilities of feeling happy with characteristics represented by the reference category. Conversely, the inverse of the odds ratio, $1/_{OR}$, compares the odds of feeling less happy with a specific category of an explanatory variable to the odds with the reference category.

Limitations

Older individuals included in this study were household heads or their spouses. Those who were not household heads or spouses were not included in the SPTK as they might not be able to answer specific questions related to household matters, such as employment, household income, and family dynamics. The happiness index results were categorised into two groups, with the mean value serving as the cut-off. This categorisation was justified by the approximation of the overall happiness index data to a normal distribution, as indicated by histogram analysis and the central limit theorem.

Results

The Happiness of Indonesian Older Individuals

In general, the happiness index of older individuals in Indonesia stood at 70.54 points. Among the dimensions, the life satisfaction index was the highest among older individuals at 73.97 points, while the affection index was the lowest at 65.91 points (Table 3). Each dimension comprised several indicators with varying scores.

Table 3.
Happiness among Indonesian Older Individuals by Indicator, Subdimension, and Dimension

Component	Value
Satisfaction Dimension Index	**73.97**
Personal Satisfaction Sub-Dimension Index	**67.80**
Satisfaction with education	59.11
Satisfaction with employment	70.98
Satisfaction with household income	65.53
Satisfaction with health	70.92
Satisfaction with housing conditions	72.22
Social Satisfaction Sub-Dimension Index	**80.14**
Satisfaction with family harmony	80.85
Satisfaction with how time is spent	76.26
Satisfaction with social relationships	79.30
Satisfaction with environmental quality of residence	81.97
Satisfaction with safety conditions	82.28
Affection Dimension Index	**65.91**
Feeling joy	76.17
Not feeling worried/anxious	59.47
Absence of stress	65.16
***Eudaimonia* Dimension Index**	**71.29**
Independence	72.91
Environmental mastery	73.25
Self-development	61.54
Positive relationships with others	70.88
Life purpose	72.30
Self-acceptance	75.71

Source: Calculated by authors (2024)

Older individuals' rating of personal life satisfaction was lower (67.80) than their social life satisfaction (80.14). They report being satisfied with their environment's security, environmental conditions, and family harmony, scoring 82.28, 81.97, and 80.85 points, respectively. Conversely, they were less satisfied with their education and skills, scoring 59.11 points, and with household income, which scored 65.53 points.

In the affection dimension, the indicator with the lowest score was the feeling of not being worried or anxious (59.47), while the highest-scoring indicator was the feeling of joy or happiness (76.17). In the meaning of life (*eudaimonia*) dimension, the self-development indicator scored the lowest (61.54), whereas the self-acceptance indicator scored the highest (75.71).

Descriptive Analysis

Table 4 provides a detailed overview of the happiness among older individuals in this study, highlighting how various aspects of life contribute to their well-being. Happiness appears to differ between genders, with older male individuals (53.16 per cent) being happier than older female individuals (44.67 per cent). This difference may be rooted in societal roles and expectations that shape individual experiences and perceptions throughout life. Marital status is another key predictor of happiness in older individuals. A majority (54.39 per cent) of married individuals expressed feelings of happiness, whereas less than half of those who were unmarried, divorced, or widowed reported being happy. This finding underscores the importance of companionship in later life.

Education opens doors to various opportunities, including the potential for greater happiness. Older individuals with higher education levels reported higher levels of happiness. Only 43.67 per cent of older individuals with an education level of elementary school or below were happy; this percentage doubled among those with higher education (82.19 per cent). This significant disparity highlights education's role in shaping not only careers but also life satisfaction. Of

Table 4.
Descriptive Statistics of Happiness among Indonesian Older Individuals by
Sociodemographic, Socioeconomic, Health, and Social Engagement Factors

Variable	N	(%)	Happiness		ᵃ *p-value*
			Happy	**Less Happy**	
Gender					
Male	8,091	54.17	4,301 (53.16)	3,790 (46.84)	0.000
Female	6,844	45.83	3,507 (44.67)	3,787 (55.33)	
Marital status					
Never married	183	1.22	63 (34.43)	120 (65.57)	0.000
Divorced	427	2.86	159 (37.24)	268 (62.76)	
Widowed	5,490	36.76	2,231 (42.46)	3,159 (57.54)	
Married	8,835	59.16	4,805 (54.39)	4,030 (45.61)	
Education level					
Elementary school or below	11,214	75.09	4,879 (43.67)	6,317 (56.33)	0.000
Junior high school	1,444	9.67	838 (58.03)	606 (41.97)	
Senior high school	1,536	10.28	1,014 (66.02)	522 (33.98)	
Higher education	741	4.96	609 (82.19)	132 (17.81)	
Type of residence					
Urban	6,311	42.36	3,287 (52.08)	3,024 (47.92)	0.000
Rural	8,624	57.74	4,071 (47.21)	4,553 (52.79)	
Household income					
Rp1,800,000 or below	6,847	45.84	2,568 (37.77)	4,261 (62.23)	0.000
Rp1,800,001 – Rp3,000,000	4,011	26.86	2,102 (52.41)	1,909 (47.59)	
Rp3,000,001 – Rp4,800,000	2,228	14.92	1,358 (60.95)	870 (39.05)	
Rp4,800,001 – Rp7,200,000	1,082	7.24	748 (69.13)	334 (30.87)	
More than Rp7,200,000	767	5.14	564 (73.53)	203 (26.47)	
Employment status					
Employed	9,067	60.71	4,638 (51.15)	4,429 (48.85)	0.000
Not employed	5,868	39.29	2,720 (46.35)	3,148 (53.65)	
Ownership of old-age security					
Yes	2,288	15.32	1,662 (72.64)	626 (27.36)	0.000
No	12,647	84.68	5,696 (45.04)	6,951 (54.96)	
Presence of chronic diseases					
Yes	2,376	15.91	1,074 (45.20)	1,302 (54.80)	0.000
No	12,559	84.09	6,284 (50.04)	6,275 (49.96)	
Disability status					
Yes	2,563	17.16	924 (36.05)	1,639 (63.95)	0.000
No	12,372	82.84	6,434 (52.00)	5,938 (48.00)	
Frequency of communicating with family					
Never	312	2.09	88 (28.21)	224 (71.79)	0.000
At least once a month	233	1.56	73 (31.33)	160 (68.67)	
At least once a week	904	6.05	349 (38.61)	555 (61.39)	
Every day	13,486	90.30	6,848 (50.78)	6,638 (49.22)	

Note: ᵃ Chi-squared test
Source: Calculated by authors (2024)

the type of residence, more older individuals living in urban areas reported happiness (52.08 per cent) than their rural counterparts (47.21 per cent).

Socioeconomic status profoundly impacts happiness among older individuals. Happiness increases with income, as only 37.77 per cent of those earning up to 1.8 million rupiahs per month felt happy, compared to 73.53 per cent of those with incomes over 7.2 million rupiahs. However, more than half of older individuals were in the two lowest household income

groups, indicating that many of them faced financial challenges. This means a critical area that requires improvement. Employment status also correlates positively with happiness, with 51.15 per cent of employed older individuals reporting feeling happy, compared to 46.35 per cent of those unemployed. Moreover, 72.64 per cent of the older individuals with old-age security reported happiness, while only 45.04 per cent of those without security did so. This suggests that financial stability contributes to peace of mind. Unfortunately, 84.68 per cent of older individuals in this study lacked a pension fund or personal savings for old-age security.

Health is another crucial factor influencing happiness among older individuals. Approximately 8 out of 10 older individuals reported good health, with 84.09 per cent being free from chronic diseases and 82.84 per cent without disabilities. Of those without chronic diseases, 50.04 per cent reported happiness, compared to 45.2 per cent of those with chronic conditions. Likewise, 52 per cent of those without disabilities reported feeling happy, in contrast to only 36.05 per cent of those with disabilities. These findings underscore a strong positive correlation between health and happiness among older individuals.

Social engagement within families appears to have a profound impact on happiness among older individuals. A remarkable 90 per cent of older individuals engaged daily with family members, whether meeting in person, having conversations, or other forms of communication. Among those who maintained daily family interactions, 50.78 per cent reported happiness, compared to just 28.21 per cent of those who never engaged with their families. This illustrates the significant impact of social connection and belonging on the happiness of older individuals.

Inference Analysis

The multivariate analysis using binary logistic regression provided insightful findings on the factors contributing to happiness among older individuals. The model is considered a good fit model, as indicated by the goodness-of-fit test, and can correctly classify respondents with an accuracy rate of 62.5 per cent. Detailed associations between happiness among older individuals and the ten explanatory variables are presented comprehensively in Table 5.

Table 5.
Sociodemographic, Socioeconomic, Health, and Social Engagement Factors Associated with Happiness among Indonesian Older Individuals (1=Happy; 0=Less Happy)

Variable	β	OR	1/OR
Gender			
Male	0.021	1.021	0.980
Marital status			
Never married	-0.515**	0.598	1.672
Divorced	-0.393**	0.675	1.481
Widowed	-0.176**	0.838	1.193
Education level			
Elementary school or below	-0.954**	0.385	2.597
Junior high school	-0.541**	0.582	1.718
Senior high school	-0.479**	0.619	1.616
Type of residence			
Urban	-0.100**	0.905	1.105
Household income			
Rp1,800,000 or below	-0.901**	0.406	2.462
Rp1,800,001 – Rp3,000,000	-0.526**	0.591	1.692
Rp3,000,001 – Rp4,800,000	-0.373**	0.689	1.452
Rp4,800,001 – Rp7,200,000	-0.167	0.846	1.182
Employment status			
Employed	0.174**	1.190	0.840
Ownership of old-age security			
Yes	0.636**	1.890	0.529
Presence of chronic diseases			
Yes	-0.206**	0.813	1.229
Disability status			
Yes	-0.428**	0.652	1.534
Frequency of communicating with family			
Never	-0.497**	0.608	1.645
At least once a month	-0.456**	0.634	1.577
At least once a week	-0.263**	0.769	1.300

*Note: ** = significant at α=1 per cent*
Source: Calculated by authors (2024)

Being married or in a partnership boosts happiness significantly. Older individuals who were never married, divorced, or widowed have higher odds of feeling less happy than

those who were married, with odds ratios of 1.672, 1.481, and 1.193, respectively. Higher educational attainment is also linked with greater happiness. Older individuals who graduated from elementary school or below, junior high school, and senior high school tend to feel less happy by 2.597 times, 1.718 times, and 1.616 times, respectively, than those who had the opportunity to complete higher education. The living environment also contributes to happiness, residing in rural areas increases the probability of being happy by 10.5 per cent. Economic factors are also a predictor of happiness. Older individuals with lower household income levels tend to be less happy than those with the highest income level. Employment contributes positively to happiness among older individuals, raising the probability by 19 per cent. Feeling secure about the future is also crucial for the happiness of older individuals. Therefore, having old-age security increases the probability of being happy by 89 per cent. The absence of chronic diseases and disabilities is another critical factor in maintaining happiness. Older individuals with chronic diseases in this study were 1.229 times more likely to be unhappy compared to those without such conditions. Meanwhile, disabilities increased the likelihood of older individuals feeling less happy by 53.4 per cent. Frequent communication with family members also enhances the probability of feeling happy. Older individuals who met or communicated with their family members at least once a week, once a month, and never tend to be less happy by 1.3 times, 1.577 times, and 1.645 times, respectively, compared to those with daily contact with their family members. Interestingly, gender did not significantly influence happiness, indicating that happiness in old age is not strongly influenced by gender differences.

Discussion

In the descriptive statistics, 53.16 per cent of older male individuals reported being happy compared to 44.67 per cent of older female individuals. This difference may be linked to cultural practices in Indonesia, where co-parenting often involves mothers and grandmothers, particularly in the case of working mothers. While some families manage to co-parent well, others experience conflicts between mothers and grandmothers over caregiving responsibilities (Antawati, 2020). These conflicts may contribute to lower happiness levels among older female individuals. However, in the multivariate analysis, gender was not found to be significantly associated with the happiness of older individuals. The lack of significance between gender and happiness or life satisfaction among older adults aligns with previous studies (Kolosnitsyna et al., 2014).

The observed lack of a significant relationship between gender and happiness among older individuals may be caused by reduced gender inequality in various aspects of life during old age. At younger ages, gender disparities often manifest in different forms, such as in employment, income, and social roles. However, as individuals enter old age, many of these inequalities diminish. For instance, as people retire and exit the workforce, traditional gender roles and expectations associated with work and productivity lose their relevance, which can lead to a more equal experience of leisure and happiness. In addition, both genders might experience similar levels of vulnerability regarding health issues and mobility limitations, further minimizing the impact of gender differences on overall happiness in later life.

In general, being unmarried, divorced, and widowed increases the probability of being less happy. This pattern aligns with a study on the determinants of happiness among older individuals in Turkey, where the odds of being unhappy increased 8.4 times for those who divorced or separated from their partners (Ergin & Mandiracioglu, 2015). Marriage contributes positively to happiness through emotional support when facing work pressure

or loneliness and financial support through joint income accumulation (Stutzer & Frey, 2006). This notion is supported by the marriage protection/support hypothesis, which assumes that unmarried individuals are more prone to physical and emotional issues compared to their married counterparts, primarily due to the absence of continuous companionship and emotional support from a spouse (Coombs, 1991). This support typically serves as a buffer against the challenges and stresses of daily life. Social interaction patterns also evolve across the lifespan (Ortiz-Ospina, 2020). While young people prioritize time with peers and extended family, older individuals increasingly rely on spouses for companionship. The absence of a spouse in old age can exacerbate loneliness and negatively impact well-being.

Older individuals with lower education levels tend to be less happy than those with higher education, which is aligned with previous studies (Collard & Hayes, 2014). Individuals with higher education levels have broader social networks and engagement with the world, which positively correlates with happiness. In addition, education indirectly influences happiness through social capital, such as self-confidence and self-esteem (Rahayu, 2016). Education empowers individuals by actualising or optimising various abilities to achieve their desires or needs, contributing to happiness. Within the components of the happiness index (Table 3), it was also observed that the satisfaction levels concerning education and self-development are the lowest compared to other indicators within each dimension. This highlights a crucial area for focus in efforts to enhance the happiness of older individuals.

Older individuals in rural areas tend to feel happier than those in urban areas. This finding aligns with research by Kolosnitsyna et al. (2014), who observed that living in a city decreased life satisfaction among Russians aged 55 and above. The better environment quality and social engagement, as well as a more peaceful life in rural areas, could be the reasons behind the positive association between rural areas and happiness. Rural areas typically have better air quality compared to urban regions, largely due to the presence of more green open spaces and fewer motor vehicles. Limayani and Tanur (2024) noted that this better air quality positively influences happiness, as opposed to poor air quality, which can negatively affect mood and emotional well-being. Additionally, rural communities tend to engage more in collective activities, such as communal work (*gotong royong*) and deliberations (*musyawarah desa*), compared to those in urban areas. These activities create a supportive environment, fostering trust within rural neighbourhoods, which is linked to higher happiness among older adults (Hwang & Sim, 2021).

Household income positively contributes to the happiness of older individuals in Indonesia. According to Table 3, satisfaction with household income and not feeling worried or free from anxiety both consistently rank as low-scoring indicators across each dimension, also indicating a positive association between household income and happiness. A study on older individuals in Turkey aligns with these findings, where the odds of being unhappy increased 4.3 times for those with low income (Ergin & Mandiracioglu, 2015). Higher income often elevates one's social status in society and ultimately enhances happiness (Rahayu, 2016). Zaidi et al. (2009) also found that average life satisfaction scores increased with higher levels of subjective social status. Additionally, higher income enables individuals to fulfil older individuals' material needs. When someone cannot meet their material needs, especially if those needs are essential, they may experience anxiety and depression, leading to a sense of unhappiness.

Being employed raises the probability of being happy. This result aligns with previous studies (Collard & Hayes, 2014; Kolosnitsyna et al., 2014). Several other studies also reveal

a positive relationship between productive activities, such as work or volunteer activities, and the personal well-being of older adults (Hao, 2008). As an activity often linked with effort and concentration, working can provide a sense of usefulness and mastery for those involved (Tadic et al., 2013). Moreover, working can also allow older individuals to engage in social activities and provide opportunities for them to participate in social interactions. Hence, happiness is enhanced.

Having old-age security increases the probability of being happy. Ownership of old-age security, whether a pension fund or personal savings, indicates older individuals' readiness to face old age. It provides income security in old age, making older individuals feel secure and protected compared to those without pension funds or savings. Collard and Hayes (2014) mention that one of the individual-level factors causing individuals aged 50 and above to feel unhappy is having no savings. Han et al. (2022) also concluded that, in general, receiving a pension is positively correlated with the level of happiness in older individuals in China. Furthermore, research by Shin (2018) compares pension funds and personal savings in increasing happiness, with personal savings enhancing happiness more than the public pension system.

The ageing population is accompanied by an increase in degenerative diseases and disabilities. The presence of chronic diseases in older individuals contributes negatively to their happiness. Chronic diseases refer to conditions that cannot be fully cured and require a relatively long time for recovery, such as diabetes and cancer. The presence of chronic diseases is related to concerns about death. Easterlin (2006) mentions that one factor contributing to a decrease in happiness is a decline in health conditions and expectations or thoughts about death. Similarly, Rahayu (2016) states that feeling healthier can make people happier. Additionally, Koopmans et

al. (2010) found in their research that there is a significant difference between the number of chronic diseases older individuals have and their level of happiness. Having more chronic diseases can lead to physical and psychological limitations, negatively impacting the ability to perform daily activities and reducing the level of happiness (Pawlowski et al., 2011).

The positive association observed between disability and reduced happiness aligns with findings reported by Rahman et al. (2022) and Luchesi et al. (2018). The presence of disabilities can hinder individuals from engaging in activities. Studies have highlighted the positive impact of physical activities on the personal well-being of older individuals (Wallace, 2008). People who are less physically active often face difficulties socialising with others (de Souto Barreto, 2014). It ultimately leads to a lower level of happiness. Angner et al. (2013) also found a strong correlation between happiness and the extent to which illnesses disrupt daily activities. Furthermore, disabilities commonly experienced by older individuals, for example, difficulties in seeing, hearing, and walking, often arise from diminished organ function associated with ageing. The feelings of diminished capability compared to earlier life stages may lead to decreased self-esteem and life satisfaction.

The more older individuals meet or communicate with their family, the greater their likelihood of being happy. In Korea, older adults showed increased happiness when the frequency of contact with their family increased (Hwang & Sim, 2021). The study by Chen et al. (2014) mentions that many older adults do not actively participate in social activities, making their children their primary source of support. Therefore, when the frequency of contact between older adults and their families (especially their children) is low, it can lead to feelings of loneliness, which is found to mediate the effect of a lack of support from family, friends, and others on life satisfaction (Bai et

al., 2018). Beyond family, social support and mutually supportive communities significantly impact the quality of life of older adults (H. Lee et al., 2014). Older individuals who lack support from family members or caregivers rely heavily on social support from their community or surrounding environment. Older adults with a "restricted" network tend to experience lower levels of well-being compared to those with a "diverse" network (Djundeva et al., 2019).

Conclusion

This study analyses the association between the happiness of older individuals in Indonesia and sociodemographic, socioeconomic, health, and social engagement indicators. The study finds that happiness among older individuals is strongly associated with factors such as being married, achieving higher education, residing in rural areas, having a higher income, being employed, having old-age security, being free from illness and disability, and maintaining regular communication with family members. Based on these findings, it is recommended to optimise the 'Healthy Lifestyle Community Movement' (GERMAS - *Gerakan Masyarakat Hidup Sehat*) program by the Ministry of Health as a preventive measure to enhance older individuals' health. This optimisation can be achieved by involving all levels of healthcare facilities, as well as NGOs working in the health sector, to raise awareness about healthy lifestyles for both older individuals and caregivers. This is crucial given the high prevalence of non-communicable diseases in Indonesia, which are primarily caused by unhealthy lifestyles (Putro et al., 2023).

Furthermore, the preventive efforts should consider the varied information reception capabilities of the community, necessitating innovations in creating simple and engaging brochures or pamphlets (Dey et al., 2020). Additionally, these preventive measures should include routine health screening for all older individuals in every neighbourhood,

coordinated by village governments in collaboration with health departments and NGOs. The successful collaboration between the Malaysian government and NGOs in strengthening the delivery of healthcare services to older individuals serves as a model for such initiatives (VNR, 2018). Regarding disabilities, the government can enhance the happiness of older individuals with disabilities by facilitating the provision of assistive devices or support tools, such as hearing aids and wheelchairs, which enable them to participate in activities and, consequently, improve their happiness.

Enhancing the social protection system is essential for improving the welfare of older individuals. Since 2016, the Government of Indonesia, through the Ministry of Social Affairs, has expanded the scope of the Family Hope Program (PKH - *Program Keluarga Harapan*) to include older individuals. This program provides financial assistance to older individuals with low socioeconomic status, enabling them to access basic services. A fundamental aspect of this program that still requires improvement is ensuring the validity of the beneficiary data to ensure that assistance is accurately targeted and not misused. It is important to note that while cash assistance can provide financial security for low-income older individuals, it is a short-term solution that heavily relies on the beneficiaries' financial management. Therefore, increasing financial literacy among older individuals and their families is necessary, especially given the rising issue of online gambling, which poses a risk to financial stability. Financial literacy also should be introduced as early as possible to prevent the lack of retirement savings from becoming a financial issue in old age. Furthermore, enhancing the skills of older individuals is essential for ensuring they are not just beneficiaries of assistance but can actively contribute to the economy during their later years.

Additionally, easily accessible peer-based interventions can meet the need for emotional support among older individuals, thereby reducing loneliness and worry and bringing happiness. One example is creating active peer communities such as "Elderly Clubs" or "Senior Centres" like those in Japan, which offer a variety of social, recreational, and educational activities for seniors. A comparable initiative has been implemented in Singapore with the introduction of the 'Community Network for Seniors,' a collaborative effort between government agencies and community-based stakeholders aimed at supporting older individuals living in the community (VNR, 2018). Besides providing companionship, this policy can also enhance knowledge through discussion and improve skills as well as capacities through various activities facilitated by stakeholders, resulting in increased self-development among older individuals.

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