

## Factors related to family resilience during the COVID-19 pandemic



Martina Pakpahan<sup>1\*</sup>, Lia Kartika<sup>1</sup>, Mega Sampepadang<sup>1</sup>

### ABSTRACT

**Introduction:** The COVID-19 pandemic has dramatically impacted people's lives. Families are affected in many ways, including daily life, the economy, social life, and health. Families who have resilience can face the COVID-19 pandemic situation. This study aims to determine the factors related to family resilience during the Covid-19 pandemic, including Family income, education, family type, family relations, and social support.

**Methods:** This study is a cross-sectional study conducted on 403 respondents using purposive sampling. Inclusion criteria include Husband or wife (with or without children) who live together, ages 18-65 years, in Jakarta and Tangerang. Data collection using an online questionnaire consisted of demographic data, the Family Resilience Assessment Scale (FRAS), and the Multidimensional Scale of Perceived Social Support (MSPSS). The questionnaire has passed the validity and reliability test. The Ethics Board of the Mochtar Riady Institute of Nanotechnology (MRIN) provided ethical approval.

**Results:** Multivariate analysis using a logistic regression test showed that factors related to family resilience were income (p-value: 0.028, OR: 3.08) and social support (p-value: 0.001, OR: 7.16). Social support is the dominant variable related to family resilience. An increase in social support increases the likelihood of family resilience by 7.16 times. Furthermore, an increase in family income has a 3.08 times greater chance of increasing family resilience.

**Conclusion:** Families and the government can collaborate to improve family resilience during the Covid-19 pandemic by optimizing social support and family income.

**Keywords:** Covid-19, Family Resilience, Income, Social support.

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<sup>1</sup>Department of Nursing, Faculty of Nursing, Universitas Pelita Harapan, Tangerang, Indonesia;

\*Corresponding author:  
Martina Pakpahan;  
Faculty of Nursing Universitas Pelita Harapan, Tangerang Indonesia;  
[martina.pakpahan@uph.edu](mailto:martina.pakpahan@uph.edu)

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### INTRODUCTION

In late December 2019, a new coronavirus (SARS-Cov-2) and its disease, called *Coronavirus disease 2019* (COVID-19), were discovered in Wuhan, China, and continues to this day in all parts of the world. The World Health Organization (WHO) explains how human-to-human transmission increases in various countries and eventually becomes a global pandemic. According to WHO data, as of October 8, 2020, there were 36,002,827 confirmed COVID-19 cases, with 1,049,810 deaths.<sup>1</sup> The first case in Indonesia has discovered in Depok in March 2020.<sup>2</sup> This COVID-19 pandemic impacts every aspect of health, including physical, mental, social, economic, and spiritual well-being.

The COVID-19 pandemic claimed many families and communities worldwide, where daily life had been drastically altered, the economy was in recession, and much of social life,

economic safety nets, and public health were under unprecedented strain. The fear and uncertainty of pandemic conditions make the situation unpredictable and less conducive. It was causing stress, especially in families. The COVID-19 pandemic had a direct and far-reaching impact on humanity. In the face of this pandemic, individuals, families, communities, and even nations must be mentally resilient. Resilience is needed during the COVID-19 pandemic as a healthy and adaptive function following adversity.

Family resilience is a family-level construct that examines the family as a unit of analysis to identify risk factors and protective factors that promote healthy and functional adaptation for the family.<sup>3</sup> Poverty, family violence, divorce, single-parent households, or death are risk factors, whereas family cohesiveness, spiritual beliefs, and cultural values are protective factors.<sup>3</sup> Family resilience is built on family success in coping with stressors in their lives during life transitions, stress, or

difficulty.<sup>4,5</sup> Families that are strengthened after a crisis or challenge survive, manage, grow and develop.<sup>6</sup> A "normal" and healthy family can cope with and use problem-solving skills.<sup>7</sup>

Family resilience is shaped by belief systems, family communication, family structures, and social support.<sup>8</sup> Walsh (2002) suggests that belief systems consist of a process of meaning-making, transcendence or spirituality, and a positive outlook.<sup>6</sup> Chow et al. (2018) discovered a positive correlation between resilience and well-being, which means that increased resilience can affect the improvement of well-being.<sup>9</sup> Yang et al. (2015) discovered a relation between resilience, well-being, and stress levels and discovered that increased resilience positively impacted individuals, potentially resulting in improved well-being and lower stress levels.<sup>10</sup> Family interrelationships and the ability to access social and economic resources are the most related aspects of family resilience.<sup>11</sup>

Family financial hardship adds to strain and stress, which has been demonstrated to affect emotional well-being and interpersonal connections, which then spreads to the children's nurturing environment.<sup>6</sup> Unemployment, low housing, a lack of health care, crime, violence, and substance misuse are among the issues that low-income families may confront. It has been demonstrated that family structure or type influences family resilience. According to studies, stereotypes of a nuclear family with complete parents and children are perceived more positively than stereotypes of other types of families. Children in single-parent households and Stepchildren are more likely to engage in problem behavior than children in nuclear families, and single-parent and stepfamily households are more likely to be impoverished.<sup>12</sup>

A resilient family can deal with the COVID-19 pandemic and its consequences better. Promoting and preventing family resilience should be prioritized by optimizing the factors influencing it. As a result, researchers are interested in researching family resilience factors during the COVID-19 pandemic. This study aims to determine the factors related to family resilience during the COVID-19 pandemic, including family income, education, family type, family relations, and social support.

## METHODS

This study uses quantitative methods with cross-sectional designs. Family resilience, income, education level, family type, family relations, and social support were studied. The research was carried out between January and July of 2021.

This study's population consisted of families from Jakarta and Tangerang. This area was selected because it is a metropolitan city with complex problems, many COVID-19 cases, and the impact they cause. The researchers established inclusion criteria: husband or wife living together in one house, ages 18-65 years old, domiciled in Jakarta and Tangerang. Purposive sampling was used, and the sample size was 403 respondents. Respondents are study subjects who meet the inclusion criteria and convey their willingness to participate in the study

through informed consent. Google Forms is used to distribute research information, informed consent, and questionnaires.

This study posed no risk to the participants. Respondents are research subjects who are willing to participate and fill out an informed consent form. This study fulfills ethical principles such as autonomy, beneficence, nonmaleficence, justice, and confidentiality.

Data was collected using the Family Resilience Assessment Scale (FRAS) questionnaire developed by Walsh (2002) to measure family resilience and the Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire developed by Zimet et al. (1988) to measure social support.<sup>6,13</sup> The online questionnaire includes demographic data questions, 32 FRAS questions, and 12 MSPSS questions with Likert scale answer choices. The FRAS and MSPSS questionnaires have been translated into Indonesian, validated, and reliable (Cronbach alpha 0.871 & 0.717). In March 2021, the validity and reliability tests were conducted in the Bogor district on 33 respondents who shared the same characteristics as the research respondents.

The analysis includes both univariate and multivariate analyses using SPSS version 28. Logistic regression tests are used in multivariate analysis.

## RESULTS

Tables 1-5 show the research findings in univariate and multivariate analysis. The characteristics of respondents are presented in [table 1](#).

In [table 1](#), regarding the characteristics of respondents, The majority of respondents are known to have characteristics, namely; 283 (70.2%) are women, 263 (65.3%) are adults (20-39 years old), 170 (42.2%) are domiciled in Tangerang Regency, 241 (59.8%) are Christian, 180 (44.7%) are Batak, 237 (58.8%) have a bachelor's degree, 372 (92.3%) with income more than Regional Minimum Wage (RMW), and 307 (76.2%) are the nuclear family.

Family resilience variables are divided into two categories, namely low (total score < Median) and High (the total score ≥ Median). The median value is 130. [Table 2](#) shows the family resilience of respondents. [Table 2](#) shows 205 (50.9 %)

respondents have high resilience, while 198 (49.1 %) have low resilience.

Factors related to family resilience studied include income, family type, family relations, and social support. [Table 3](#) summarizes the findings of the investigation. According to [table 3](#) on family resilience factors, the majority of respondents were: 372 (92.3%) have income > Regional Minimum Wage (> IDR 4,000,000), 364 (90.3%) have high education, 307 (76.2%) are a nuclear family, 225 (55.8%) have closer family relationships in the pandemic period, and 210 (52.1%) have high social support.

In [table 4](#), the results of the first multivariate modeling showed that the variables with a p-value greater than 0.05 were family relations, education level, and family type. Multivariate modeling continues by removing these variables one by one starting from the highest p-value.

In the final multivariate analysis presented in [table 5](#), it was known that the factors associated with family resilience were income (p-value: 0.028, OR: 3.08) and social support (p-value: 0.001, OR: 7.16). According to the study's findings, social support is a variable strongly related to family resilience, with increased social support having the potential to affect family resilience 7.16 times. Furthermore, an increase in family income can potentially affect changes or increases in family resilience 3.08 times.

## DISCUSSION

The initial definition of resilience is "the process of managing and adapting to significant sources of stress or trauma, in which assets and resources in individuals, their lives, and their environment facilitate the capacity for adaptation and "bounce back" when faced with adversity".<sup>8</sup> Walsh (2003) developed a family resilience theory by combining data from individual resilience research with studies on efficient family functioning.<sup>14</sup> As a result, family resilience has been defined as the family as a functional system affected by high-stress social events and contexts, enabling successful adjustment of all members and the family unit.<sup>15</sup> Domains and characteristics of family members that contributed to the family resilience including family communication

**Table 1. Characteristics of respondents (n = 403).**

Characteristic	Category	n	%
Gender	Man	120	29.8
	Woman	283	70.2
Age	Adults (20-39 years old)	263	65.3
	Middle Age (40-59 years old)	138	34.2
	Elderly ( $\geq 60$ years old)	2	0.5
Domicile	Tangerang Regency	170	42.2
	Tangerang City	101	25.1
	East Jakarta	65	16.1
	South Jakarta	31	7.7
	West Jakarta	15	3.7
	North Jakarta	12	3.0
	Central Jakarta	9	2.2
Religion	Islam	117	29
	Christian	241	59.8
	Catholic	39	9.7
	Hindu	2	0.5
	Buddhist	4	1
Ethnicity	Javanese	115	28.5
	Sundanese	27	6.7
	Batak	180	44.7
	Chinese	29	7.2
	Manado	14	3.5
	Betawi	9	2.2
	Other	29	7.2
Level of Education	Junior High School	2	0.5
	Senior High School	37	9.2
	Diploma	50	12.4
	Bachelor	237	58.8
	Magister/Specialist	72	17.9
	Doctor	5	1.2
Income	$\leq$ Regional Minimum Wage	31	7.7
	$>$ Regional Minimum Wage	372	92.3
Family Type	Nuclear Family	307	76.2
	Extended Family	94	23.3
	Single Parent/ Divorced	2	0.5

**Table 2. The family resilience of respondents (n= 403).**

Category	n	%
Low	198	49.1
High	205	50.9

processes (collaborative communication and problem-solving), family belief systems (such as spirituality, having an optimistic attitude, and so on), and family organizational processes (interpersonal relationships, effective social networks, and economic resources).<sup>14</sup> When reporting COVID-19 concerns, people are more concerned about their families than themselves. Measuring resilience can help with resource allocation planning and inform interventions for individuals and communities dealing with pandemic

effects.<sup>16</sup> Worries, anxiety, and depression can all be reduced with resilience.<sup>16</sup>

Lin et al. (2016) discovered that economic strength, problem-solving, and family cohesion significantly predict family members' trust in dealing with family crises.<sup>17</sup> Matos et al. (2021) discovered that the greater the poverty rate, the lower the family resilience.<sup>18</sup> According to the study, 50.9 % of respondents had high resilience, and 92.3% earned more than RMW. Furthermore, that family income was discovered to be related to family resilience, with increased family income increasing family resilience by 3.08 times. It is possible to conclude that income is a resource that contributes to family resilience. Mansfield, Dealy, and Keitner (2013) discovered that low-income

families had significantly lower social support than non-low-income families.<sup>19</sup>

Family, friends, someone special (significant others), the community, and the government are all sources of social support. Social support can be informational, instrumental, or emotional. Informational support occurs when one person assists another in better understanding a stressful event and locating the resources and coping strategies required to solve the problem; instrumental support includes providing tangible assistance such as services, financial assistance, and other forms of assistance, and emotional support includes showing others warmth and attention and convincing them that they deserve to be cared for.<sup>20</sup> Wen and Hanley (2015) discovered that a lack of social support makes Chinese migrant families vulnerable and reduces *resilience* in the face of massive social, cultural, and economic transformations.<sup>21</sup> A single parent will struggle to provide the best care possible to alleviate such concerns. Increased friend support might have far-reaching repercussions for single mothers who lack the benefits of a supportive spouse, especially when friend assistance may incur lower emotional expenses than family support.<sup>22</sup> Perceived social support and specific internal resources significantly contribute to the well-being of single mothers.<sup>22</sup> According to the findings, social support is the essential variable related to family resilience, with increases in social support being 7.16 times more likely to affect increases in family resilience.

According to the study, there was no correlation between family resilience and education level, family type, or family relationship. In the Family Resilience Model (FRM) developed by Henry et al. (2015), family resilience is influenced by the family's adaptive system, which consists of a meaning system, an emotional system, a control system, a maintenance system, and a family stress response system.<sup>23</sup> So, even in low-education families and any type of family, family resilience can be built as long as the family adaptation system is maintained against incoming stressors. The capacity to identify resources and handle complex

**Table 3. Distribution of factors related to family resilience (n = 403).**

Factor	Category	n	%
Income	≤ IDR 4,000,000 (RMW)	31	7.7
	>IDR 4,000,000 (RMW)	372	92.3
Education	Low	39	9.7
	High	364	90.3
Family Type	Nuclear Family	307	76.2
	Extended Family	94	23.3
	Single Parent/Divorced	2	0.5
Family Relations in Pandemic Covid-19	Stretchable	11	2.7
	Stay the same	167	41.4
	Getting closer	225	55.8
Social Support	Low	5	1.2
	Moderate	188	46.7
	High	210	52.1

**Table 4. First modeling of multivariate analysis (n= 403).**

Variable	p-value	OR
Income	0.047	2.836
Education	0.551	1.283
Family Type	0.112	0.654
Family Relation	0.644	1.108
Social Support	0.001	7.06

**Table 5. Multivariate final analysis of factors related to family resilience (n = 403).**

Variable	P-value	OR	95% CI
Income	0.028	3.08	1.13-8.37
Social Support	0.001	7.16	4.59-11.17
Family Type	0.084	0.63	0.38-1.06

challenges is also aided by how families interact internally and publicly. When a family possesses particular abilities that enable them to access critical resources, they are considered resilient.<sup>6</sup> Work, education level, and human development, particularly child development, are other factors that can increase family resources in dealing with various family difficulties.<sup>18</sup>

Family relationships do not affect family resilience directly or automatically. Close Family relationships are essential for establishing social support, family cohesion, and an adaptive family system. Radeti-Pai and Erne (2020) discovered that highly resilient families exhibit open communication patterns.<sup>24</sup> This communication pattern includes an open environment for family members to express or share feelings and a condition that demonstrates a frank and productive open attitude in discussing family problems.<sup>24</sup> In the context of COVID-19, the importance of family processes in risk mitigation and resilience promotion through shared family beliefs

and close relationships is provided.<sup>25</sup> Walsh (2002) suggests that belief systems are made up of a process of meaning-making, transcendence or spirituality, and a positive outlook.<sup>6</sup> Communication clarity, emotional sharing, and problem-solving are all improved by shared meaning-making; conversely, effective communication processes improve shared meaning-making.<sup>15</sup>

The COVID-19 pandemic may increase unfavorable outcomes for family relationships and child adjustment, necessitating the formation and maintenance of family bonds to mitigate the effects of an otherwise stressful event, as well as the improvement of family belief systems to provide a framework to understand COVID-19-related occurrences. According to recent studies, families come out stronger, more loving, and more resourceful in facing potential challenges. Although some families are more vulnerable or face greater adversity than others, a family resilience perspective is based on a strong belief in families' ability

to enhance their resilience in the face of adversity.<sup>26</sup> Even those who have suffered severe trauma or had difficult relationships can heal and grow throughout their lives and generations.<sup>15</sup>

This study has limitations, a purposive sampling technique was used, so generalizations should be used with caution. Furthermore, there may be confounding factors or other variables that were not regarded as could influence the findings. Therefore, the findings should be interpreted with caution.

## CONCLUSIONS

Family resilience during the COVID-19 pandemic was discovered 205 (50.9%) respondents demonstrated high resilience while 198 (49.1%) demonstrated low resilience. Factors related to family resilience were income (p-value: 0.028, OR: 3.08) and social support (p-value: 0.001, OR: 7.16). Social support is the dominant variable related to family resilience. While education level, family type, and family relations are unrelated to family resilience. An increase in social support increases the likelihood of family resilience by 7.16 times. Furthermore, an increase in family income has a 3.08 times greater chance of increasing family resilience.

Families and the government can collaborate to improve family resilience during the COVID-19 pandemic by optimizing social support and family income. Further study can be conducted using the qualitative method to delve deeper into the factors influencing family resilience.

## CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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## ETHICS APPROVAL

This study was approved by the MRIN/Mochtar Riady Institute for

Nanotechnology ethics committees (No. 028/MRIN-EC/ECL/XII/2020), and all respondents provided written informed consent.

## AUTHOR CONTRIBUTION

The protocol, design, and questionnaire were created and modified by Martina Pakpahan (MP), Lia Kartika (LK), and Mega Sampepadang (MS). MP, LK, and MS collected the data. MP was also involved in data analysis and interpretation. MP assisted in the development and editing of the manuscript. All the authors provided constructive feedback and contributed to the finalization of the manuscript.

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