



## THE EFFECTIVENESS OF EMERGENCY HANDLING PROTOCOL EDUCATION ON FAMILY COMPLIANCE IN INITIAL EMERGENCY HANDLING IN BUNI BAKTI VILLAGE RT 10/RW 18, BABELAN DISTRICT, BEKASI REGENCY IN 2025

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### Abstract

*Emergency situations frequently occur in household settings and require prompt and appropriate responses to prevent serious health consequences. At the community level, families play a vital role as the first responders in emergency situations before professional medical assistance is available. The ability of families to handle emergencies appropriately is closely related to their level of knowledge, understanding, and preparedness regarding emergency handling protocols. However, in many communities, limited access to health education and insufficient exposure to emergency preparedness training may lead to low family compliance in implementing emergency handling protocols. This condition highlights the importance of providing structured emergency handling protocol education to improve family compliance and readiness in managing emergency situations at the household level. Research objective this study aimed to determine the effectiveness of emergency handling protocol education on family compliance in emergency situations in Buni Bakti Village, Bekasi Regency Research method this study employed a quantitative approach using a quasi-experimental design with a one-group pretest–posttest method. The research was conducted in Buni Bakti Village, RT 10/RW 18, Babelan District, Bekasi Regency, from October to December 2025. A total of 47 family respondents were selected using purposive sampling. The educational intervention consisted of counseling, demonstrations, and distribution of educational leaflets regarding emergency handling protocols based on the Indonesian Ministry of Health guidelines. Data were collected using a validated family compliance questionnaire and analyzed using the Wilcoxon Signed Rank Test. The results showed that family compliance before the educational intervention varied, with several respondents categorized as moderately compliant or non-compliant. After the intervention, all respondents demonstrated a high level of compliance. Statistical analysis indicated a significant difference in family compliance before and after the educational intervention ( $p < 0.05$ ). Conclusions and suggestions emergency handling protocol education was proven to be effective in improving family compliance in managing emergency situations at the household level. The educational intervention enhanced families' understanding, readiness, and adherence to standardized emergency handling procedures, enabling them to respond more appropriately before professional medical assistance is available. These findings indicate that emergency education plays an important role in strengthening family preparedness and supporting effective emergency management within the community. Based on the findings of this study, it is recommended that emergency handling protocol education be implemented continuously and in a structured manner at the community level. Health workers and local health institutions are encouraged to integrate emergency education programs into routine community health activities to improve family preparedness and compliance. In addition, future studies are suggested to explore the effectiveness of different educational methods, involve larger samples, and include additional variables that may influence family compliance in emergency situations.*

**Keywords:** Emergency Protocol Education, Family Compliance, Emergency Handling, Community Health

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**INTRODUCTION**

Emergency conditions can occur suddenly within household settings and require immediate and correct actions to minimize health risks, complications, and potential fatalities. In many emergency situations, families serve as the first line of response before professional medical assistance arrives. The ability of family members to recognize emergency signs and apply appropriate emergency handling protocols is therefore essential in preventing the worsening of the patient’s condition. Family compliance in implementing emergency handling protocols is closely related to their level of knowledge, understanding, and preparedness. Without adequate education, families may respond inappropriately, delay necessary actions, or fail to follow recommended procedures during emergency situations. This lack of compliance may increase the risk of adverse outcomes and reduce the effectiveness of early emergency management at the household level.

Previous studies have demonstrated that health education plays a significant role in improving knowledge, attitudes, and preparedness related to emergency care. Educational interventions have been shown to enhance community awareness and readiness in dealing with emergency situations. However, most existing research has primarily focused on increasing knowledge or general preparedness, while studies that specifically examine family compliance in applying emergency handling

protocols remain limited, particularly at the community level. Considering the important role of families in emergency response and the need for improved compliance with emergency handling protocols, this study was conducted to evaluate the effectiveness of emergency handling protocol education on family compliance in Buni Bakti Village, Babelan District, Bekasi Regency. The findings of this study are expected to provide evidence supporting the implementation of structured emergency education programs to strengthen family preparedness and improve emergency management within the community.

**METHODS**

This study employed a quantitative approach using a quasi-experimental design with a one-group pretest–posttest method. The research was conducted in Buni Bakti Village, RT 10/RW 18, Babelan District, Bekasi Regency, from October to December 2025. A total of 47 family respondents were selected using purposive sampling. The educational intervention consisted of counseling, demonstrations, and distribution of educational leaflets regarding emergency handling protocols based on the Indonesian Ministry of Health guidelines. Data were collected using a validated family compliance questionnaire and analyzed using the Wilcoxon Signed Rank Test.

**RESULT AND DISCUSSION**

Table 1. Frequency Distribution of respondents’ characteristic

Characteristics	Frequency	Percentage
Male	23	48.9
Female	24	51.1
<b>Total</b>	<b>47</b>	<b>100.0</b>
<b>Age Group</b>		
Late Adolescents	11	23.4
Adults	18	38.3
Middle-aged Elderly	16	34.0
Elderly	2	4.3
<b>Total</b>	<b>47</b>	<b>100.0</b>

The results indicate that a total of 47 respondents were involved in this study, representing families residing in Buni Bakti Village. In terms of gender distribution, female respondents slightly outnumbered male respondents, with 24 respondents (51.1%) and 23 respondents (48.9%), respectively. This relatively balanced distribution suggests that both male and female family members were actively involved in the study.

Regarding age characteristics, the majority of respondents were adults, totaling 18 respondents

(38.3%). This group was followed by middle-aged elderly respondents, who accounted for 16 respondents (34.0%). Late adolescents comprised 11 respondents (23.4%), while elderly respondents represented the smallest proportion, with 2 respondents (4.3%). Overall, the age distribution shows that most respondents were within productive and middle-aged groups, which may influence their involvement in emergency handling at the household level.

Table 2. Family compliance before emergency handling protocol education (pre-test)

Compliance Category	Frequency	Percentage
Non-compliant	2	4.3
Moderately Compliant	13	27.7
Compliant	32	68.1
<b>Total</b>	<b>47</b>	<b>100.0</b>

The findings demonstrate that family compliance levels prior to the implementation of emergency handling protocol education varied across

respondents. Most respondents were categorized as compliant, with 32 respondents (68.1%).

Despite this, a considerable proportion of

respondents had not yet achieved optimal compliance. A total of 13 respondents (27.7%) were classified as moderately compliant, and 2 respondents (4.3%) were categorized as non-

compliant. These results indicate that although the majority of families had a basic level of compliance before the intervention, gaps in adherence to emergency handling protocols were still evident

Table 3. Family Compliance After Emergency Handling Protocol Education (Post-test)

Compliance Category	Frequency	Percentage
Compliant	47	100.0
<b>Total</b>	<b>47</b>	<b>100.0</b>

Following the implementation of emergency handling protocol education, a marked change in family compliance was observed. All 47 respondents (100.0%) were categorized as compliant after the intervention. This finding reflects a substantial improvement in family compliance compared to the

pre-test results. The absence of respondents in the moderately compliant or non-compliant categories suggests that the educational intervention contributed to a more uniform and higher level of adherence to emergency handling protocols among families.

Table 4. Family support before emergency handling protocol education (Pre-test)

Support Category	Frequency	Percentage
Moderate	19	40.4
High	28	59.6
<b>Total</b>	<b>47</b>	<b>100.0</b>

The results show that before receiving emergency handling protocol education, family support levels differed among respondents. Most respondents reported a high level of family support, with 28 respondents (59.6%). However, a notable proportion positive prior to the intervention, there was still variability in the degree of support provided within families.

of respondents, totaling 19 respondents (40.4%), were categorized as having a moderate level of family support. These findings indicate that although family support was generally

Table 5. Family support before emergency handling protocol education (Post-test)

Support Category	Frequency	Percentage
Tinggi	47	100.0
<b>Total</b>	<b>47</b>	<b>100.0</b>

After the emergency handling protocol education was conducted, all respondents demonstrated a high level of family support. A total of 47 respondents (100.0%) were classified in the high support category. This result indicates a clear increase in

family support compared to the pre-test condition. The shift toward uniformly high family support suggests that the educational intervention not only affected compliance but also strengthened family involvement in emergency handling situations.

Table 6. Normality Test Results

Tests of Normality			Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Family	Statistic	df	Sig.	Statistic	df	Sig.
<i>Pre Test</i>	<i>Compliance</i>	Family	.245	47	.000	.897	47	.001
<i>Post Test</i>	<i>Compliance</i>	Family	.245	47	.000	.798	47	.000
<i>Pre Test</i>	<i>Family Support</i>	Family	.148	47	.012	.950	47	.043

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<b>Pre Test Family Support</b>	.268	47	.000	.806	47	.000
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The results of the normality tests using the Kolmogorov–Smirnov and Shapiro–Wilk methods revealed significance values of less than 0.05 for all assessed variables, including family compliance and family support in both pre-test and post-test conditions. These findings indicate that the data were not normally distributed. Consequently, non-parametric statistical analysis was deemed appropriate for further analysis in this study.

Table 7. Wilcoxon Signed Rank Test Results

Test Statistics <sup>a</sup>		Post Test – Pre Test Family Compliance	Post Test - Pre Test Family Support
Z		-4.143 <sup>b</sup>	-5.457 <sup>b</sup>
Asymp. Sig. (2-tailed)		.000	.000

a. Wilcoxon Signed Ranks Test  
b. Based on negative ranks.

The Wilcoxon Signed Rank Test results demonstrated a statistically significant difference in family compliance and family support before and after the implementation of emergency handling protocol education. The analysis yielded a significance value of  $p = 0.000$  ( $p < 0.05$ ) for both variables. This result confirms that the observed changes in family compliance and family support following the educational intervention were statistically significant.

### Discussion

The findings of this study demonstrate that emergency handling protocol education has a significant effect on improving family compliance in managing emergency situations at the household level. The results showed a clear increase in family compliance after the educational intervention, as indicated by the shift of all respondents into the compliant category during the post-test. This finding suggests that structured emergency education plays an important role in enhancing families' ability to respond appropriately during emergency conditions.

Before the intervention, most respondents were already categorized as compliant; however, a proportion of respondents still showed moderate and low levels of compliance. This condition indicates that although families may have basic awareness of emergency handling, their understanding and application of proper procedures were not yet optimal. Limited knowledge, uncertainty about correct actions, and lack of prior training may contribute to suboptimal compliance in emergency situations. After receiving education on emergency handling protocols, family compliance increased uniformly, indicating that the educational content successfully addressed gaps in knowledge and practical understanding.

The improvement in family compliance after the intervention is consistent with the concept that health education can positively influence health-

related behaviors. Education provides individuals and families with essential information, increases awareness, and builds confidence in applying appropriate actions. In the context of emergency situations, this increased knowledge and preparedness enable families to act more quickly and correctly, thereby reducing the risk of complications before professional medical assistance becomes available.

In addition to family compliance, this study also found a significant improvement in family support following the educational intervention. Prior to the intervention, family support levels varied among respondents, with some families reporting only moderate support. After the implementation of emergency handling protocol education, all respondents demonstrated high levels of family support. This finding indicates that education not only improves individual compliance but also strengthens collective family involvement in emergency handling. Enhanced family support may facilitate better coordination and shared responsibility when responding to emergency situations.

The results of the Wilcoxon Signed Rank Test further confirmed that the differences observed in family compliance and family support before and after the intervention were statistically significant. This finding reinforces the effectiveness of emergency handling protocol education as an intervention to improve family readiness and adherence to recommended emergency procedures. The use of non-parametric statistical analysis was appropriate, given that the data were not normally distributed.

Overall, the findings of this study highlight the importance of emergency handling protocol education in strengthening family preparedness and compliance in emergency situations. Families play a crucial role as first responders at the household level, and improving their knowledge, compliance,

and support systems can contribute to more effective early emergency management. Therefore, implementing structured and continuous emergency education programs at the community level may be an effective strategy to enhance family capacity in managing emergency situations.

## CONCLUSION

Based on the findings of this study, it can be concluded that emergency handling protocol education is effective in improving family compliance in managing emergency situations at the household level. The results demonstrated a significant increase in family compliance after the educational intervention, with all respondents categorized as compliant during the post-test. This indicates that structured and targeted emergency education can enhance families' understanding and adherence to appropriate emergency handling procedures.

In addition, the study found that emergency handling protocol education also had a positive impact on family support in emergency situations. The improvement in family support following the intervention suggests that education not only influences individual behavior but also strengthens collective family involvement in emergency management. Strong family support is essential in ensuring coordinated and timely responses during emergency conditions.

Overall, the findings highlight the important role of emergency handling protocol education in strengthening family preparedness and readiness as first responders before professional medical assistance is available. Therefore, emergency education serves as a valuable strategy in promoting effective early emergency management and improving health outcomes at the community level.

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