Relationship between Social Capital and Mental Health among the Older Adults in Aceh, Indonesia

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Abstract

Background: It is recognized that social capital plays an important role in health, including mental health. However, there are only a few studies that explain the role of social capital in the mental health of older adults in Aceh, Indonesia. This study aims to assess the relationship between social capital and the mental health of older adults.

Method: This study used cross-sectional design by involving 483 respondents aged 60 or above, which are retrieved by using multistage random sampling in Aceh Barat District. Data collection was conducted for four months in 2019. SPSS Version 21 was used to analyze the data through a logistic regression test.

Result: The result shows that the average age of respondents is 69.76 years and female respondents are 68.9%. The result of logistic regression analysis to conclude the relationship between social capital and mental health resulted in confidence level (p=0.044), social cohesion (p=0.021), social network (p=0.001), and social participation (p=0.119).

Conclusion: The result indicates that social capital includes a social network, social cohesion, and trust are significantly relevant to the mental health of older adults.

Keywords: *mental health, social capital and older adults.*

Introduction

Mental health is crucial to overall health and prosperity. Mental health is also recognized to be equally important to physical health, including the older adults[1]. They are recognized as a group that has a higher risk of experiencing mental health problem[2]. There are several plausible reasons that older people have a higher risk of experiencing mental health problems, including illness, lack of independence, weakness, isolation, separation, and their age [3].

The proportion of older adults who experience mental health problems may increase as the growth of the aging population continues to happen in this era. Globally, it is estimated that adults aged 60 years or more suffer from mental and neurological disorders by 20% [3]. In developed countries like America, it is estimated that in 2017 there were 46.6 million adults who experienced mental, behavioral, or emotional disorders, and 13.8% occurred in adults aged 50 years or more[4]. While in Indonesia, it was found that among 2,929 people aged 60 years or above, there was 16.14% who experienced symptoms of moderate and severe depression[5].

Mental health problems harm sufferers, families, and the government. In patients with, for example, disruption of mental health impacts on the decrease of productivity, decrease of life quality, social problems, and additional health problems. Families who have members with mental health problems can experience economic problems such as a decrease in household income because they cannot work optimally due to caring for family members who suffer from mental

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health problems. These conditions can increase the risk of household poverty. More broadly, the adverse effects of mental health problems are experienced by the government, where the national economic burden increases, and globally this can hamper international public health efforts[6]. WHO states that higher disability and death rates are found in people with mental disorders. For example, the chance of dying prematurely in people with major depression and schizophrenia is 40% -60% compared to the general population[2].

As with other aspects of health, mental health can be influenced by various factors, including individual attributes, social, cultural, economic, political, and environmental factors[2]. In this study, we only highlight the important role of social capital in mental health, which is part of social factors. As a construct, social capital has been popular for the last decade[7]. Most researchers divide *social capital* into two complementary forms, structural social capital, and cognitive social capital. Structural social capital are social contact, the compactness of social networks and social participation, while the cognitive social capital are trust, social cohesion and perceived social support [8,9]

Social capital has been used in recent years to explain health disparities[9], including mental health. The positive significant relationship between social capital and mental health has been proven through several studies conducted in developing countries[10] and developed countries, such as Japan [11] and Finland[8].

Although the study of social capital relationship with mental health has been conducted, according to the WHO, knowledge which specifically highlights the process of aging and mental health is still limited[2]. Such conditions also occurred in Indonesia, and this is a challenge that needs to be answered with more research efforts. This study was conducted to examine the relationship between social capital and mental health of older adults in Aceh, Indonesia.

Materials and Method

Design and sample

The study design used was cross-sectional. Data collection was conducted from June to October 2019 through a survey of 483 respondents. Respondents in this study were people who were 60 years of age or above. Sampling was carried out by using multistage random sampling in the Aceh Barat District, Aceh, Indonesia. 6 out of 12 sub-districts in Aceh Barat District are randomly selected. Then, each of the three sub-districts was chosen randomly as a sampling place. Samples taken are respondents who meet the following criteria: 1) can be invited to communicate; 2) willing to become a respondent by signing a statement of consent to be a respondent; and 3) respondent is not in a condition of serious illness or treated in the health services unit during the data collection period. During data collection, researchers were assisted by several trained enumerators.

Mental health measurement

The instrument used to measure mental health is the geriatric depression scale (GDS) developed by Yesavage and Sheikh with 15 question items [12]. The 15 questions were translated into Indonesian. The answer to each question item has two choices, "yes" or "no". A zero score (0) is given for each answer, indicating low mental health, and a score of one (1) is given for each answer indicating good mental health. The higher the composite score obtained by the respondent, the better the mental health of the respondent.

Social capital measurement

Social capital is assessed through four variables, including trust, social participation, social cohesion, and social networks. Cronbach's alpha scores for trust (0.9), participation (0.8), social cohesion (0.8) and social networks (0.9). All question items are in positive form using a Likert scale (four choices of the answer) includes strongly disagree (score 1); disagree (score 2); agree (score 3), and; strongly agree (score 4). The higher composite score shows better social capital.

Statistic Analysis

Logistic regression using IBM SPSS v.21 was conducted to determine the relationship between several variables of social capital and mental health.

Results

The results of the descriptive analysis in Table 1 about the demographic characteristics of the respondents showed that the average age of respondents was 69.76 years (standard deviation: 8.41) or more than half were aged 60-69 years (56.5%), more women (68.9%), unemployed (58.2%), no income (41.0%). An overview of mental health showed that there are more healthy older adults (65.8 %) than the unhealthy ones (34.2%). While several social capital variables are known that

trust, social cohesion, social participation, and social networks are more in the medium category with the percentage of each is trust (67.7 %), social cohesion (59.4%), social participation (58.0%) and social networks (67.7%).

Table 1. Descriptions of respondents' demographic characteristics and study variables.

Characteristics of respondents (n = 483)	**n**	**Mean /%**	**Elementary school**
Age		69. 76	8.41
60-69 years old	273	56.5	
≥ 70 years old)	210	43.5	
Gender			
Male	150	31.1	
Female	333	68.9	
Profession			
Unemployed	281	58.2	
Farmers / Laborers / Fishermen	133	27.5	
Pensioners	24	5.0	
Private workers	45	9.3	
Income			
No income	198	41.0	
Rp. <1,000,000	184	38.1	
Rp. 1,000,000 up to 2,000,000	50	12.4	
Rp. ≥ 2,000,000	41	8.5	
Mental health			
Not healthy	163	34.2	
Healthy	318	65.8	
Social capital			
Trust			
Low	19	3.9	
Medium	327	67.7	
High	137	28.4	
Social cohesion			
Low	16	3.3	
Medium	287	59.4	
High	180	37.3	
Social participation			
Low	11	2.3	
Medium	280	58.0	
High	192	39.8	
Social network			
Low	7	1,4	
Medium	327	67.7	
High	149	30.8	

Table 2. Logistic regression analysis of social capital and mental health variables stage 1

Social capital	B	SE	Wald	p- value	Adj. OR	95% CI	
						Lower	Upper
Trust	0.590	0.294	4.038	0.044 *	1.804	1.015	3.209
Social cohesion	0.685	0.296	5.355	0.021 *	1.984	1.111	3.545
Participation	0.495	0.317	2.436	0.119	1.641	0.881	3.056
Social network	1,122	0.343	10.733	0.001 *	3.070	1.569	6.007
Constant	-8.238	1.103	55.744	< 0.001	0.000		

Abbreviations: B = Beta coefficient, SE = Standard Error, CI = Confidence Interval, Adj OR = Adjusted odds ratio, * = significant p-value

The results of logistic regression test stage 1 (Table. 2) between social capital and mental health variables show that trust is significantly related to mental health of older adults (p=0.044), social cohesion is significantly related to the mental health of older adults (p=0.021), social network is significantly relevant to the mental health of older adults (p=0.001). Social participation is the only variable that is not related to mental health (p=0.119). Since social participation has a value of > 0.05, it was taken out of the model, and logistic regression stage 2 was conducted.

Table 3. Logistic regression analysis of social capital and mental health variables stage 2.

Social capital	B	SE	Wald	p- value	Adj. OR	95% CI	
						Lower	Upper
Trust	.718	.281	6.531	0.011 *	2.050	1.182	3.553
Social cohesion	.864	.274	9.946	0.002 *	2.373	1.387	4.061
Social network	1.205	.337	12.793	<0.001*	3.336	1.724	6.457
Constant	-7.879	1.075	53.711	<0.001	0.000		

Abbreviations: B = Beta coefficient, SE = Standard Error, CI = Confidence Interval, Adj OR = Adjusted odds ratio, * = significant p-value

In the logistic regression test stage 2 (Table. 3), it was found that trust, social cohesion, and social networks significantly related to the mental health of older adults with a p-value of each is p = 0.0 11, p = 0.002, and p = <0.001 respectively. The relationship between the three variables with mental health is positive, and social networks have the strongest relationship with mental health.

Discussion

The result of our study shows that trust and social cohesion as forms of cognitive social capital have a significant and positive relationship with the mental health of older adults. This finding indicates that older adults with a high sense of trust in their community have better mental health than older adults with a lower sense of trust. Likewise, social cohesion, where older adults with high social cohesion have better mental health compared to older adults with low social cohesion.

Previous studies have proven the link between cognitive social capital and mental health in older adults. Formans et al. reported from the results of their study that cognitive social capital through mistrust was significantly related to psychological distress among older adults in Finland[8]. A study in China found a correlation between trust and depression in older adults[7]. In Indonesia, the results of the Tampubolon and Hanandita study also prove that social trust is positively related to mental health in people aged 15-65 years[10]. Although the study does not specifically address the older adult population, it could support the result of our study in proving the relationship of trust with mental health. The study of social cohesion was carried out in older adults in the Czech Republic, Russia, and Poland with

a prospective approach. The results of the study showed that the symptoms of depression increased among older adults with lower levels of social cohesion[12].

In addition, the results of our study found that social networking as a form of structural social capital was positively related to the mental health of older adults. It means that older adults with good social networking have better mental health compared to older adults with bad social networking. The social network is the variable of social capital that has the most significant relationship with mental health compared to the other two variables (trust and social cohesion). For social networks, we focus more on the close relationships of older adults with family or other relatives, their close relationships with friends and neighbors, and the close relationships of older adults with village officials where they live. This is important to assess as a part of an individual's social capital because one of the essential mental health resources is the social individual capital of older adults[8]. Older adults who feel close to family members, relatives, friends, neighbors, or the community around their residence may feel more calm and comfortable in living than those who have a less close relationship. If they have a problem, some close people can be invited to share and find solutions to the problems encountered. The condition is likely to have a positive influence on the psychology or mental of older adults so that they are mentally healthier. This finding is supported by the results of previous studies on the relationship between social networks and mental health of older adults[7].

Of the four social capital variables examined, we do not find any relationship between social participation and mental health in older adults. A study conducted in China by Cao et al. in people aged 60 years or above found the same result, in which social participation is not correlated with geriatric depression[7].

From the previous description, it can be concluded that mental health problems in older adults cannot be underestimated, as the notion of some people who consider the problem as an inevitable part of the aging process[13]. Whereas mental health problem is a critical aspect of health problems, especially in older adults[3] and social capital is one factor that plays an important role. The results of this study can be one of the evidence that proves positive social capital can improve and maintain the mental health of older adults. The increase of knowledge and awareness about social capital can be considered as one of the health promotion program strategies to increase and maintain the mental health of older adults. Health promotion of the importance of social networks is the first thing that needs to be done by public health practitioners. Finally, because this study is only cross-sectional, the results of this study cannot be concluded as a causal relationship. For this reason, further longitudinal studies need to be conducted by future researchers.

Conclusion

The conclusion that can be drawn from the results of this study is that three social capital variables are positively related to the mental health of older adults, including trust, social cohesion, and social networking. Social participation is not positively related to health. The social network is the variable that has the strongest relationship with mental health compared to the other variables.

Conflicts of Interest – Nil

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Ethical Clearance: The ethical clearance was taken for the present study from the institute ethical committee.

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