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Family Regenerative Typology of Cianjur Earthquake Survivors: Influence Analysis to Religiosity and Family Vulnerability

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Abstract

Indonesia is one of the countries prone to disasters. One of the biggest disasters in 2022 was the earthquake in Cianjur Regency. Disaster events result in damage to assets and infrastructure and hamper social growth. This study aims to analyze the differences in religiosity, family vulnerability and regenerative typology between families in lightly damaged and severely damaged houses and analyze the influence of religiosity and family vulnerability on the regenerative typology of earthquake survivor families in Cianjur Regency. The population of this study is the families of earthquake survivors in Cianjur Regency. Respondents in this study were 100 wives with lightly damaged houses and 100 wives with severely damaged houses. Data were analyzed using a statistical package for the social sciences and structural equation modeling least squares. The t-test results showed a higher vulnerability of families in severely damaged houses than families in lightly damaged houses. The regenerative typology of disaster survivor families is influenced by religiosity and family vulnerability. Stakeholders are expected to work together to provide material and psychosocial disaster assistance. It is essential to conduct socialization and education for families to become regenerative and resilient families facing disasters.

Keywords: *disaster, vulnerability, religiosity, regenerative typology*

Introduction

Disasters impact family life through the economic and psychosocial disruptions they cause. Disaster victims feel That disasters have a long-term impact, even if they are prolonged if the disaster occurs repeatedly (Sunarti, 2013; Senarath, 2021). The earthquake disaster in Cianjur in 2022 was recorded as one of the major disasters in Indonesia (BNPB 2022). Based on the Cianjur Regent Decree No: 360/KEP.118-BAPPERIDA/2023, the results of the damage and loss assessment (DaLA) analysis or damage and loss assessment after the Cianjur earthquake disaster showed that the total value of damage and losses incurred in the housing sector, infrastructure sector, social sector, economic sector, and cross-sector was 4.5 billion rupiah. The sector that suffered the most damage and losses was the housing sector (70.55%). Damage to the physical structure of residential buildings, classified as lightly and moderately damaged, did not show significant damage. Namely, there was only 35-36 percent damage, such as frames, door leaves, and walls. The condition of severely damaged houses with a damage level above 65 percent causes the house to not function as a place to live due to collapse.

In the 1 month after the disaster, families experience difficulty dealing with the crisis, difficulty feeling calm, anxiety about the future, and feelings of inability to continue life. During the crisis period, the family cannot reoccupy the house damaged by the disaster, so they have to live in refugee tents, cannot work temporarily, have deep trauma, and can only depend on humanitarian assistance from the government and volunteers to meet their needs (Laily & Sunarti, 2022). Losses and damage to homes and other assets lead to the need for funds for



home repairs that will disrupt the family's economy. Disaster disruptions cause families to reorient their lifestyles and re-plan their priority goals. The reorientation of family life is also related to the uncertainty faced by the family, the uncertainty of sources of livelihood and income, and housing uncertainty. Some family reorientations include changes in lifestyle to become more straightforward, such as many families not celebrating children's birthdays, postponing business development plans, and even postponing children's school continuation (Sunarti, 2013; Sunarti, 2015).

Families dealing with events, pressures, and changes in life, one of which is due to disaster, have different efforts. The characteristics or traits of families when assessing, operating, and behaving when facing sources of stress are known as family typology, and one of the family typology models is regenerative typology. Regenerative typology is the family's ability to face challenges, pressures, and changes in life, which is described by family coherence and family hardiness (Sunarti, 2012). Family coherence is a fundamental thing that families must have when carrying out coping strategies. Family hardiness is the family's strength and fortitude in stressful conditions. Regenerative typology can optimize family function and reduce anxiety and crisis (Ngai & Ngu, 2015; Pate et al., 2016).

Families can deal with crises in disaster conditions through the family belief system (constancy of values, religion, beliefs, and rules). The value of religiosity increases in line with the disaster experienced by the family because the values of religiosity improve psychological well-being so that families get the spirit to rise and rebuild the future (Sunarti, 2018; Kadiyono & Harding, 2017; Bentzen, 2019). Good values in the family allow the family to face the dangerous impacts of disasters (Fadmawaty & Wasludin 2021). Religiosity is defined as a belief in God accompanied by a commitment to follow the principles believed and set by God (Abou-Youssef et al., 2011). The results showed that religiosity increases the sense of coherence and coping. Spiritual and religious matters are essential for understanding family functioning, and fostering shared religious practices within the family can strengthen family cohesion and greater satisfaction with family life (Krok, 2015; Berc et al., 2017).

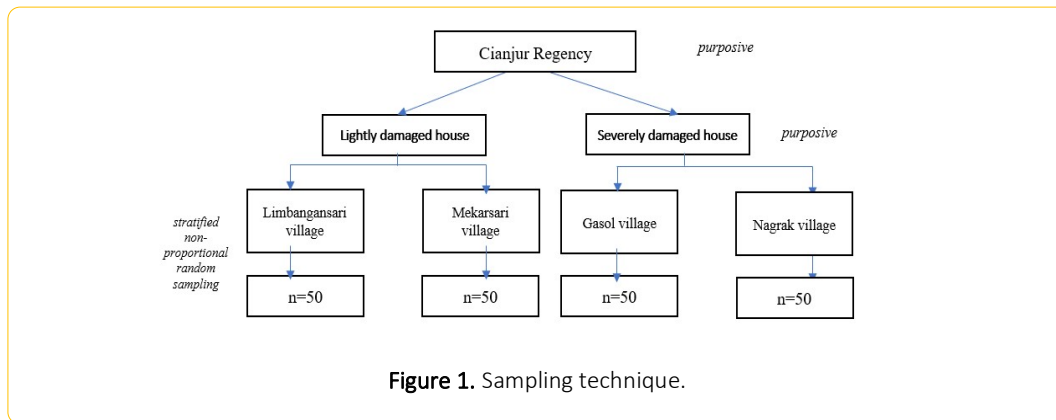
In the event of a disaster, for the safety of life, disaster survivors must evacuate to a safer place from the disaster site, causing the family environment to change, vulnerable, and uncomfortable. Vulnerability is the family's inability to respond to crises or conflicts. Suppose a family has a high level of vulnerability. In that case, the family can no longer survive, and if this balance is not handled correctly, it will affect life, interactions, and functions in the family (Gustiani & Gustina, 2020; Sunarti, 2014). Research by Ginanjarsari and Sunarti (2014) states that family flexibility creates a flexible family situation in dealing with problems and changes in family life, allowing families to deal with stressful situations more openly. Families with the ability to survive, have a resilient nature, and get social support from their environment are likely to adapt to the pressures and difficulties faced (Weiss et al., 2013; Hackbarth et al., 2012). Other research also states that religiosity can reduce perceived vulnerability, where religious behavior and beliefs can comfort and provide strength for individuals and families experiencing difficulties (Bryant-Davis & Wong, 2013; Pargament et al., 2013).

Regenerative typology, as one of the family typology models, still needs to be studied. Previous research on regenerative typology shows that regenerative family types are more prevalent in urban areas. Furthermore, research shows no difference between regenerative typology in poor and non-poor families (Ginanjarsari & Sunarti, 2014; Sunarti, 2013). However, no research examines the influence of religiosity and family vulnerability on regenerative typology in earthquake disaster survivor families. Examining regenerative typology in post-disaster conditions is essential to map the family's ability to manage disaster pressures. This study aims to analyze the differences in religiosity, family vulnerability and regenerative typology between families in lightly damaged and severely damaged houses and analyze the influence of religiosity and family vulnerability on the regenerative typology of earthquake survivor families in Cianjur Regency.

Methods

Sampling and Study Design

This research design is an explanatory quantitative *cross-sectional study*. The research was conducted in Nagrak Village, Gasol Village, Limbangansari Village, Mekarsari Village, and Cianjur Regency, West Java Province. The selection of research locations was chosen *purposively* and was based on the consideration that the area was a disaster location with heavy damage and the most casualties. Data collection was conducted in October 2023. The study population was the families of earthquake survivors in Cianjur Regency. The sample was selected using a *stratified non-proportional random sampling* technique (Figure 1). The criteria for the sample in this study are intact families and having children. Respondents in the study were the wives of earthquake survivors in Cianjur Regency, totaling 200 respondents with details of 100 wives with lightly damaged houses and 100 people with severely damaged houses. This research has passed ethical review at the Bogor Agricultural University Human Ethics Commission with Number 1063/IT3.KEPMSM-IPB/SK/2023. The research was conducted using an interview method with the help of a structured questionnaire with an interview duration of about 30 minutes.



Variable Measurement Tools

The following variable measurement tools were used: (1) Religiosity is belief in God accompanied by a commitment to follow the principles believed and established by God. The religiosity questionnaire was measured using the religiosity questionnaire developed by Abou-Youssef et al. (2011). The religiosity questionnaire has three dimensions: religious beliefs, religious practices, and religious appreciation, and it has 18 question items. The answer options use a Likert scale, namely 1 = never, 2 = sometimes, 3 = often, and 4 = always, with a *cut-off point* value of low: <60.0; medium: 60.0-80.0; high: >80.0. The *Cronbach alpha* value was 0.959; (2) Family vulnerability is a situation or condition that can reduce the family's ability to prepare for danger or threats. The vulnerability questionnaire was measured using the SIREN-GA (family vulnerability) questionnaire developed by Sunarti (2021). The family vulnerability questionnaire has three dimensions: physical-economic vulnerability, social vulnerability, and psychological vulnerability, with 24 question items. The answer options used a Guttman scale, namely 0 = no, 1 = yes, with a *cut-off point* value of very low: 0-19.0; low: 20.0-39.0; moderate: 40.0-59.0; high: 60.0-79.0; very high: 80.0-100. The *Cronbach alpha* value is 0.775; (3) Regenerative typology is a family typology model based on indicators of family hardiness (family strength and resilience that arises from a strong feeling as a family in controlling life events and difficulties) and family coherence (the essential thing in carrying out coping strategies in the family, and is used in the management of family problems). The regenerative typology questionnaire was measured using the family typology questionnaire developed by McCubbin, Thompson, & McCubbin (2001) and modified by Sunarti (2012). The family typology questionnaire (*regenerative families*) has two dimensions, family *hardiness*, and *coherence*, with 20 question items. The answer options use a Likert scale, namely 1 = never, 2 =

sometimes, 3 = often, and 4 = always, with a *cut-off point* value of low: 0.0-50.0; high: >50.0-100.0. The *Cronbach alpha* value is 0.866.

Data Analysis Method

Quantitative data processing and analysis were processed through *editing, coding, entry, and scoring*. Data processing and analysis used *Microsoft Excel, Statistical Package for Social Science (SPSS) 25.0* for descriptive and t-test analysis, and *Structural Equation Modeling-PartialLeast Square (SEM-PLS)* for influence analysis.

Results

Family Characteristics

Based on the study results, 62.0 percent of husbands in families with lightly damaged houses were in middle adulthood with an average age of 48 years, and 50.0 percent of husbands with severely damaged houses were in middle adulthood with an average age of 44. The age of wives in families with lightly damaged houses was 56.0 percent in middle adulthood, with an average age of 42.5 years. The age of wives in severely damaged houses was 57.0 percent in early adulthood, with an average age of 38 years (Table 1).

Table 1. Distribution of families by age of husband and wife in lightly and severely damaged houses.

Family characteristics (age)	Lightly damaged house (%)	Severely damaged house (%)
Husband's Age (Years)		
Early adulthood (18-40 years)	42.0	42.0
Middle adulthood (41-60 years)	50.0	50.0
Late adulthood (>60 years)	8.0	8.0
Min-Max	25-82	25-76
Average $\pm$ Standard Deviation	48 $\pm$ 11.3	44 $\pm$ 11.4
Wife's age (Years)		
Early adulthood (18-40 years)	44.0	57.0
Middle adulthood (41-60 years)	56.0	43.0
Late adulthood (>60 years)	0	0
Min-Max	22-60	20-60
Average $\pm$ Standard Deviation	42.5 $\pm$ 9.9	38 $\pm$ 9.9

The education of husbands in both lightly damaged and severely damaged houses was primarily elementary and high school graduates, with the average length of education of husbands in families with lightly damaged houses being higher at 9.1 years. In addition, the number of university graduates is also higher than in severely damaged houses. The education of wives in lightly damaged houses is elementary primarily and senior high school graduates, while the education of wives in severely damaged houses is elementary primarily and junior high school graduates; the average length of education of wives in families of lightly damaged houses is higher at 8.7 years (Table 2).

Table 2. Distribution of families by years of education of husband and wife in lightly and severely damaged houses.

Family characteristics (Education)	Lightly damaged house (%)	Severely damaged house (%)
Husband's Education		
Elementary school	44.0	64.0
Junior high school	15.0	12.0
High school	33.0	22.0
Higher education	8.0	2.0
Min-Max	4-16	3-16
Average $\pm$ Standard Deviation	9.1 $\pm$ 3.2	7.8 $\pm$ 2.8
Wife's Education		
Elementary school	46.0	71.0
Junior high school	23.0	17.0
High school	27.0	12.0
Higher education	4.0	0
Min-Max	4-18	1-12
Average $\pm$ Standard Deviation	8.7 $\pm$ 3.0	7 $\pm$ 2.3

The results also show that the husband's occupation in this study is quite diverse in both families with lightly damaged and severely damaged houses; the most common occupations are farmers and laborers (construction) and other jobs, such as odd jobs, drivers, and distributors of goods, as well as private employees/employees. The results showed that the wife's occupation in the study was dominated by homemakers/non-workers, as many as 79.0 percent, while 12.5 percent worked as farmers. The average per capita income was higher in families with lightly damaged houses IDR 3,375,500 (206 USD) than those with heavily damaged houses IDR 2,761,650 (168 USD).

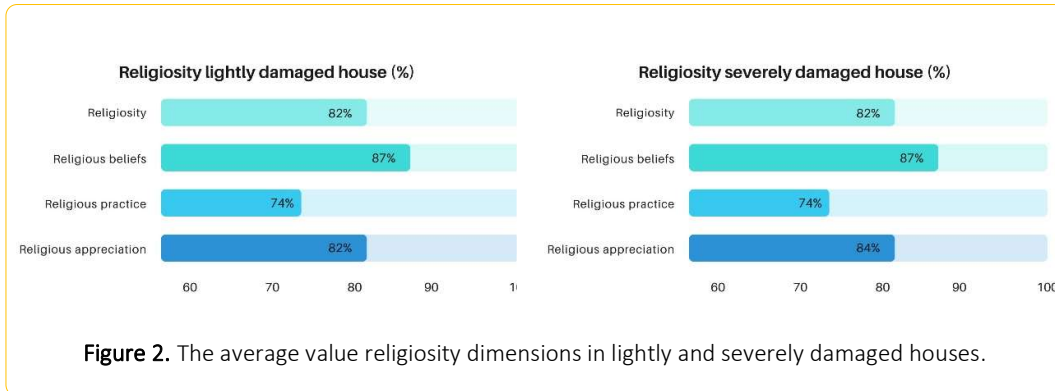
Religiosity

Descriptive test results showed that more than half of the respondents in families with lightly damaged houses (54.0%) and severely damaged houses (59.0%) were in the high religiosity category. The high religiosity category includes believing that worshipping God is very important for life, participating in religious activities because it benefits life in the community, and feeling that remembering God helps comfort them. Figure 2 shows that families with severely damaged houses have higher mean scores on the dimension of religious appreciation. The T-test results showed no difference in religiosity between families in severely and lightly damaged houses.

Religiosity in lightly damaged homes, higher indicators in families of lightly damaged homes are indicated by the percentage of respondents who answered strongly agree in terms such as believing all problems faced are tests that have been set by Allah (60.0%), watching religious programs on TV / Youtube (36.0%).

Religiosity in severely damaged houses, higher indicators in families of severely damaged houses are shown by the percentage of respondents who answered strongly agree in terms such as believing that God always hears the prayers of his servants (72.0%), running all affairs in life by religious teachings (68.0%), praying for guidance,

forgiveness to God (58.0%), participating in religious activities because it is beneficial for life in society (50.0%), feeling that worship is very beneficial for oneself (55.0%).

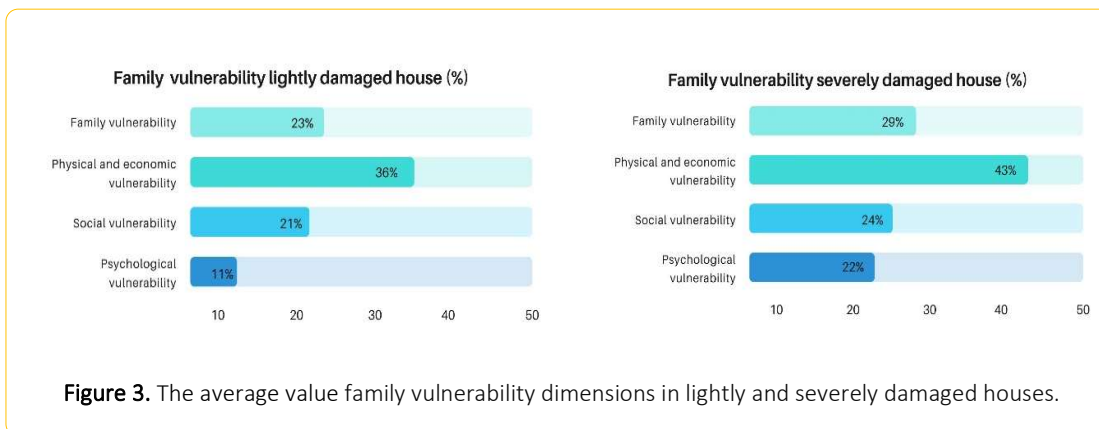


Family Vulnerability

The descriptive test results showed that 44.0 percent of respondents in families in lightly damaged houses and 46.0 percent in families in severely damaged houses were in the low family vulnerability category, indicated by the percentage of respondents who answered no in matters such as not having debts more outstanding than income, knowing neighbors and neighborhood administrators, having no difficulty performing daily worship, and believing that there is ease behind difficulties. T-test results showed that there was a significant difference in family vulnerability between families in severely damaged houses and lightly damaged houses ($p=0.004^*$). Figure 3 shows that families in severely damaged houses have a higher average family vulnerability score.

The vulnerability of families in severely damaged houses is higher than that of families in lightly damaged houses, especially in the dimensions of physical and economic vulnerability and psychological vulnerability. This can be seen in the presence of family members potentially being laid off (44.0%), having difficulty paying for various needs (51.0%), rarely contributing to social activities (51.0%), frequent conflicts in the family (38.0%), feeling lonely (38.0%), feeling down (34.0%), and not quickly feeling happy (19.0%).

The vulnerability of families in lightly damaged houses, families in lightly damaged houses also has several indicators of higher vulnerability in social vulnerability; for example, families feel that they do not have family friends who will always help if needed (12.0%) and often forget to pay attention to special events of family members (31.0%).



Regenerative typology

Descriptive test results showed that most respondents in both families with lightly damaged houses (94.0%) and severely damaged houses (96.0%) were in the high regenerative typology category, indicated by the percentage of respondents who answered strongly agree in terms such as thinking of ways to improve parent-child relationships and improve husband and wife harmony, feeling confident that they will be able to survive if they face major family problems, accepting problems as part of family life and believing in God's intervention in family life. The results of the T-test showed no difference in the regenerative typology between families in severely and lightly damaged houses. However, some indicators of regenerative typology were higher in severely damaged houses and vice versa (Table 3).

Regenerative typology in severely damaged houses, higher indicators in severely damaged housing families such as rethinking the meaning of marital ties (89.0%), feeling confident that they can survive family problems even though they are big (96.0%), happy to stay at home rather than traveling outside the home (92.0%), accepting problems as part of family life (97.0%).

Regenerative typology in lightly damaged house families, higher indicators in lightly damaged house families such as thinking of ways to improve husband and wife harmony (96.0%), feeling need to have a family plan in the future (79.0%), understanding different views in family thinking (91.0%), believing in God's intervention in family life (96.0%).

Table 3. Distribution of regenerative typology dimensions in lightly and severely damaged houses.

Regenerative typology dimensions	Lightly damaged house (%)	Severely damaged house (%)
Regenerative typology		
Low (0-50)	6,0	4,0
High (51-100)	94,0	96,0
Average ± Standard Deviation	71,0±11,0	70,0±12,0
<i>p-value</i>	0,791	
Family Hardiness		
Low (0-50)	7,0	5,0
High (51-100)	93,0	95,0
Average ± Standard Deviation	69,0±11,0	69,0±12,0
<i>p-value</i>	0,936	
Family Coherence		
Low (0-50)	5,0	4,0
High (51-100)	95,0	96,0
Average ± Standard Deviation	72,0±14,0	71,0±14,0
<i>p-value</i>	0,608	

Factors Affecting Regenerative Typology

Measurement and structural model fit test

Structural Equation Modeling-Partial Least Square (SEM-PLS) analysis to analyze the influence of religiosity and family vulnerability on regenerative typology. Before carrying out an influence analysis, it is essential to test the model's suitability using the PLS test through two stages: fulfilling the outer model's requirements (outer loading, AVE, composite reliability) and the inner model (R-square). Measurement and structural model fit test can be seen in Table 4.

Table 4. Summary measurement and structural model fit test.

Size type	A measure of the degree of match	Results	Information
Convergent validity	AVE dan Communality	AVE > 0,5	Good fit
Dicriminant validity	Cross Loading	Cross Loading > 0,5	Good fit
Reliability	Composite Reability (CR)	CR > 0,7	Good fit
	Cronbach Alpha	Cronbach Alpha > 0,6	Good fit
Fit measures	Goodness of Fit (GoF)	0,296	Medium fit
	Standardized Root Mean Square Residual (SRMR)	SRMR < 0,08	Good fit
	Exact Fit Criteria d_ULS and d_G	0,262; 0,142	Good fit
	Normed Fit Index (NFI)	0,781	Medium fit

Table 5 shows that the latent variables of religiosity and family vulnerability to regenerative typology have met the requirements with AVE values >0.5, composite reliability >0.7, and Cronbach alpha >0.6. However, family vulnerability has a Cronbach alpha value of 0.485 <0.6. Lam (2012) states that a Cronbach alpha value of <0.6 is acceptable if the composite reliability value is >0.6.

Table 5. Value of Average Variance Extracted, Composite Reliability and Cronbach Alpha empirical model of the effect of religiosity, family vulnerability on regenerative typology.

Variable	Cronbach's Alpha	Composite Reliability	AVE	R-square
Religiosity	0,914	0,946	0,853	
Family Vulnerability	0,485	0,742	0,503	0,182
Regenerative Typology	0,821	0,918	0,848	0,432

The outer loading value in Table 6 for the empirical model of religiosity, family vulnerability to regenerative typology, has a value of > 0.5. This means that the dimensions in this study validly describe the characteristics of the variables and are consistent.

Table 6. Outer loading value of the empirical model of the effect of religiosity, family vulnerability on regenerative typology.

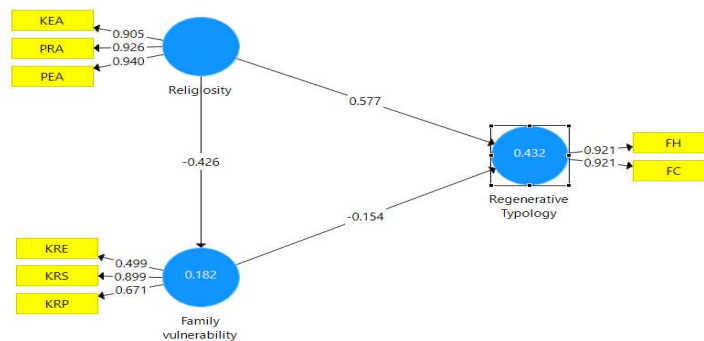
Variable	Outer Loading	P Values
Religious belief <- religiosity	0.340	0.000**
Religious practice <- religiosity	0.363	0.000**
Religious appreciation <- religiosity	0.379	0.000**
Physical, economic vulnerability <- family vulnerability	0.317	0.005*
Social vulnerability <- family vulnerability	0.645	0.000**
Psychological vulnerability <- family vulnerability	0.390	0.001*
Family hardiness <- regenerative typology	0.544	0.000**
Family coherence <- regenerative typology	0.542	0.000**

Note: significant with p-value *) sig. ≤ 0.05 **) sig. ≤ 0.01 .

Table 7. Path coefficients.

Direction of influence	Direct	Indirect	Total
Family Vulnerability-> Regenerative Typology	-0.154*		-0.154*
Religiosity -> Regenerative Typology	0.577**	0.066*	0.642**
Religiosity -> Family Vulnerability	-0.426**		-0.426**

Description: There is a significant effect with a p-value *) sig. ≤ 0.05 **) sig. ≤ 0.01

**Figure 3.** SEM-PLS Model Influence Test.

Note: KEA (Religious Belief); PRA (Religious Practice); PEA (Religious Appreciation); KRE (Economic Vulnerability); KRS (Social Vulnerability); KRP (Psychological Vulnerability); FH (Family Hardiness); FC (Family Coherence).

Discussion

This research uses a functional structural theory approach based on systems, social structure, function and balance, family ecology, and family systems theory. It is based on the idea that individuals and systems influence each other and how family members function, interact, and interrelate, especially in natural disasters. The earthquake that occurred in Cianjur is one factor that affects the balance of family structure and function, so the family cannot perform its duties, roles, and functions. Disasters impact various aspects of family life, such as decreasing welfare and disrupting individual, family, and community life (Sunarti et al., 2022). Families dealing with events, pressures, and changes in life, one of which is due to disaster, have different efforts. The family's ability to deal with this is described by family *coherence* and *hardiness*, called a regenerative typology (Sunarti, 2012).

This shows that if the family belongs to the regenerative typology, it means that the family can recover immediately when affected by a disaster and also can adapt to the coping strategies that the family has. The results showed that a high regenerative typology was dominant in disaster survivor families, with families feeling confident that the efforts made would be successful and seeing problems as a way to develop. According to Sunarti, Marwiah, Bavaria, & Islamia (2022), disaster survivor families who have a positive outlook are more active in finding problem-solving because they have strong optimism to get up. Laily and Sunarti's research (2022) states that the family atmosphere is getting warmer 15 months after the disaster; the family can communicate more, convey thoughts clearly, and become calmer in dealing with differences in views between family members. Families of disaster survivors also spend more time gathering, comforting each other, and relying on each other to build a positive environment in the family.

Facing a crisis caused by a disaster requires the constancy of values, religion, and beliefs in the family to increase family resilience. At the beginning of the disaster, the family will find it challenging to deal with the crisis, but their religiosity will make the family feel calmer (Laily & Sunarti, 2022). The results showed that most respondents were in the high religiosity category, meaning the family performed worship well even in disaster conditions. The results of in-depth interviews that support high religiosity can be seen in:

"After the earthquake, I became more diligent in worshipping, sunnah prayers such as Duha prayers were also more diligent, and recitations of the Al-Quran were also more frequent. Recitations at the mosque are always involved, especially after the earthquake; people are more grateful because if my family and house were destroyed, the whole family would be safe" (ZA, 38 yo).

According to Setiawan & Pratitis (2015), religiosity is a coping strategy carried out by families in disaster conditions; with religious coping, families accept disaster events as God's will so that they become more adaptable.

In disaster conditions, the damage to homes and other assets makes families physically and economically vulnerable, as well as low adaptive capacity (Rahmi & Satria, 2015). Vulnerability is a deficiency that is predicted to cause interference with the implementation of individual or family roles, functions, and tasks (Sunarti, 2021). According to Riviwanto et al. (2021), things that must be done to reduce vulnerability/threats due to disasters are seeking information about disasters, having a preparedness plan, knowing disaster warning information and the mobilization process when a disaster occurs. The results showed that most respondents were in the low vulnerability categories. However, physical and economic vulnerability and social vulnerability are also exceptionally high. The vulnerability felt by families is categorized as low because families feel grateful to still survive and be able to gather with their families. The results of in-depth interviews regarding the vulnerabilities felt by families can be seen in:

"Now, the conditions are difficult, but thank God we can still eat because the children are still at school, so the need for children is greater. There are always flaws, but that is okay. Even though economic conditions are difficult, our relationship with my husband and family remains good"(AF, 50 yo).

However, the disaster disrupted the family's livelihood, which increased the family's economic vulnerability (Sunarti et al., 2022). The high value of assets damaged by disasters also affects the time families need to recover their assets (Sunarti et al., 2022).

Disasters increase the vulnerability of families and communities and create potential crises related to the uncertainty caused by disasters. In addition, there is also environmental damage due to the disaster (Sunarti et al., 2017). In overcoming the perceived vulnerability, families of disaster victims carry out several livelihood coping strategies such as building good social relationships to get a job, seeing or looking for business opportunities to make a living, looking for information on job sources, and being ready to do any available job. The number of livelihood strategies carried out shows the more significant the family's efforts to earn income (Sunarti et al., 2022). Families that can carry out coping strategies under challenging conditions are called *family coherence*, and families with strength and fortitude when facing stressful conditions are called *family hardiness*. High *family hardiness* and *coherence* indicate a regenerative typology (Ginanjarsari & Sunarti, 2013). Sunarti et al. (2023) mentioned that one of the efforts to reduce disaster risk is to create a holistic livelihood ecosystem. The results of in-depth interviews with the family's regenerative typology can be seen at:

"The family has plans for children's education, but currently, after the disaster, the money is used to rebuild destroyed houses, and if there is more income, the money is saved" (SH, 32 yo).

Based on the results of the T-test, it is known that there are differences in family vulnerability between families in severely damaged houses and lightly damaged houses. Families in severely damaged houses have higher family vulnerability. The most vulnerability felt by families in severely damaged houses is physical, economic vulnerability, and psychological vulnerability, such as having difficulty paying for various needs and feeling down; this happens as a result of families in severely damaged houses losing their homes so they have to rebuild their houses which require much money. Research shows that families with severely damaged houses feel worse off due to the loss of assets owned; this also causes the perceived economic vulnerability to be higher after the disaster (Amanah et al., 2017).

In this study, religiosity and regenerative typology have no difference between families in severely damaged houses and lightly damaged houses. The results show that religiosity in families of severely damaged houses tends to be higher; this is because even though families feel devastated by the loss of property due to disasters, most families are always grateful because they are still allowed to live by God and gather with other family members. According to Abdullah et al. (2015), in disaster conditions, high religiosity can be a coping mechanism, such as being open-minded to everything and adapting to the conditions experienced. In the regenerative typology in lightly damaged houses, families tend to be higher because the perceived damage is lower, and the surrounding environment does not experience significant destruction, so families get up and start activities more quickly. In addition, the regenerative typology in families of lightly damaged houses in this study is also shown by harmonising with spouses and family planning for the future. According to Khrisnanda & Shanti (2022), families who experience psychological stress need friends to discuss and listen to empathy from their partners because this can reduce the pressure felt, so harmonious relationships are needed in the family.

Based on SEM analysis, it is found that regenerative typology is directly influenced by religiosity and family vulnerability. Family-perceived vulnerability has a significant negative effect on regenerative typology, meaning that the higher the family vulnerability will reduce regenerative typology, so families need resilience as a stress buffer and a high sense of coherence to manage stress more effectively (Raisanen, 2013; Mittelmarm & Bull, 2013). Family vulnerability tends to be a potential conflict in the family (Sunarti et al., 2018). Families with a regenerative

typology adapt positively to crises (Ngai & Ngu, 2015). In times of crisis, families lose all their assets and cannot reoccupy their destroyed homes, so families must temporarily live in refugee camps, cannot work for a while, experience deep trauma, and can only rely on humanitarian assistance from the government and volunteers to meet their needs (Laily & Sunarti, 2022).

The results of the study state that religiosity has a significant positive effect on regenerative typology, meaning that the higher the religiosity, the higher the regenerative typology. The results showed that religiosity has a significant relationship with a sense of coherence and coping styles (emotion-oriented coping, avoidance-oriented coping, and social diversion) (Krok, 2015). Activities that increase faith, respect, care, interaction, and tolerance are the main predictors that can improve family typology (Salamah et al., 2023). Religious families, as shown by practicing the value of religiosity in household life and emphasizing religious commitment, will be happier; conversely, families who emphasize less religious commitment will have a four times risk of being unhappy in their families. It is not uncommon for families with low religiosity values to end up in broken homes, divorce, and separation (Istiqomah & Muklis, 2015; Fenelon & Danielsen, 2016). Other research shows that religiosity significantly affects family structure (number of children and marital stability), how to create family roles (adopting gender roles and parenting styles), and the quality of family relationships (Mahoney, 2013). The results also show that religiosity significantly negatively affects family vulnerability, meaning that higher religiosity will reduce family vulnerability. Religiosity can encourage individuals to overcome vulnerability and reduce fear (Lee et al., 2020). Religious resources are essential in coping with challenging and stressful situations, providing comfort, and finding meaning in times of distress and complexity of life (Rosmarin & Koenig, 2020).

This study has several research limitations such as the research location was only conducted in several villages in Cianjur Regency, so it cannot describe the entire Cianjur Regency affected by the disaster and the respondents who filled out the questionnaire were only wives, so this study only measured variables according to the perceptions of wives/mothers.

Conclusions

This research shows that regenerative typology is directly influenced by religiosity and family vulnerability. Religiosity has a significant positive effect on regenerative typology, meaning that an increase in religiosity will increase regenerative typology. Family vulnerability significantly negatively affects regenerative typology, meaning a decrease in family vulnerability will increase regenerative typology. The influence test results also show an influence between variables; namely, religiosity has a significant negative effect on family vulnerability, meaning that an increase in religiosity will reduce family vulnerability. This study also shows differences in the vulnerability of families in lightly damaged and severely damaged houses, with families in severely damaged houses experiencing higher vulnerability.

Recommendation

Family vulnerability negatively affects regenerative typology in disaster conditions, so families are expected to have optimal resilience and coherence by planning for the future and interpreting problems positively. Families are also expected to maintain and increase religiosity even in disaster conditions because high religiosity will increase regenerative typology and reduce family vulnerability. The government is expected to provide optimal material and psychosocial support; the government needs to evaluate the assistance provided to families. Academics, NGOs, community organizations, and other communities are expected to educate families to become regenerative type families and be more resilient when facing disasters.

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