

# Social Engagement and Retirement Satisfaction: Evidence from Indonesia

Emmanuel Nizeyumukiza<sup>1\*</sup>, Adi Cilik Pierewan<sup>1</sup>, Edmond Ndayambaje<sup>1</sup>,  
and Yulia Ayriza<sup>1</sup>

## Abstract

*Little is known about the association between social engagement and retirement satisfaction in the developing world. This study examines the association between social engagement and retirement satisfaction in Indonesia, a developing country. The data come from the Indonesia Family Life Survey (IFLS fifth wave) which took place in late 2014 and early 2015. After narrowing the survey so that it would pertain exclusively to retired individuals, a sample of 1,316 Indonesian retirees was yielded. Logistic regression was performed to estimate this relationship after controls were established around a set of confounding variables. The main findings show that social engagement increases the odds of being satisfied with retirement. Specifically, an increase of one unit of social engagement is associated with an increase in the odds of being satisfied with retirement by 21%. The study suggests that policies and programs that can stimulate retired individuals to actively participate in social life in their environments should be developed and prioritized.*

## Keywords

*Social engagement; community participation; retirement satisfaction; Indonesia*

## Introduction

The decline in fertility and the enhanced life expectancy have led to an increased aging population around the world including those in ASEAN (Association of South-East Asian Nations) countries. In fact, in 2010, the aging population in the ASEAN region was estimated as high as 8.1% of the entire population, and it is projected to be 17% in 2035 and as high as 24.2% in 2050 (Adioetomo & Mujahid, 2014). In Indonesia, there were 21 million elderly individuals over the age of 60 in 2015, and this number is projected to be 62 million in 2050 (Biswas, 2018). This suggests that by the year 2050, there will potentially be 62 million retirees in Indonesia. The mandatory age for retirement in Indonesia had been 56 years old for a considerable time but in the year 2019, this was increased to the age of 57, and the policy now is that once every three years, it will continue to increase by one year until the mandatory retirement age becomes that of the age of 65 (International Labor Organization, 2017). Given this increased number of retirees, it is important to address issues associated with well-being during the years of retirement.

Retirement can be defined as a withdrawal of older individuals from their active positions in jobs and careers (Mukku, Harbishettar & Sivakumar, 2018). The role theory (Cottrel, 1942) postulates that with retirement, individuals experience role loss and struggle with the aging process. Conversely, the continuity theory (Atchley, 1999) posits that individuals can cope

---

<sup>1</sup> Yogyakarta State University, Indonesia

\* Emmanuel Nizeyumukiza, corresponding author. Email: emmanizeye90@gmail.com

with role loss by creating new roles for themselves (role continuity). Consistent with this theory, some elderly individuals perceive retirement as a unique opportunity from which to travel, to enjoy life with their families, and to pursue their hobbies while others think of it as a time to engage in community activities so as to give back to society. However, elderly individuals who do not establish specific goals in their retirement are more likely to experience negative impacts (Butrica & Schaner, 2005). Thus, engaging in social activities, which was conceptualized as social engagement (Wang & Shi, 2014), may lead to satisfaction with retirement.

Retirement satisfaction can be thought of as a measure of subjective well-being in retirement (Asebedo & Seay, 2014); and some studies have sought to investigate it as a function of social engagement (Kim & Feldman, 2014; Sener, Terzioglu & Karabulut, 2007; Butrica & Schaner, 2005). However, most of these empirical studies were conducted in developed countries. There is lack of empirical evidence on this issue from developing countries. Therefore, the purpose of this study is to close this gap by investigating how retirement satisfaction is linked to social engagement in Indonesia, a developing country, using national representative data from the fifth wave of the Indonesian Family Life Survey.

## Literature Review

Following the paradigm set up by Diener, Oishi and Lucas (2002) who define life satisfaction as an individual's cognitive and affective evaluation of his/her life, retirement satisfaction can be defined as an individual's cognitive and affective evaluation of his/her retirement or an indicator of well-being in retirement (Price & Joo, 2005). Therefore, the cognitive assessment of one's retirement would be the best way to monitor retirement satisfaction. Potocnik, Tordera and Peiró (2011) argue that retirement satisfaction is an indicator of retirement adjustment. Retirement satisfaction can be thought of as comfort, defined as satisfaction of needs (Mishchuk & Grishnova, 2015) in retirement. Previous studies have documented the determinants of retirement satisfaction including gender (Calasanti, 1996), financial security (Richardson & Kilty, 1991), health (Asebedo & Seay, 2014), depression (Kubicek, Korunka, Raymo & Hoonakker, 2011), education (Szinovacz & Washo, 1992), social integration (Szinovacz & Washo, 1992), an earlier plan of objective and goals to be pursued in retirement (Quick & Moen, 1998), and social engagement (Butrica & Schaner, 2005).

As there is no common definition of social engagement in literature regarding geriatric studies, the term is very subjective in its meaning. Some studies define it as social networks, social activities, social participation (Mendes de Leon, 2005), and formal or informal volunteer work (Butrica & Schaner, 2005). Hence, it is warranted that social engagement be defined as participation in community activities. Social engagement can be measured by the amount and frequency of participation in activities in the social environment (Sabbath et al., 2015). In this study, social engagement is defined as participation in community meetings, voluntary labor, religious activities, and programs to improve neighborhoods and cooperatives.

Social engagement, for elderly individuals, has been associated with positive outcomes. Cherry et al. (2013) found a positive association between social engagement and physical health in a sample of older adults. In one cohort study conducted by Hajek et al. (2017), the researchers reported that social engagement decreased depressive symptoms of older adults aged 75 and over. Tiernan, Lysack, Neufeld and Lichtenberg (2013) found a positive association between community engagement and well-being in a sample of older African American adults. Similarly, D'Silva and Samah (2018) found that participating actively in

voluntary activities contributed to the objective well-being of Japanese retirees residing in Malaysia. Despite the benefits of social engagement in old age, this association with retirement satisfaction has not been given adequate coverage in literature on geriatric studies. Few studies have examined the relationship between social engagement and retirement satisfaction, and those that did so tended to study individuals in developed countries exclusively.

In the United States, Kim and Feldman (2014) investigated the links between leisure activities and volunteer work and retirement satisfaction. They studied professors who had retired from the University of California. The results revealed that participating equally in volunteer work and leisure activities were predictors of life satisfaction in retirement. Butrica and Schaner (2005) investigated the links between engagement and retirement satisfaction. Analyzing data from a nationally representative sample of American retirees over 55, they found that engagement was positively associated with life satisfaction during retirement.

Community service seems to benefit retirement satisfaction as well. For instance, in a study aimed at examining the effect of unpaid work on satisfaction with retirement among rural retirees, Dorfman and Rubenstein (1993) found that volunteering was significantly associated with retirement satisfaction among male retirees, and that unpaid community service was predictive of satisfaction among female retirees. In China, Wu, Tang and Yan (2005) found that volunteer work correlates with life satisfaction of elderly individuals. Cohen-mansfield, Dakheel-ali and Frank (2010) found that retirees who were enrolled in a community service program reported being happier than those who had not sought to be part of this involvement.

In retirement, one can expect to have enough time from which to devote himself to leisure activities which may be beneficial to one's sense of life satisfaction. In a study that was designed by O'Brien (1981) to investigate the relationship between leisure participation and satisfaction with retirement, the researchers used the retirement descriptive index to measure retirement satisfaction of retirees in South Australia. The results revealed an appreciable effect of leisure activities on retirement satisfaction among both female and male retirees. Similarly, participation in leisure activities was found predictive of life satisfaction among men who were retirees in Turkey (Sener et al., 2007). Using an Israeli national sample survey, Nimrod (2007) examined the links between leisure activities and life satisfaction in retirement. The results revealed that leisure activities were predictive of life satisfaction in retirement.

Given the small number of studies investigating the benefits of social engagement on retirement satisfaction, this current study intends to contribute to the existing literature by providing empirical evidence of the relationship between social engagement and retirement satisfaction in Indonesia.

## **Analytic Strategy**

Similar to previous studies, retirement satisfaction was dichotomized (Li et al., 2014) with logistic regression judged as the most suitable method for analysis. This particular study began by first analyzing a simple model (model 1) in which retirement satisfaction was estimated as a function of social engagement. It then included a set of confounding variables (model 2) to understand the dynamics of the relationship between social engagement and retirement satisfaction after confounding variables were adequately controlled. Both data management and data analysis were performed using R statistical software (Fox & Leverage, 2016).

## Methods

### Data

The data come from the Indonesian Family Life Survey (IFLS), the fifth wave which took place in late 2014 and early 2015. This study used the fifth wave as it is the most recent wave of the survey available. IFLS is an ongoing longitudinal socioeconomic and health survey that began in 1993 and has already completed 5 rounds and represents around 83% of the entire Indonesian population (Strauss, Witoelar & Sikoki, 2016). It provides data information on individuals, their families, households, communities, education, and health. More information can be found in the studies done by Strauss et al. (2016).

### Sample

IFLS-5 collected information on 16,204 households and 50,148 individuals using a multistage stratified sampling (Strauss et al., 2016). Several household members were randomly selected and asked detailed personal information. The sample was restricted to individuals who reported that they were retired. After correcting missing data pertaining to assessment of retirement satisfaction, a sample of 1,316 retired individuals was yielded.

### Measures

#### *Outcome variables*

Retirement satisfaction served as the outcome variable and was measured by a single question, which was whether, in the perspectives of the respondent, retirement had turned out to be satisfying, moderately satisfying, or not at all satisfying at all (Strauss et al., 2016). As with previous studies, the answers were dichotomized to become satisfied or not satisfied with retirement with the study designating the dummy variable of 0 to answers not at all satisfying, and 1 to the answers moderately satisfying or very satisfying. Most respondents (61%) reported being satisfied with retirement and 39% reported not being satisfied with retirement. Descriptive statistics of the sample can be found in table 1.

#### *Explanatory variable*

Social engagement served as an explanatory variable and was measured by community participation. Retired individuals were asked if in the past 12 months they had participated in the community activities of community meetings, cooperatives, voluntary labor, programs to improve the neighborhood, and religious activities, and then were given yes or no options (Strauss et al., 2016). In accordance with Sabbath et al. (2015) who defines social engagement as the number of community activities an individual participates in, the scores for the five activities were then aggregated into one score ranging between 0 to 5. The average score for community participation was 1.5 (SD = 1.21, range = 0-5). This yield suggested low participation.

#### *Control variables*

There is evidence of the relationship between gender, age, marital status, education (Wang & Matz-Costa, 2019), social trust, religiosity, smoking status, poverty (Ardjmand, Weckman,

Schwerha & Snow, 2016; Szinovacz & Davey, 2005), self-rated health (Asebedo & Seay, 2014), physical activity, and depression (Kubicek et al., 2011) with retirement satisfaction. Therefore, it was the intention of the study to control these confounding variables. The descriptive statistics of the control variables can be found in table 1.

Gender was coded with the dummy variable of 1 for males and 0 for females. In this analysis, the study also coded 1 for married individuals and 0 for unmarried ones (that being based on whether the individual was single, widowed, or divorced). Education was coded based on the level of education achieved by respondents. 1 was designated for education consisting only that of elementary school and the equivalent. A code of 2 was designated for individuals whose education was that of junior high school and the equivalent. A code of 3 was designated for those with a senior high school education and the equivalent. A code of 4 was designated for individuals having received a higher education. Elementary school was taken as reference category. Religious individuals were given dummy code 1 and not religious were given dummy code 0. Personality traits were measured with the short version of the Big Five Inventory (Rammstedt & John, 2007). Extroversion was used to account for personality traits of respondents and was a continuous variable. Health status also entered into the analysis. Those who reported being healthy and somewhat healthy were given the dummy code of 1, and those who reported being somewhat unhealthy and very unhealthy were given a 0. As no real sense of being healthy is possible without good mental health (World Health Organization, 2016), depression was also entered into the analysis. It was measured using the 10 items of the short version for the Center for Epidemiological Studies (Andresen, Malmgren, Carter & Patrick, 1994).

A measure of subjective poverty was entered as well. The survey asked the respondents to imagine a six-step ladder in which, on the bottom step, stands the poorest people, and on the highest step (the sixth step) stands the richest individuals, and then to determine which step he or she is on. Possible answers ranged between 1 (the poorest) and 6 (the richest). The scores were then reversed so that the highest scores indicated high subjective poverty. Physical activity frequency was included in the analysis as it has the potential to influence retirement satisfaction. The survey then asked the respondents to think about the time he or she spent walking in the last 7 days (this would include at work, at home, and in all forms of recreation), and then to determine if it was done for ten minutes continuously (Strauss et al., 2016). The respondent who answered in the affirmative to this question was asked a subsequent question which was how much over the past seven days he or she exercised. Possible answers range from 1 to 7. The highest scores indicated a high frequency of physical activity.

## Results

### Descriptive statistics

As indicated in table 1, the mean age of the sample was 63.2 (SD being 8.44, with a range of 50-90). Forty-five percent reported being male, while fifty-five respondents reported being female. Slightly over 56% finished elementary school, with about 15% having completed junior high school, around 21% who finished senior high school, and slightly over 7% reported having finished an undergraduate program of higher education. Around one-third of respondents reported being single, while two-thirds reported being married. More than three-fourths reported that they smoked, and around the same amount indicated that they were religious. Around 57% of respondents reported being healthy while around 43% reported not being healthy.

**Table1:** Descriptive statistics of the study variables

		%	Min	Max	Mean	SD	n
Retirement satisfaction							
	Satisfied	61.0					804
	Unsatisfied	39.0					512
Gender							
	Male	45.0					594
	Female	55.0					722
Education							
	Elementary school	56.8					584
	Junior high school	15.3					157
	Senior high school	20.6					211
	High education	7.3					75
Marital status							
	Married	67.2					885
	Unmarried	32.8					431
Religiosity							
	Religious	86.2					903
	Not religious	13.8					144
Smoking behaviors							
	Smoking	87.0					463
	Non-smoking	13.0					69
Self-Rated Health							
	Healthy	57.4					748
	Unhealthy	42.6					556
Social engagement			0	5	1.48	1.21	1,301
Age			50	90	63.2	8.44	1,316
Social trust			1	4	2.8	1.16	1,316
Extroversion			2	10	7.05	1.34	1,304
Frequency of physical activity			1	7	4.96	2.38	911
Subjective poverty			1	6	4.03	1.08	1,301
Depression			0	30	5.93	4.68	1,304

For social trust, the mean score was 2.88 (SD being 0.46, with a range of 1-4). As for extroversion, the mean score was 7.05 (SD being 1.34, with a range of 2-10). For depression, the mean score was 5.93 (SD being 4.68, with a range of 0-30). For subjective poverty, the mean score was 4.03 (SD being 1.08, with a range of 1-6). For physical activity frequency, the mean score was 4.96 (SD being 2.38, with a range of 1-7).

## Multivariate analysis

The test for multicollinearity indicated very small values for all the predictors with VIF that was between 1.02 and 1.28, suggesting an absence of multicollinearity. Thus, all predictors are included in the multivariate analysis. The results of logistic regression have been summarized in table 2.

Model 1 indicates positive association of social engagement with retirement satisfaction (OR = 1.14,  $p < .01$ , 95% CI = [1.04, 1.25]). This association is even larger when including confounding variables in Model 2 (OR = 1.21,  $p < .05$ , 95% CI = [0.97, 1.52]). This means that high levels of social engagement are associated with high odds of reporting moderate or high retirement satisfaction. Among the demographic variables, age is the only one that was significantly associated with high odds of reporting moderate or high retirement satisfaction

(OR = 1.04,  $p < .05$ , 95% CI = [1.00, 1.08]). No significant gender or education differences were found in the odds of reporting no satisfaction, moderate satisfaction, or high satisfaction.

**Table 2:** Multivariate logistic regression predicting retirement satisfaction

	Model 1		Model 2	
	OR	CI	OR	CI
Social engagement	1.14**	(1.04, 1.25)	1.21*	(0.97, 1.52)
Age			1.04*	(1.00, 1.08)
Extroversion			0.98	(0.80, 1.19)
Frequency of physical activity			1.06	(0.93, 1.20)
Social trust			0.99	(0.77, 1.26)
Subjective poverty			0.76*	(0.57, 1.00)
Depression			0.96	(0.89, 1.02)
Gender (ref. female)				
Male			0.83	(0.32, 2.09)
Education (ref. elementary school)				
Junior high school			1.29	(0.59, 2.81)
Senior high school			1.73	(0.83, 3.63)
High education			1.13	(0.36, 3.83)
Marital status (ref. unmarried)				
Married			1.15	(0.52, 2.49)
Smoking (ref. non-smoking)				
Smoking			0.66	(0.26, 1.75)
Religiosity (ref. non-religious)				
Religious			0.78	(0.37, 1.64)
Self-Rated Health (ref. unhealthy)				
Healthy			1.82*	(0.98, 3.40)

*Note:* Results of logistic regression models for retirement satisfaction, where 0 = not at all satisfied and 1 = moderately/very satisfied. OR = odds ratio; CI = confidence interval.

\* $p < .05$ , \*\* $p < .01$

Among the other control variables, subjective poverty and self-rated health were shown to be significantly associated with retirement satisfaction. Subjective poverty was shown as related to the odds of reporting no satisfaction with retirement (OR = 0.76,  $p < .05$ , 95% CI = [0.57, 1.00]), whereas healthy retirees were shown to have higher odds of reporting satisfaction with retirement (OR = 1.82,  $p < .05$ , 95% CI = [0.98, 3.40]). The association between social trust, smoking, marital status, religiosity, extroversion, and retirement satisfaction was not found significant in this analysis.

## Discussion

Little attention was paid to the links between social engagement and satisfaction with retirement in the developing world. The purpose of this study was to investigate the association between social engagement and retirement satisfaction using national representative data in Indonesia. The main findings showed that social engagement increases the odds of being satisfied with retirement, regardless of such factors as age, gender, marital status, education, personality traits, physical health, mental health, physical activity frequency, and subjective poverty. Specifically, an increase of one unit of social engagement is

associated with a 21% increase in the odds of being satisfied with retirement. Social engagement, therefore, is an important predictor of retirement satisfaction.

The results of this study corroborate prior studies that have documented a positive association of social engagement with retirement satisfaction in developed countries (Kim & Feldman, 2014; Butrica & Schaner, 2005; Mendes de Leon, 2005). Moreover, the results are comparable with those found in developing countries, which found a positive association between social engagement and retirement satisfaction (Sener et al., 2007; Nimrod, 2007). These results may be explained by the social ties which retired individuals engage in when they participate actively in social activities. Furthermore, these social ties may bring social support, comfort, a sense of belonging, companionship, and accomplishment (Ashida, Sewell, Schafer, Schroer & Friberg, 2018). Various theories, as well, can help to explain the positive association found between social engagement and retirement satisfaction. The role theory emphasizes that while retirement leads to the loss of a worker's role, career, and a sense of being a fellow worker and member of an organization, it strengthens the role of being a family member and a member of the community (Barnes-Farrell, 2003). The continuity theory stresses the fact that human beings have a tendency to remain the same over time in both how they think and behave, and behaving in this singular role, it continues into retirement, and thus can be transferred to other activities (Atchley, 1999). Finally, the activity theory postulates that elderly individuals can maintain their health and mental well-being by remaining active (Rosow, 1967) which is imperative for retirement satisfaction.

It seems that people are more satisfied with retirement as they age. In fact, as retired individuals get older, they get more adjusted to retirement. These results are in line with those found by Wang and Matz-Costa (2019). As expected, healthy elderly individuals are more satisfied with retirement than their counterparts. These findings corroborate previous studies that found health as a significant determinant of retirement satisfaction in developed countries (Asebedo & Seay, 2014; Dorfman & Rubenstein, 1993; Fouquereau, Fernandez, Fonseca, Paul & Uotinen, 2005). Subjective poverty exhibits a negative association with retirement satisfaction in this study. It is possible that poor retirees have to look for other sources of income (Quinn, 2010) and the stress of these concerns as well as the activities themselves will no doubt bring fatigue and exhaustion to them given their old age. In fact, it is usual, especially in developing countries, that retirees have to seek other jobs to contribute to the functioning of the family. Previous studies have documented that earning a large income was associated with subjective well-being in Europe (Cannas, Sergi, Sironi & Mentel, 2019) with large incomes contributing to financial stability in subsequent retirement.

This study has some limitations that need to be addressed. First, the cross-sectional nature of the data doesn't allow it to draw any causation. Secondly, even though multiple adjustments were included, some variables could not be measured. For example, there was no available information about the retirement preparedness of the respondents. It is possible that retirement satisfaction may vary according to whether a worker has or has not planned out his or her retirement fully.

This study has several strengths. Foremost, it is probably the first study to investigate the association between social engagement and retirement satisfaction in Indonesia, and also one that used nationally representative data.



## Conclusion

The numbers of the geriatric population are growing rapidly around the world, including in the ASEAN region. As the global population ages, the number of retirees increases. Retirement satisfaction may be an indicator of the quality of life in retirement. Using nationally representative data, this study confirmed the importance of social engagement for retirement satisfaction. Specifically, participating in community meetings, voluntary labor, religious activities, and programs to improve neighborhoods was associated with high odds of being satisfied with retirement. Creating more opportunities for retired individuals to participate in the community life is a better way to maintain their satisfaction, and the best means for them to enjoy a good life. Previously, Seda, Setyawati, Pera, Febriani and Pebriansyah (2018) noticed social exclusion in some parts of Indonesia for vulnerable groups, policies that can enable social engagement for all might reduce social exclusion in general and for retirees in particular. Thus, policymakers and governments should initiate policies and programs that can be stimulating to the aging population in general and retired individuals in particular. These programs should induce the elderly to actively participate in social life for a successful and healthy aging process. Further research should use longitudinal designs, which follow individuals before and after retirement to understand better the factors that contribute to retirement satisfaction.

## Acknowledgments

This study used secondary data from IFLS fifth wave conducted by RAND Corporation (<http://www.rand.org/labor/FLS/IFLS.html>), and thus owes it a debt of appreciation for providing free access to the data. Also, appreciation is conveyed to the Indonesian respondents who answered the survey.

## References

- Adioetomo, S.M., & Mujahid, G. (2014). Indonesia on the threshold of population ageing. *UNFPA Indonesia Monograph Series: No.1*.
- Andresen, E.M., Malmgren, J.A., Carter, W.B., & Patrick, D.L. (1994). Screening for depression in well older adults: Evaluation of a short form of the CES-D. *American Journal of Preventive Medicine*, 10(2), 77-84. doi: [https://doi.org/10.1016/S0749-3797\(18\)30622-6](https://doi.org/10.1016/S0749-3797(18)30622-6)
- Ardjmand, E., Weckman, G.R., Schwerha, D., & Snow, A.P. (2016). Analyzing the retirement satisfaction predictors among men and women using a multi-layer feed forward neural network and decision trees. *The Second International Conference on Big Data, Small Data, Linked Data and Open Data (Includes KESA 2016)*, (c), 102-107.
- Asebedo, S.D., & Seay, M.C. (2014). Positive psychological attributes and retirement satisfaction. *Journal of Financial Counseling and Planning*, 25(2), 161-173.
- Ashida, S., Sewell, D.K., Schafer, E.J., Schroer, A., & Friberg, J. (2018). Social network members who engage in activities with older adults: do they bring more social benefits than other members? *Ageing & Society*. doi: <https://doi.org/10.1017/S0144686X17001490>
- Atchley, R.C. (1999). *Continuity and adaptation in aging: Creating positive experiences*. Baltimore: The John Hopkins University Press.
- Barnes-Farrell, J. (2003). Beyond health and wealth: Attitudinal and other influences on retirement

- decision making. In G. Adams & T. Beehr (Eds.), *Retirement: Reasons, Processes, and Results* (pp. 159–187). New York: Springer.
- Biswas, S. (2018). *Spotlight on retirement: Indonesia*. Retrieved from <https://www.soa.org/globalassets/assets/Files/resources/research-report/2018/spotlight-retirement-indonesia.pdf>
- Butrica, B.A., & Schaner, S.G. (2005). *Satisfaction and engagement in retirement*. Washington, DC: Urban Institute.
- Calasanti, T.M. (1996). Gender and life satisfaction in retirement: An assessment of the male model. *Journal of Gerontology: Social Sciences*, 51(1), 18–29.
- Cannas, M., Sergi, B.S., Sironi, E., & Mentel, U. (2019). Job satisfaction and subjective well-being in Europe. *Economics and Sociology*, 12(4), 183–196. doi: <https://doi.org/10.14254/2071-789X.2019/12-4/11>
- Cherry, K.E., Walker, E.J., Brown, J.S., Volaufova, J., Lamotte, L.R., Welsh, D.A., ... Frisard, M.I. (2013). Social engagement and health in younger, older, and oldest-old adults in the Louisiana healthy aging study. *Journal of Applied Gerontology*, 32(1), 51–75. doi: <https://doi.org/10.1177/0733464811409034>
- Cohen-Mansfield, J., Dakheel-ali, M., & Frank, J.K. (2010). The impact of a naturally occurring retirement communities service program in Maryland, USA. *Health Promotion International*, 25(2). doi: <https://doi.org/10.1093/heapro/daq006>
- Cottrel, L.S. (1942). The adjustment of the individual to his age and sex roles. *American Sociological Review*, 7(5), 617–620.
- D'Silva, J.L., & Samah, A.A. (2018). Holistic well-being of Japanese retirees in Malaysia. *Journal of International Studies*, 11(3), 95–103. doi: <https://doi.org/10.14254/2071-8330.2018/11-3/8>
- Diener, E., Oishi, S., & Lucas, R.E. (2002). Subjective well-being: The science of happiness and life satisfaction. In S. J. Lopez & C. R. Snyder (Eds.), *The Oxford Handbook of Positive Psychology* (2nd ed.). doi: <https://doi.org/10.1093/oxfordhb/9780195187243.013.0017>
- Dorfman, L.T., & Rubenstein, L.M. (1993). Paid and unpaid activities and retirement satisfaction among rural seniors. *Physical & Occupational Therapy in Geriatrics*, 12(1), 45–63.
- Fouquereau, E., Fernandez, A., Fonseca, A.M., Paul, M.C., & Uotinen, V. (2005). Perceptions of and satisfaction with retirement: A Comparison of six European union countries. *Psychology and Aging*, 20(3), 524–528. doi: <https://doi.org/10.1037/0882-7974.20.3.524>
- Fox, J., & Leverage, A. (2016). R and the Journal of Statistical Software. *Journal of Statistical Software*, 73(2). doi: <https://doi.org/10.18637/jss.v073.i02>
- Hajek, A., Brettschneider, C., Mallon, T., Ernst, A., Mamone, S., Wiese, B., ... König, H.H. (2017). The impact of social engagement on health-related quality of life and depressive symptoms in old age - evidence from a multicenter prospective cohort study in Germany. *Health and Quality of Life Outcomes*, 15(140), 1–8. doi: <https://doi.org/10.1186/s12955-017-0715-8>
- International Labor Organization. (2017). *Actuarial study on the reform of the Indonesian BPJS*. Jakarta.
- Kim, S., & Feldman, D.C. (2014). Working in retirement: The antecedents of bridge employment and its consequences for quality of life in retirement. *Academy of Management Journal*, 43(6), 1195–1210.
- Kubicek, B., Korunka, C., Raymo, J.M., & Hoonakker, P. (2011). Psychological well-being in retirement: The effects of personal and gendered contextual resources. *Journal of Occupational Health Psychology*, 16(2), 230–246. doi: <https://doi.org/10.1037/a0022334>
- Li, C., Chi, I., Zhang, X., Cheng, Z., Zhang, L., & Chen, G. (2014). Urban and rural factors associated with life satisfaction among older Chinese adults. *Aging & Mental Health*. doi: <https://doi.org/10.1080/13607863.2014.977767>
- Mendes de Leon, C. (2005). Social engagement and successful aging. *European Journal of Ageing*, 2(1), 64–66. doi: <https://doi.org/10.1007/s10433-005-0020-y>
- Mishchuk, H., & Grishnova, O. (2015). Empirical study of the comfort of living and working environment – Ukraine and Europe: comparative assessment. *Journal of International Studies*, 8(1), 67–80. doi: <https://doi.org/10.14254/2071-8330.2015/8-1/6>

- Mukku, S.S.R., Harbishettar, V., & Sivakumar, P.T. (2018). Psychological morbidity after job retirement: A review. *Asian Journal of Psychiatry*, 37, 58–63. doi: <https://doi.org/10.1016/j.ajp.2018.08.003>
- Nimrod, G. (2007). Retirees' leisure: Activities, benefits, and their contribution to life satisfaction. *Leisure Studies*, 26(1), 65–80. doi: <https://doi.org/10.1080/02614360500333937>
- O'Brien, G.E. (1981). Leisure attributes and retirement satisfaction. *Journal of Applied Psychology*, 66(3).
- Potocnik, K., & Tordera, N. & Peiró, J.M. (2011). Truly satisfied with your retirement or just resigned? Pathways toward different patterns of retirement satisfaction. *Journal of Applied Gerontology*, 2(32). doi: <https://doi.org/10.1177/0733464811405988>
- Price, C.A., & Joo, E. (2005). Exploring the relationship between marital status and women's retirement satisfaction. *International Journal of Ageing and Human Development*, 61(1), 37–55.
- Quick, H.E., & Moen, P. (1998). Gender, employment, and retirement quality: A life course approach to the differential experiences of men and women. *Journal of Occupational Health Psychology*, 3(1), 44–64. doi: <https://doi.org/10.1037/1076-8998.3.1.44>
- Quinn, J. (2010). Work, retirement, and the encore career: Elders and the future of the American workforce. *Generations*, 34(45–55).
- Rammstedt, B., & John, O.P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality*, 41, 203–212. doi: <https://doi.org/10.1016/j.jrp.2006.02.001>
- Richardson, V., & Kilty, K.M. (1991). Adjustment to retirement: Continuity vs. discontinuity. *The International Journal of Aging & Human Development*, 33(2), 151–169. doi: <https://doi.org/10.2190/6RPT-U8GN-VUCV-P0TU>
- Rosow, I. (1967). *Social integration of the aged*. New York: Free Press.
- Sabbath, E.L., Lubben, J., Goldberg, M., Zins, M., Berkman, L.F., & Goldberg, M. (2015). Social engagement across the retirement transition among 'young-old' adults in the French GAZEL cohort. *European Journal of Ageing*, 12(4), 311–320. doi: <https://doi.org/10.1007/s10433-015-0348-x>
- Seda, F.S.S.E., Setyawati, L., Pera, Y.H.T., Febriani, R., & Pebriansyah, P. (2018). Social policies, social exclusion & social well-being in Southeast Asia: A case study of Papua, Indonesia. *Economics and Sociology*, 11(3), 147–161. doi: <https://doi.org/10.14254/2071-789X.2018/11-3/9>
- Sener, A., Terzioglu, R.G., & Karabulut, E. (2007). Life satisfaction and leisure activities during men's retirement: A Turkish sample. *Aging & Mental Health*, 11(1), 30–36. doi: <https://doi.org/10.1080/13607860600736349>
- Strauss, J., Witoelar, F., & Sikoki, B. (2016). *User's guide for the Indonesia family life survey, Wave 5*, 2.
- Szinovacz, M.E., & Davey, A. (2005). Retirement and marital decision making: Effects on retirement satisfaction. *Journal of Marriage and Family*, 67, 387–398.
- Szinovacz, M., & Washo, C. (1992). Gender differences in exposure to life events and adaptation to retirement. *Journal of Gerontology: Social Sciences*, 47(4), 191–196.
- Tiernan, C., Lysack, C., Neufeld, S., & Lichtenberg, P.A. (2013). Community engagement: An essential component of well-being in older African-American adults. *International Journal of Ageing and Human Development*, 77(3), 233–257.
- Wang, M., & Shi, J. (2014). Psychological research on retirement. *Annual Review of Psychology*. doi: <https://doi.org/10.1146/annurev-psych-010213-115131>
- Wang, Y., & Matz-Costa, C. (2019). Gender differences in the effect of social resources and social status on the retirement satisfaction and health of retirees. *Journal of Gerontological Social Work*, 62(1), 86–107. doi: <https://doi.org/10.1080/01634372.2018.1474156>
- World Health Organization. (2016). *Mental health and older adults*. Retrieved from <http://www.who.int/mediacentre/factsheets/fs381/en/#>.
- Wu, A.M.S., Tang, C.S.K., & Yan, E.C.W. (2005). Post-retirement voluntary work and psychological functioning among older Chinese in Hong Kong. *Journal of Of Cross-Cultural Gerontology*, 20, 27–45. doi: <https://doi.org/10.1007/s10823-005-3796-5>