Analysis of Family Resilience: The Effects of the COVID-19

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Abstract: This study aims to analyze family resilience during the COVID-19 pandemic. The COVID-19 pandemic is a worldwide health problem at this time, including Indonesia, with a massive spread. Various issues arise due to the COVID-19 pandemic in economic, social, cultural, educational, and social welfare. This research was conducted on the people who lived in the COVID-19 red zone at Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi) area, with a total sample of 311 people. This study's data are political data collected using the Family Resilience instrument distributed using the Google Form application and data analysis using the Rasch Model and SPSS. Based on the research, it was found that the level of family resilience during the COVID-19 pandemic was in a suitable category. Therefore, it is necessary to increase parents' understanding in maintaining harmony and stability in the family conditions.

Keywords: family resilience; Rasch Model; COVID-19


Kata Kunci: ketahanan keluarga; Rasch Model; COVID-19
A. Introduction

COVID-19 pandemic is a global health problem today. This pandemic is a new virus that originated in Wuhan, China.\(^1\) COVID-19 was designated as a pandemic by WHO in the early 2020s. This virus's spread can spread through saliva or duplex, caused by people who are positively infected by this virus when talking, coughing, and sneezing.\(^2\) The increase in these cases continues quickly and significantly; even during March, there was an increase of 69.17%\(^3\).

A vaccine for treatment has not been found,\(^4\) causing problems for the community of the dangers of this virus, including Indonesia.

The World Health Organization and countries in the world only commit social restrictions with physical distancing, health protocols, etc., which ultimately also lead to the strengthening of each individual's antibodies in the face of COVID-19.\(^5\) Confusion is rife everywhere, between those who comply ___________


\(^{5}\) World Health Organization, “WHO Director-General’s Opening Remarks at the Media Briefing on COVID-19-11 March 2020.”

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with the health protocol or those who ignore it, and so on. The search for
treatment and treatment of Corona Virus has become a severe event and is
needed by the world community today.

COVID-19 in Indonesia is increasing and expanding across regions and
countries, accompanied by the number of cases and deaths. This increase
impacts the political, economic, social, cultural, defense, and security aspects
and the welfare of the people in Indonesia, so it is necessary to accelerate the
handling of COVID-19 in the form of Large-Scale Social Restrictions to reduce
the widespread of COVID-19. These actions include restrictions on certain
activities of the population in an area suspected of being infected with COVID-
19, including limitations on the movement of people and goods for one
particular province or district/city to prevent the spread of COVID-19. The
restrictions are carried out through the consolation of schools and workplaces,
rules on religious activities, and restrictions on activities in public places or
facilities. All of this is contained in Government Regulation number 21 of 2020
concerning Large-scale social conditions implemented in almost every region in
Indonesia.

Implementing these large-scale social restrictions has various impacts on
Indonesian people’s lives both from social, economic, cultural, defense, security,
welfare, and community happiness aspects. Besides, it has also been studied

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6 Muh Hasrul, “Aspek Hukum Pemberlakuan Pembatasan Sosial Berskala Besar (PSBB) dalam
7 Aknolt Kristian Pakpahan, “COVID-19 dan Implikasi bagi Usaha Mikro, Kecil, dan Menengah,”
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mau?page=all.
from various perspectives that the isolation protocol impacts lifestyle and communication, physical and mental health, public health and the environment and even social relations problems. Upward of one-third of families have reported feeling very anxious about family stress from COVID-19. The impact of isolation is associated with disturbances, such as stress, fear, sadness, anxiety, and emotional disorders on family life. Likewise with community life at home, with the existence of large-scale social restrictions, an opportunity for families to strengthen ties in the family, because the function of the family during this pandemic is essential in the protection and defense of each family member. In addition to encouraging adjustments to new habits, building new connections and achieving a new identity. The emotions that exist in the family will affect the pressure that arises on that family and related to family resilience as well as psychological. However, research reveals that there have been increasing domestic violence cases, lack of personal space in the family,
and boredom.\textsuperscript{20} Homemakers may be burdened by shortages of supply and the sudden need to care for the whole family. Parents may be depressed about the future of their work and their children’s education\textsuperscript{21} among all family members. It also has an impact on community family resilience.

Resilience is a concept that was initially developed in developmental psychopathology and is based on ecology, stress, and coping.\textsuperscript{22} Previous resilience studies have examined resilience in individuals, but strength itself can actually be seen in the analytical unit such as families, groups, organizations, and communities,\textsuperscript{23} positive adaptation processes accompanied by the ability to rise from bad experiences and pain.\textsuperscript{24}

In the family environment, family resilience is needed, especially in this COVID-19 condition, because family resilience affects each family member's life\textsuperscript{25} and influences and contributes to education, economy, and socialization.

\textsuperscript{20}Wang et al., “Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus–Infected Pneumonia in Wuhan, China.”


Also, family resilience has a function to prevent the risk of problems in the family. Family resilience is a combination of individual characteristics, patterns of relationships, and interactions between family members so that strength is formed from strong and positive relationships in the family. The emergence of family resilience is based on theory and research on stress, coping, and family adaptation. Previous researchers began studies of family stress assuming 1) family members interact and support one another, 2) the existence of stressors requires families to adapt and make adjustments, and 3) specific rules and communities will encourage family coping and adaptation.

In Indonesia, family resilience is explained in Law Number 52, the Year 2009 concerning Population Development and Family Development, and Law Number 10/1992. Dynamic of a family with tenacity and resilience and contains material physical abilities and mental and spiritual spirituality to live independently, develop themselves and his family to achieve harmony in improving physical and psychological well-being.

Various factors can build family resilience during the 19th pandemic. Mackay (2003) mentions that family resilience's critical concept can be understood from three aspects: protective factors, risk factors, and vulnerability factors. McCubbin et al. identified family resilience factors: protective factors, recovery factors, and general family resilience factors. Family protective factors include family celebrations, family time and routine, and family traditions. Recovery factors include family integration, family support and building self-esteem, family recreation orientation, and family optimism. Meanwhile, general family resilience factors can act as protective factors and family recovery factors, including problem-solving strategies, effective communication strategies, and effective family communication. 

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processes, equality, spirituality, flexibility, truth, hope, social support, and physical and emotional health. \textsuperscript{31}

Family resilience is a complex process that involves social, psychological, and biological factors. There are efforts to overcome the negative consequences of oppressive events and help families and individuals adjust to life difficulties. A sign of resilience is initiative and perseverance, which are strengthened by firm hopes and beliefs. According to Julia Bryan et al.\textsuperscript{32} (quoted from Van Hook, 2008), family resilience can be realized if family members can recognize their social roles and tasks. Parents must be educated to encourage their children to engage in more creative activities, including board games, gardening, and drawing. Parents must find time to play with children and engage in daily rituals that strengthen family relationships and help spend time (WHO, 2020). Fellow family members can adequately resolve the psychological and social problems in the home during the COVID-19. Various studies on family resilience have been done quite a lot. Such as family conditions for parents who have dementia,\textsuperscript{33} family resilience to children with schizophrenia,\textsuperscript{34} and family resilience to natural hurricanes.\textsuperscript{35} But in the context of family resilience during the COVID-19 pandemic, there are still not many. This research focuses on the level of family resilience during the COVID-19 pandemic in the red zone in several aspects. This study's results can also be the basis for understanding, preventing, and dealing with the impact of COVID-19 on family resilience.


B. Method

This research was conducted on the people who live in the COVID-19 red zone area at Jabodetabek area, with a total sample of 311 people. Sampling was obtained by using the convenience sampling method. This research uses a quantitative approach with descriptive research methods.\textsuperscript{36} The data in this study were political data collected using the Family Resilience instrument distributed using the Google Form application with four alternative answers in the Likert scale model among the choices of solutions are 1) Always, 2) Often, 3) Sometimes and 4) Never.

The instrument in this study is based on six indicators: 1) Positive outlook, 2) Spirituality, 3) Communication in the family, 4) Engagement in the family, 5) Financial Management, and 6) Social Support. This study uses a quantitative approach. The data analysis technique used is descriptive statistics using the SPSS application combined with Rasch Modeling analysis using the Winsteps application.\textsuperscript{37}

C. Results

The results are discussed in detail based on the SPSS and the Rasch Model analysis. It addresses several items, including the level of family resilience in the red zone areas affected by COVID-19. The study results and interpretation of family endurance are seen based on scalograms, analysis of answer patterns on family endurance tests is presented with good validity.

Table 1 shows the categorization of family endurance tests in the COVID-19 red zone area. Table 1 shows that family resilience in the red zone affected


by COVID-19 is in the medium category with a percentage of 68.9%. This analysis supports the observations that there are still some that are less serious and do not think deeply. The results of the study below support this.

Table 1.
Categorization of Family Resilience

<table>
<thead>
<tr>
<th>Level</th>
<th>NP</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rendah</td>
<td>46</td>
<td>14.7</td>
<td>14.7</td>
<td>14.7</td>
<td>14.7</td>
</tr>
<tr>
<td>Sedang</td>
<td>215</td>
<td>68.9</td>
<td>68.9</td>
<td>83.7</td>
<td></td>
</tr>
<tr>
<td>Tinggi</td>
<td>51</td>
<td>16.3</td>
<td>16.3</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>312</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.
Baseline Data from Six Indicators of Family Resilience

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>Positive Outlook</td>
<td>7</td>
</tr>
<tr>
<td>Spirituality</td>
<td>6</td>
</tr>
<tr>
<td>Communication in the family</td>
<td>6</td>
</tr>
<tr>
<td>Attachment in the family</td>
<td>7</td>
</tr>
<tr>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>Social Support</td>
<td>4</td>
</tr>
</tbody>
</table>

In the Figure 1, it can be seen that there are 95 respondents (top) having respondents who are not fit compared to the others, as well as 23 and 41. Furthermore, it can be interpreted that respondents who have the highest family security are respondents with numbers 109 and 132. Again, the lowest value is in unpluralize. The level of family resilience is in the moderate position with a percentage of 68.9%. The results of the validity and reliability analysis are explained in the figure 2.
<table>
<thead>
<tr>
<th>ENTRY</th>
<th>TOTAL</th>
<th>MODEL</th>
<th>INFIT</th>
<th>OUTFIT</th>
<th>PT-MEASURE</th>
<th>EXACT MATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>53</td>
<td>24</td>
<td>3.47</td>
<td>.61</td>
<td>1.01</td>
<td>0.014</td>
</tr>
<tr>
<td>24</td>
<td>73</td>
<td>24</td>
<td>3.47</td>
<td>.61</td>
<td>1.01</td>
<td>0.014</td>
</tr>
<tr>
<td>35</td>
<td>46</td>
<td>24</td>
<td>3.47</td>
<td>.61</td>
<td>1.01</td>
<td>0.014</td>
</tr>
<tr>
<td>56</td>
<td>67</td>
<td>24</td>
<td>3.47</td>
<td>.61</td>
<td>1.01</td>
<td>0.014</td>
</tr>
<tr>
<td>76</td>
<td>24</td>
<td>3.47</td>
<td>.61</td>
<td>1.01</td>
<td>0.014</td>
<td>0.014</td>
</tr>
</tbody>
</table>

**Figure 1.** Person Statistic: Misfit Order
Figure 2 shows that the mean value of a person is (1.52 logit > 0.00 logit), which means that respondents' tendency to answer more is always the instrument that has been given to see the extent of family resilience. The reliability of respondents shows the number 0.86, which means respondents' consistency in answering choices on the instrument shows good. The interaction between the item and person reliability values of 0.89 means that...
the alpha Cronbach's quality is classified as excellent quality. Also, the sensitivity value for person answers is +1.01 Logit (INFIT MNSQ), and the sensitivity value for person answers as a whole is +0.97 Logit (OUTFIT MNSQ) which means that it is still in the ideal range (+0.5 > MNSQ < +1.5). In the grouping section, people get four results which means that there are four groups of respondents.

Furthermore, Figure 3 shows that the instrument's reliability is (0.99), meaning that its quality is in an outstanding category. Besides, the item answer's sensitivity value is +1.02 logit, and the overall value of the item answer sensitivity is + 0.97 logit. This indicates that it is still in the ideal range. This shows that the instrument's things are of good quality for the conditions of measurement that have been done.

Figure 4 shows that the natural variance is 48%, not so much different from the expected value of 48.9%. This indicates that the 20% one-dimensional minimum requirements have been met. The results of unexpended 1-5, it is 9% which shows an adequate level of instrument. Thus this condition states that the one-dimensional requirements of the instrument can be fulfilled. Also, it is noted that the 24 items used are valid.

<table>
<thead>
<tr>
<th>Table of STANDARDIZED RESIDUAL variance (in Eigenvalue units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-- Empirical -- Modeled</td>
</tr>
<tr>
<td>Total raw variance in observations = 46.1 100.0% 100.0%</td>
</tr>
<tr>
<td>Raw variance explained by measures = 22.1 48.0% 48.9%</td>
</tr>
<tr>
<td>Raw variance explained by persons = 8.9 19.3% 19.6%</td>
</tr>
<tr>
<td>Raw Variance explained by items = 13.2 28.7% 29.3%</td>
</tr>
<tr>
<td>Raw unexplained variance (total) = 24.0 52.0% 100.0% 51.1%</td>
</tr>
<tr>
<td>Unexplained variance in 1st contrast = 2.3 5.1% 9.7%</td>
</tr>
<tr>
<td>Unexplained variance in 2nd contrast = 1.9 4.2% 8.1%</td>
</tr>
<tr>
<td>Unexplained variance in 3rd contrast = 1.7 3.7% 7.2%</td>
</tr>
<tr>
<td>Unexplained variance in 4th contrast = 1.5 3.2% 6.2%</td>
</tr>
<tr>
<td>Unexplained variance in 5th contrast = 1.4 3.0% 5.0%</td>
</tr>
</tbody>
</table>

Figure 4.
Standardized Residual Variance

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D. Discussion

The study results showed that the level of family resilience in the red zone affected by COVID-19 is divided into three categories: high, medium, and low. The work shows that the level of family resilience in the moderate categorization is 16%, 16.3% for the high category, and 14.7% for the low class. This means that the family's condition in the red zone is sufficient to survive in difficult situations of life and adapt to these conditions and rise from adversity. The indicators reinforce this on family resilience which shows that attachment in the family has an essential role with a score of 18.33%. It is believed that the passion between members is able to solve a problem that occurs so that they can work together to recover from a situation. The same thing is expressed that attachment to each other can make the family able to coordinate with bai, attract each other from adversity, and significantly impact recovery.42

Furthermore, a positive outlook with a score of 16.79% indicates that a positive outlook can strengthen one another and be able to rise from adversity. Positive emotions can be in the form of my love, humor, optimism, having positive solutions and suggestions that strengthen one another will make the family stronger:43 Families who have a positive perspective will see the difficulties faced as a challenge that can be passed together and make it an experience and life process that must be accepted. This finding is also in line with research conducted by Siahaan that festive desserts can strengthen them and become a motivator to continue to work to overcome problems, and is confident that things will get better in the future.44

Furthermore, spiritual indicators with a score of 13.36% adopted by a family are felt to provide suggestions for positive solutions to problems experienced by families.45 The emergence of COVID-19 teaches that material is not everything. It starts to improve the quality of worship by always getting closer to God, such as listening to studies or lectures, worshiping in the

43Lobo et al.

Communication in the family falls into the score of 12.82%. Communication patterns are essential for family resilience both verbally and non-verbally; the designs must be reciprocated with each other so that communication can go well. Communication can be complicated if not giving and receiving, which results in misunderstanding, feeling unappreciated, feeling poorly understood, making it a problem between family members that makes communication unhealthy. The next indicator is financial management with a score of 8.19% and social support 7.21%; both of these points are in a low position compared to other indicators; during the COVID-19 pandemic period, the economy is hampered, which family members who have jobs forced not to work, because following the call to not do activities outside the home. The low social support experienced in the red zone region resulted in family resilience in the moderate category.

The instrument test results using Rasch show that the instrument is in the outstanding category with a reliability value (0.99). The item sensitivity value is +1.02 logit, and the overall score is +0.971 logit.

\textbf{E. Conclusion}

The study results showed that the level of family resilience in the red zone affected by COVID-19 is divided into three categories: high, medium, and low. The work shows that the level of family resilience in the moderate categorization is 16%, 16.3% for the high category, and 14.7% for the low class. This means that the family's condition in the red zone is sufficient to survive in difficult situations of life and adapt to these conditions and rise from adversity. The indicators reinforce this on family resilience which shows that the family's attachment has an essential role with 18.33%. It is believed that the passion between members is able to solve a problem that occurs so that they can work together to recover from a situation.
Furthermore, a positive outlook with a score of 16.79% indicates that a positive outlook can strengthen one another and rise from adversity. A spiritual indicator with a score of 13.36% adopted by a family is felt to provide positive solutions to problems experienced by the family. Communication in the family with 12.82% communication patterns is essential for family resilience both verbally and non-verbally; the designs must be reciprocated so that communication can go well. Financial management with a score of 8.19% and social support 7.21%, both of these points are in a low position compared to other indicators; during the COVID-19 pandemic period, the economy was hampered, which family members who had jobs were forced not to work because following the call to not do activities outside the home and the low social support experienced in the red zone resulted in the resilience of the family is in the medium category.[s]

References


