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FACTORS ASSOCIATED WITH SOCIAL PARTICIPATION ACCORDING TO RESIDENCE AREA AMONG ELDERLY IN INDONESIA

Laila Ulfa
Department of Nutrition, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
ulfanns@gmail.com

Ratu Ayu Dewi Sartika
Department of Nutrition, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
ratuayu.fkm.ui@gmail.com

Kusharisupeni
Department of Nutrition, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
kusharisupeni@gmail.com

Abstract

Social participation in elderly is an important component of active aging. The purpose of this study was to identify factors associated with social participation in elderly by differential residence area (urban/rural). This cross-sectional study involved all subjects (n = 2900) aged ≥ 60 years old from Indonesia Family Life Survey data (IFLS) 2014. Chi-square analysis was used to identify factors associated with social participation. This study found that the proportion of social participation in elderly in urban area was greater than rural. Factors associated with social participation both in rural and urban areas were level of education and working status.

According to mental health problem, anxious was significantly related to social participation in elderly in rural area, while in urban area was isolated. This result implies that socio-demographic is an important factor of social participation in the elderly, and mental health

contributes to their involvement. Some efforts are needed to maximize the social participation activities according to the characteristics of their environmental life.

Keywords

Elderly, Social Participation, Socio-Demographic, Mental Health, Rural-Urban Differences

1. Introduction

In the concept of active aging, social participation is an important component to improve the quality of life and well-being of the elderly (World Health Organization, 2002). Unfortunately, functional limitations or bodily disorders due to the aging process, decreasing the chance of elderly to participate in social life (Tough, Siegrist, & Fekete, 2017; Edith et al., 2017). The lack of involvement of the elderly in social activities has a negative influence on health and quality of life (Douglas, Georgiu, & Westbrook, 2017). Some previous studies mentioned the benefits of social participation in the elderly, including: increasing knowledge, providing self-confidence, providing opportunities to try something new, overcoming loneliness and isolation (Novek, Menec, Tran, & Bell, 2013). Social participation also improves physical health (Tomioka, Kurumatani, & Hosoi, 2017b), mental (Myroniuk & Anglewiez, 2015) and decreases the risk of dementia (Zhou, Wang & Fang, 2018).

Various types of social participation in the elderly, including: neighbourhood associations/senior citizen clubs/fire teams (in local communities), hobby groups, clubs sports, political organizations groups, industrial or trade associations, consumer groups (Kanamori, et al, 2014), volunteering (Kanamori et al., 2014; Douglas, Georgiu, & Westbrook, 2017), religious activities (Hs, 2014) and social activities (Zhou, Wang, & Fang, 2018), social connection and informal social participation (Douglas, Georgiu, & Westbrook, 2017).

Previous studies showed factors affecting the social participation of the elderly including: age, gender (Tomioka, Kurumatani, & Hosoi, 2017a), employment status, marital status, whether or not the respondent lives with a child, educational status, income, country residential (Vogelsang, 2016), health status and life style (Zhou, Wang, & Fang, 2018).

Most of the studies stated that social participation did not distinguish between living areas (urban/rural), even though the differences in living areas had unequal socio-demographic characteristics, behaviours and health conditions, thus allowing social activities in the elderly to also be different.

The purpose of this study was to identify factors associated with social participation in elderly by differential residence area (urban/rural).

2. Methodology

2.1 Sample

This cross-sectional study uses data from Indonesia Family Life Survei (IFLS) 2014 that included all older person aged ≥ 60 years old who met the inclusion criteria (n=2900). The inclusion criteria of the study were aged ≥ 60 years old, having complete data for all variables and no missing data.

2.2 Variable Measurement

In this study, social participation was measured based on questions about participation in attending community meetings in the past 12 months, including: community meetings, cooperatives, community services, village improvement, attending to integrated service post (*posyandu*) for elderly, religious and political activities. Social participation were grouped as "participate" if they involved in at least one activity, and "not participate" if not involved in all activities.

Socio-demographic factor used in this analysis included age, gender, and marital status, level of education, working status, personal income and residence area. Level of education was defined as “high” for participants with more than 12 years and “low” for those who attended school last than 12 years. Marital status was categorized as “married” and “unmarried”. Working status was dichotomized as “employed” and “unemployed” and area of residence was dichotomized as “urban” and “rural”. For personal income, based on questions about the total personal income earned in the last 12 months and was divided as “< 3 percentile” and “≥ 3 percentile”. The last one, mental health was assessed based on the feelings experienced by respondents in the past week, including: 1. Insomnia, 2. Disturbed, 3.Need effort to do something 4. Difficult in concentrating, 5. Anxious, 6. Isolated, 7. Unable to start something, 8. Depressed. Mental health grouped into “not healthy” who experience any disorder and “healthy” who has never experienced a disorder.

3. Results

The sample consisted of 1577 (54.4%) elderly living in urban areas and 1323 (45.6%), of the elderly living in rural areas, the average age of the elderly was 66.83 ± 5.9 years (min 60-101

years) and the average length of education was 6.15 ± 4.6 years . The average age of the elderly who live in rural areas is 68.06 ± 6.6 years (60-94 years old) with an average length of education of 3.5 ± 3.0.

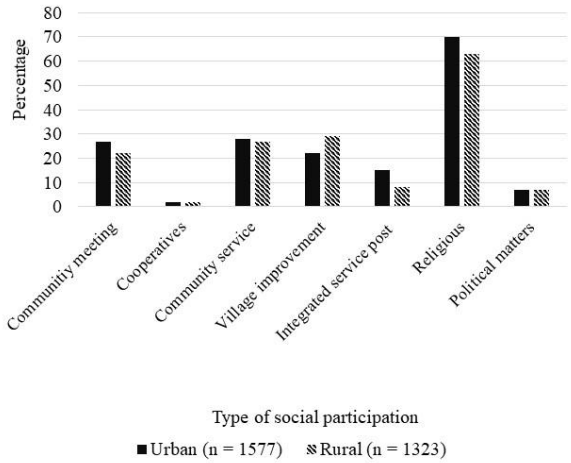

Figure 1: *Percentage of Type of Social Participation by Residence Area in Elderly (p value = 0.064)*

Figure 1 illustrates the proportion of types of participation followed by elderly in urban and rural areas. Religious activities are the type of social participation that is mostly carried out by the elderly in both urban and rural areas. Meanwhile, community meeting and integrated service post (*posyandu*) were mostly attended by the elderly in urban community, while participation in village improvement is more often in rural.

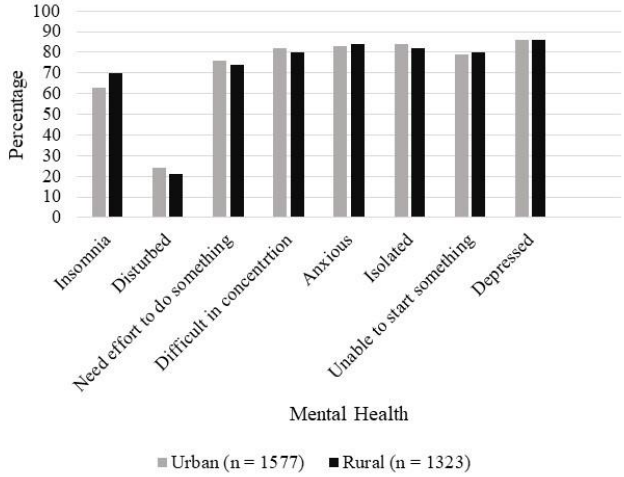

Figure 2: *Percentage of Type of Mental Health by Residence Area in Elderly (p value = 0.616)*

Figure 2 shows that the percentage of mental health problems experienced by the elderly is almost the same between rural and urban living, and the highest proportion is depression.

Table 1: *The Association between Residence Area (Urban-Rural) and Social Participation in Elderly (n= 2900)*

Variable	Rural (%) (n = 1323)	Urban (%) (n = 1577)	OR (95% CI)	P value
Social Participation				
-Not participate	53.7	50.2	1.15 (0.99 – 1.33)	0.064
-Participate	46.3	49.8		
Type of Social Participation				
-Community meeting				
Not participate	77.9	72.7	1.32 (1.12 – 1.57)	**0.001***
Participate	22.1	27.3		
-Cooperatives				
Not participate	97.6	94.8	2.21 (1.46 – 3.35)	**< 0.001***
Participate	2.4	5.2		
-Community service				
Not Participate	73.2	72.0	1.06 (0.9 – 1.25)	0.494
Participate	26.8	28.0		
-Village improvement				
Not participate	70.5	78.1	0.67 (0.9 – 1.25)	**< 0.001***
Participate	29.5	21.9		
-Integrated service post *(posyandu)*				
Not participate	91.5	85.0	1.88 (1.49 – 2.39)	**< 0.001***
Participate	8.5	15.0		
-Religious activity				
Not participate	36.8	29.9	1.37 (1.17 – 1.59)	**< 0.001***
Participate	63.2	70.1		
-Political matters				
Not Participate	93.1	92.8	1.055 (0.79 – 1.4)	0.77
Participate	6.9	7.2		

*Significant statistic ($p<0.05$)

Table 1 shows that the proportion of social participation in elderly in rural area was lower (46,3%) than urban (49,8%). According to the type of social participation, there is a significant relationship between residence area with type of social participation such as community meeting, involved in cooperatives, village improvement, attend to posyandu and religious activities.

Table 2: *The Association between Characteristic Sociodemographic and Mentally Healthy in Rural and Urban Area*

Variable	Rural (n = 1323)			Urban (n = 1577)			Total (n = 2900)		
	Not Participate (%)	Participate (%)	Pv OR (95% CI)	Not participate (%)	Participate (%)	Pv OR (95% CI)	Not Participate (%)	Participate (%)	Pv OR (95% CI)
Age									
>74 years	28.0	72.0	0.142 1.29 (0.93-1.81)	29.4	70.6	< 0.001* 2.08 (1.46-2.97)	59.8	40.2	0.001* 1.46 (1.17 – 1.81)
≤74 years	23.1	76.9		16.6	83.4		50.6	49.4	
Gender									
Female	28.6	71.4	< 0.001* 1.72 (1.33-2.23)	19.7	80.3	0.097 1.25 (0.97-1.63)	65.2	34.8	< 0.001* 3.12 (2.68 – 3.63)
Male	18.9	81.1		16.3	83.7		37.5	62.5	
Marital status									
Unmarried	25.3	74.7	0.429 1.12 (0.86-1.46)	20.2	79.8	0.114 1.25 (0.96-1.62)	62.3	37.7	< 0.001* 1.93 (1.65 – 2.25)
Married	23.2	76.8		16.9	83.1		46.1	53.9	
Level of Education									
Low (< 12 years)	24.7	75.3	0.006* 2.88 (1.37-6.04)	19.9	80.1	< 0.001* 2.01 (1.39-2.93)	54.9	45.1	<0.001* 2.44 (1.95 – 3.04)
High (≥ 12 years)	10.3	89.7		11.0	89.0		23.3	66.7	
Working status									
Unemployed	31.6	68.4	< 0.001* 6.04 (1.77-1.36)	20.6	79.4	0.018* 1.37 (1.06-1.78)	59.1	40.9	<0.001* 1.61 (1.38 – 1.88)
Employed	20.7	79.3		15.9	84.1		47.2	52.8	
Personal income									
< 3rd percentile	30.1	69.9	< 0.001* 1.92	19.8	80.2	0.059 1.29	58.1	41.9	< 0.001* 1.68
≥ 3rd percentile	18.3	81.7		16.0	84		45.2	54.8	

			(1.48-2.48)			(0.99-2.68)			(1.17 – 1.81)
Mental health									
Not healthy	23.4	76.6	0.093	17.8	82.2	0.230 0.7	51.2	48.8	0.007*
Healthy	32.5	67.5	0.63 (0.38-1.04)	23.5	76.5	(0.42-1.18)	62.3	37.7	0.63 (0.46 – 0.88)
Type of Mental Health :									
Insomnia									
-ever	23.6	76.4	0.809	18.0	82	0.946 0.98	50.7	49.3	0.091
-never	24.4	75.6	0.96 (0.73-1.25)	18.2	81.8	(0.75-1.28)	54.1	45.9	0.87 (0.75 – 1.02)
Disturbed									
- ever	24.3	75.7	0.917	19.1	80.9	0.597 1.09	48	52	0.029*
- never	23.8	76.2	1.03 (0.76-1.39)	17.7	82.3	(0.82-1.47)	53	47	0.82 (0.69 – 0.98)
Need effort to do something									
-ever	25.2	74.8	0.073	18.8	81.2	0.213	54	46	, 0.001*
-never	20.2	79.8	1.33 (0.98-1.79)	15.8	84.2	1.23 (0.9-1.69)	45.1	54.9	1.43 (1.21 – 1.69)
Difficult in concentration									
-ever	23.7	76.3	0.820	18.1	81.9	1.000	52.8	47.2	0.037*
-never	24.6	75.4	0.95 (0.69-1.30)	18.1	82.0	1.01 (0.72-1.40)	47.7	52.3	1.23 (1.02 –1.47)
Anxious									
-ever	22.8	77.2	0.051**	17.8	82.2	0.661	51.5	48.5	0.504
-never	29.4	70.6	0.711 (0.513-0.99)	19.2	80.8	0.92 (0.66-1.3)	53.3	46.7	0.93 (0.77 – 1.13)
Isolated									
-ever	23.4	76.6	0.483	17.1	82.9	< 0.001*	51.8	48.2	1.000
-never	25.8	74.2	0.88 (0.64-1.21)	23.3	76.7	0.68 (0.49-0.94)	51.9	48.1	0.93 (1.17 – 1.21)

Unable to start something									
-ever	23.8	76.2	0.968	17.9	82.1	0.720	51.8	48.2	0.993
-never	24.2	75.8	0.98 (0.72-1.34)	18.9	81.1	0.93 (0.68-1.27)	51.9	48.1	0.96 (0.83 – 1.19)
Depressed									
-ever	23.6	76.4	0.667	17.9	82.1	0.701	52.5	47.8	0.401
-never	25.4	74.6	0.91 (1.06-1.30)	19.2	86.8	0.914 (0.63-1.32)	49.7	50.3	1.1 (0.89 – 1.36)

***Significant statistic (p < 0.05) dan **Significant statistic (p < 0.1)**

As shown in Table 2, the relationship between social participation and their factors vary by rural-urban residence. We found that younger age (<74 years) tends to be more involved in social activities than older age (≥ 74 years). The results also showed that there is a significant relationship between sex with social participation in both rural (Pv < 0.001) and urban (Pv <0.001), and the proportion of women not involved in social activity is greater than male (rural 28.6 vs. 18.9%. urban 19.7 vs 16.3%).

Social participation also associated with level of education and working status in both rural and urban community. The proportion of the elderly who are not involved in social activities in the lower education groups, and unemployed. Based on personal income, the difference in proportion between income level and social participation is only found in the rural, and those who have income < 3rd percentile more likely not to be involved in participation (Table 2).

In this study, we also identified mental health problem in elderly. According to type of mental health problem, a significant relationship was found between anxious and social participation only in rural, while in urban was isolated (Tabel 2). In table 2 also shows a significant relationship between socio-demographic factors namely age> 74 years, female gender, unmarried, low education level, unemployed and individual income < 3rd and mentally unhealthy with not participating in social activities for all elderly people living in the rural or urban areas (n = 2900).

4. Discussion

Social participation is mostly done by the elderly who live in urban rather than rural areas. The difference in social participation in the elderly in both regions is caused by socio-demographic, cultural and environmental differences. This difference also resulted in the occurrence of mental health problems in older people living in urban areas higher than rural ones (figure 3). Both in urban and rural areas, religious activities are the most activities carried out by the elderly. The involvement of the elderly in religious activities can reduce depression, improve well-being, self-confidence, reduce suicidal desires (Hs, 2014). Another important thing is, that the frequency of religious activities is also significantly related to physical health in male and female aged over 45 years (Myroniuk & Anglewicz, 2015). The results of this study found the

percentage of social participation in the elderly aged > 74 years was less than those aged ≤ 74 years. Health problems experienced by the elderly such as: chronic diseases, cognitive function, depression, dementia and decreased functional ability may be the cause of a lack of involvement of the elderly in social activities.

We found that both urban and rural areas, the proportion of elderly people who did not participate in social activities was higher in women than in men. This is likely caused by women having more health problems than men. A study conducted in elderly in China reported that women were more at risk for dementia (Zhou, Wang, & Fang, 2018), had higher emotional value than men (Tomioka, Kurumatani, & Hosoi, 2017b), had functional abilities which decreases in mobility (Giuli, Papa, Mocchegiani, & Marcellini, 2012), and is associated with osteoporosis that is often experienced (Nascimento et al., 2012). In addition, a decrease in physical and cognitive function also reduces social and productive participation in elderly women (Arias-Merino, Mndoza-Ruvalcoba, Arias-Merino, Cueva-Contreras, & Arias, 2012). The difference in the percentage of social participation between men and women may be because the type of participation that is followed is not the same, for example men often take part in activities such as community service and repair of environmental facilities, while women prefer activities such as social gathering and recitation.

Most of the elderly have a low education level (<12 years) both in urban and rural areas, and have a significant relationship to not participating socially. Higher education is associated with better healthy behaviour (Parikh, Fahs, Donna, & Yerneni, 2009). Higher levels of education provide an opportunity to get a better job and higher income. This study found that most of the elderly living in urban areas have income <3 percentile, on the contrary, the majority of the elderly who live in rural areas have better income ≥ 3 percentile. Elderly who live in urban areas generally work as office employees and have retired, while in rural areas, the elderly can still work because they have their own income sources, such as agricultural, plantation and livestock products so they have a better income. However, the lower income of elderly are significantly associated with not being involved in social activities compared to those with higher income in the rural elderly. Income that is less likely to hamper the social participation of the elderly, because they do not have enough money to meet their social needs, such as: social gathering, associations, holidays, etc. Not only encourages participation in the community, financial support also enhances the quality of life for the elderly (Mudor, 2017).

Mental health and well-being are just as important at an older age. About 15% of adults aged 60 years and over suffer from mental disorders (World Health Organization, 2017). Social participation in the elderly can reduce stress and improve emotional well-being (Novek, Menec, Tran, & Bell, 2013). However, social participation can also interfere with mental health if participation aims to provide financial support, while the elderly with relatively lower financial conditions will tend to reduce their participation (Myroniuk & Anglewicz, 2015). In this study, it was found that mental health disorders were more experienced by the elderly who lived in urban areas (figure 3). Risks for some major mental illnesses (eg anxiety, psychotic, mood, or addictive disorders) are generally higher in cities (Gruebner et al., 2017). Loss of work and income due to retirement, lack of family attention and social environment can be the cause of mental health disorders in the elderly living in urban areas. A study about depression among elderly in an urban slum in India reported that depression can be associated with a number of causes such as financial insecurity after retirement, loss of social recognition and loss of a partner that causes loneliness. Furthermore, living in an urban environment with all family members who work outside, they cannot find means of social interaction (Lilian, Ranganath, & Thangaraj, 2015).

5. Conclusion

This study found that the proportion of social participation in elderly in urban area was greater than rural. Factors associated with social participation both in rural and urban areas were level of education and working status. Age, gender, marital status, level of education, working status, and personal income were significantly associated with social participation. Previous literature found that older adults who have higher socioeconomic status, higher college graduation rates, have greater involvement in community-based scores (Vogelsang, 2016).

According to mental health problem, anxious was significantly related to social participation in elderly in rural area, while in urban area was isolated. Similar to previous findings, higher levels of depression have a negative impact on regular physical activity in the elderly Giuli, Papa, Mocchegiani, & Marcellini, 2012)

This result implies that socio-demographic is an important factor of social participation in the elderly and mental health contributes to their involvement. Some efforts are needed to

maximize the social participation activities according to the characteristics of their environmental life.

The limitiation of this study that there is not physical health as independent variable that might influence on the social participation of elderly. Further studies are required to understand the physical health and its relationship with social participation among elderly in rural and urban areas.

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