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Family social capital in the public response to COVID-19 in Indonesia

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ABSTRACT The Coronavirus Disease 2019 (COVID-19) has severely impacted on various sectors, not limited to the health sector. It was known that social capital had helped the Indonesian community during the 1998 economic crisis. This study aimed to describe the effect of family social capital on COVID-19 prevention and examine factors that contribute to family social capital among Indonesia citizens. Cross-sectional data were derived from community surveys conducted across some of the largest islands in Indonesia. A total of 581 Indonesian citizens aged 18 – 59 years old participated in this study. Data were collected by using an online questionnaire that was distributed through social media in February 2021. Furthermore, univariate, bivariate, and multivariate analyses were done in this study. Most of respondent (55%) had high family social capital. The family social capital includes (1) education function, (2) protective function, and (3) reinforcement function. They had discussed with their family members about the hazard of COVID-19, health protocols as strategy for COVID-19 prevention, and tried to remind each other to apply health protocols in their daily activities. Furthermore, the families provided face masks and hand sanitizer for family members as a tool of COVID-19 prevention. Family was the second highest information source (65%) regarding COVID-19 and prevention among family member. In addition, there was a significant association between perception toward health protocols ($p < 0.001$), vulnerable status ($p = 0.044$), and economic status ($p < 0.001$), and family social capital. Community empowerment in the COVID-19 prevention through family social capital was challenging. This study demonstrated that the Indonesian community has high family social capital. Moreover, public health experts need to empower family social capital in the further prevention of COVID-19 transmission.

1. Introduction

Studies shows that social capital is closely related to the health outcomes.[1] The higher the level of social capital tends toward the higher level of health status.[1-3] However, social capital also has some negative impacts on health. Furthermore, public health experts need to take account of the potential dark sides of social capital such as ignorance and social stigma when leveraging the concept of social capital for the health promotion intervention.[4]

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The Coronavirus Disease 2019 (COVID-19) has become a global burden, and led to the 'New Normal' strategy.[5] The implementation of 'New Normal' needs the community participation. The community level response to COVID-19 depends on the social capital level.[6] Social capital is defined as the resources available to individuals and groups through membership in social networks.[4,7] The type of social group is varied, and it can refer to both the individual and group levels.[7] Social cohesion is one aspect of the social capital in the family. Social cohesion in the family means the extent of closeness and solidarity within the family member.[8] Family cohesion has four dimensions of measures, which are collective efficacy, informal control, social interaction, as well as sense of belonging.[9]

The health protocols on COVID-19 prevention recommend people to perform physical distancing, hand washing frequently, use a mask, avoid crowds, as well as limit mobility.[10] Those public health policies cause people to stay at home with their family and conduct many activities from home (i.e., work and school from home). In addition, the COVID-19 transmission has mostly happened in the family clusters,[11] including in Indonesia. This is a new challenge for the COVID-19 control and prevention. At the same time, there is an opportunity to empower family members for the COVID-19 prevention by increasing family awareness toward these important health protocols. The lack of awareness will lead to the poor health behavior on the COVID-19 prevention.[12] Unfortunately, research on family social capital is limited.[8] This current study aimed to describe the effect of family social capital on the COVID-19 prevention and examine determinants of the family social capital in the COVID-19 prevention in Indonesia.

2. Method

This research was a cross-sectional study that was conducted on some of the biggest islands of Indonesia.[13-14] This study was conducted in February 2021. Respondents are Indonesian citizens who are aged 17 – 59 years old. According to the sample size, this study needed 471 respondents. Fortunately, 581 Indonesian citizens voluntarily completed the online questionnaire that was distributed through an online survey. The questionnaire was developed by determining the operational definition for each variable. A blue print was developed based on the operational definitions. The blue print was important to analyze the distribution of favorable and unfavorable items of the questionnaire. Content validity was applied to the developed questionnaire.

Data were collected by using a Google form. The online survey (Google form) was distributed through social media platforms such as WhatsApp, Instagram, Line, and Facebook of the researchers' team network. There were 573 respondents who were eligible for further analysis.

Family social capital in COVID-19 prevention was defined as awareness, closeness, trust, and care among family members in COVID-19 prevention. The family social capital, as the dependent variable, was assessed by using 12 questions which consist of education, protection, and reinforcement items. Meanwhile, the independent variables include socio-demographics, vulnerable status, knowledge on COVID-19, perception toward health protocols, and the barriers of health protocol practice. The socio-demographic characteristics include gender, age, education level, economic status, and living status (with or without their family). The vulnerable status was measured according to: (1) comorbid that they had, and (2) whether they live with people vulnerable toward COVID-19. The health protocol in this study focused on the wearing mask, washing hand frequently, and physical distancing.

The family social capital was categorized as high family social capital if the score was higher than the mean, but the cut-off point for the knowledge on COVID-19 used fixed score (more than 80 was categorized to high level of knowledge). Moreover, the perceptions toward COVID-19 and the perceptions toward health protocol were divided into positive and negative perceptions by using mean as the cut-off point.

Respondents signed the informed consent form before completing the online questionnaire. Besides, this study had approved by the Medical and Health Research Ethics Committee of the Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada (Ref. No. KE/0137/02/2021).

Univariate, bivariate and multivariate data analysis were conducted. Univariate analysis provides an overall comparison of the characteristics of respondents and the family social capital in COVID-19 prevention. Chi-square tests were used to examine the association between independent variables and the family social capital on COVID-19 prevention, with *p* value 0.05.

3. Result

3.1 Respondents' Characteristics

A total of 581 respondents completed the online survey. Unfortunately, 8 people of them did not

Table 1. Respondents' characteristics

Characteristic	n	%
Age (years old)		
17-29	341	59.5
30-49	49	8.5
40-59	183	32.0
Gender		
Male	220	38.4
Female	353	61.6
Education level		
Low	6	1.0
Middle	160	28.0
High	407	71.0
Economic status		
Low	224	39.1
High	329	60.9
Live with family		
Yes	450	78.5
No	123	21.5
Residence		
Sumatera	102	17.8
Java	417	72.8
Kalimantan	23	4.0
East Indonesia (Papua, Sulawesi, Maluku)	31	5.4

meet the respondents' inclusion criteria. They were less than 17 years old or more than 59 years old. Furthermore, only 573 respondents who completed the online survey met the inclusion criteria and eligible for analysis. Most of them were female (61.6%), had high level of education (71%), and live with their family (78.5%). Most of respondents are in 17 – 29 years old age group (59.5%) and stay at Java Island (72.8), as shown in Table 1.

Table 1 shows that most of respondents stay with their family (78.5%). The Indonesian government issued a restrictive social policy to respond to the spread of COVID-19 by recommending people to work from home and continue with their school from home.

3.2 Family social capital in respond to COVID-19

Family social capital in this study was indicated by family member awareness concerning the COVID-19 hazard and their care to protect each other through their efforts to share information and doing their best to prevent COVID-19 transmission among their family members. Most of respondents (55%) had high family social capital. Of the total respondents, 373 respondents (65%) were intensively engaged in discussion on COVID-19 and the prevention within their family. Surprisingly, family was the second information source concerning COVID-19. The five most common information sources about COVID-19 were: television (71%), family (65%), instant messaging (*WhatsApp*) (63%), friends (62%), and social media (*Instagram*) (61%).

Table 2 shows that the Indonesian community has high family social capital, which covered education, protective, and reinforcement functions. The discussion about the importance of using face masks for COVID-19 prevention had the highest score (82%) for the education function of family social capital. In addition, wearing face masks had the highest possibility for adherence among health protocols, since families provided face masks for their family members (87%) and tried to reinforce the family members to wear face masks (81%). On the other hand, physical distancing was the hardest health protocol to apply.

3.3 Determinants of family social capital

This study showed that there were significant associations between perceptions toward health protocols ($p < 0.001$), vulnerable status ($p = 0.010$), and economic status ($p < 0.001$) with family social capital on COVID-19 prevention (Table 3). Besides, respondents from both low and high family social capital had positive perceptions toward COVID-19, which meant that Indonesian citizens perceived that COVID-19 was harmful and tried to adjust their lives, accordingly.

Table 3 shows that most of respondents (93%) had barriers to apply the health protocols. The barriers involved the surrounding community since many people did not use face masks and there was not punishment for people who disobey the health protocols. Those conditions discouraged them in adhering to the health protocols.

Multivariable analysis also showed that three variables had significant association with family social capital ($p < 0.05$). Those were respondents' perceptions toward health protocols ($p < 0.001$), economic status ($p < 0.001$), and vulnerable status ($p = 0.044$), as Table 4.

The results showed that family social capital on

Table 2. Family social capital on COVID-19 prevention (n=573)

Indicators	n	%
Education function		
Discussion on health protocols (face mask use, hand washing, physical distancing) frequently	338	59
Discussion about the importance of using face masks for COVID-19 prevention	471	82
Discussion on the hand washing steps	378	66
Discussion on the hazard of COVID-19	276	48
Protective function		
Families provide face mask for family members	496	87
Provide hand sanitizer	410	72
Practice physical distancing	271	47
Shower when arrive home	293	51
Reinforcement function		
Remind to improve physical activity	381	67
Remind to keep the distance and avoid crowd	275	48
Remind to keep healthy air circulation	293	51
Remind to wear face mask	465	81

COVID-19 prevention was influenced by perceptions toward health protocol, vulnerable status, and economic status. Besides, the perception toward health protocols had the highest odds ratio (OR) among independent variables.

4. Discussion

This study indicated the high level of family social capital among Indonesian citizens. Family was the second most common information source regarding COVID-19 and the COVID-19 prevention, after television. The family social capital covered education, protective, and reinforcement function. Moreover, family social capital was determined by the perceptions toward health protocol, economic status, as well as vulnerable status.

The education function of family social capital explained that family played the central role as a forum to seek information about COVID-19 and the prevention. Family members discussed about COVID-19 prevention with their family. The 'New Normal' strategy and policy led people to apply physical distancing.[5, 12] It improved the opportunity of family member to have family time and spend more time to discuss and conduct activities together, including to discuss about COVID-19 as a disease with high morbidity and mortality. Families were able to stay connected and provide social support during pandemic.[15(13)] Education and communication with and within the family are essentially important to increase family engagement in health programs.[14, 15]

The protective function of family social capital in COVID-19 prevention boosted the community participation in the COVID-19 prevention. They provided face masks and hand sanitizer as daily activities tools. In addition, they were teaching each other on how to wash their hand correctly. These efforts were enabling family member to apply the health protocol. They also tried to shower when they arrived home. The protective function of family social capital helped other family members to adopt the 'New Normal' strategy in the pandemic era.[5] The family social capital in the response to COVID-19 prevention had positive impacts on public health.[8] Furthermore, research showed that the proactive and abundant community participation will strengthen the pandemic response.[15]

The third function of family social capital in the public response to COVID-19 was the reinforcement function, which is very important to control health protocol practice and strengthen the personal decisions concerning healthy behavior. Personal decision making process has critical steps for the community empowerment in order to engage people on healthy behavior practice.[14, 16] Strong

Table 3. The association between respondent characteristic with family social capital

Variables	Family social capital				p-value
	Low (n=257)		High (n=316)		
	n	%	n	%	
Knowledge level of health protocols					
Low	54	21	52	15	0.162
High	203	79	264	85	
Perception toward COVID-19					
Positive	244	95	308	97	0.109
Negative	13	5	8	3	
Perception toward health protocols					
Positive	100	39	243	77	<0.001
Negative	157	61	73	23	
Education level					
Low	2	1	4	1	0.202
Middle	81	31	79	25	
High	174	68	233	74	
Economic status					
Low	129	50	95	30	<0.001
High	128	50	221	70	
Vulnerable status					
Yes	181	70	191	60	0.010
No	76	30	125	40	
Barrier to health protocols					
Yes	238	93	294	93	0.842
No	19	7	22	7	

Table 4. Multivariable analysis of family social capital

Independent variable	B	P-value	OR
Knowledge of health protocols	-0.374	0.115	0.688
Perception toward health protocols	1.571	<0.001	4.809
Education level	0.067	0.744	1.069
Economic status	-0.738	<0.001	0.478
Vulnerable status	-0.396	0.044	0.673
Perception toward COVID-19	0.486	0.341	1.625
Constanta	-0.983	0.326	0.374

bonding and trust among family members potentially affect the personal decisions related to health. The reinforcement function of family social capital in the response to COVID-19 will lead to better personal decisions on health protocol practice. The family social capital drives the positive impact of social capital on health.[1, 4, 7] This evidence proves the benefit of social capital for health, especially the family social capital in the low and middle income countries with strong collectivist cultures.

This study showed that the perceptions toward health protocols, vulnerable status, and economic status were the determinants of family social capital. Families with the positive perceptions toward health protocols lead to strong education, protection, as well as to the reinforcement function of family on the COVID-19 prevention. In addition, families with vulnerable status such as those with certain comorbidities of COVID-19 will drive families to protect their family members from COVID-19 by performing COVID-19 prevention.

This article helps public health experts when developing public health interventions in the family level[17]. Indonesia has been developing Indonesia

Healthy Program by using family approach (*Program Indonesia Sehat dengan Pendekatan Keluarga* PIS-PK). There were 12 program indicators including the communicable disease control program. COVID-19 is one of the communicable diseases. Therefore, the results of this paper are in line with the Indonesian government program to empower family members to achieve better health status.

Despite the contribution of this study in providing evidence on the family social capital from a low and middle income countries, several limitations should be addressed. First, this study did not examine the association between family social capital on COVID-19 prevention and community behavior on COVID-19 prevention. Secondly, this study did not explore how policy as the social environment and the structural social capital contribute to the community behavior in COVID-19 prevention. Third, the online survey had a limited capacity to reach the broader community, such as the rural areas communities. Most of respondents of this study came from Java Island, which is the most populated in Indonesia.

5. Conclusions

Indonesian citizens have high family social capital in response to the COVID-19 outbreak. The family social capital includes education, protective, and reinforcement functions. The determinants of family social capital for the COVID-19 prevention were perceptions toward health protocols, vulnerable status, and economic status. This study implied that public health experts should consider family social capital when developing public health interventions for COVID-19 prevention and control.

Conflict of Interests

This study did not receive specific grants from funding agencies in the public sector, commercial, or non-profit section. There is no conflict of interest.

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