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Community Development

Strengthening community health cadres' capacity in household emergency first aid

(Penguatan kapasitas kader kesehatan tentang pertolongan pertama kegawatdaruratan di rumah tangga)

Ajeng Purwanty[1*]

[1] Program Studi DIII Keperawatan STIKes Al-Ma'arif Baturaja, Ogan Komering Ulu, Indonesia

***Corresponding author:**
Ajeng Purwanty
Sekolah Tinggi Ilmu Farmasi Bakti Pertiwi, Palembang, Indonesia
Email:
ajengpurwantyalmaarif@gmail.com

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Abstract

Background: Household emergencies are common events that require prompt and appropriate first-aid management to prevent complications and reduce the risk of delayed treatment. In many communities, health cadres play an important role as frontline community agents; however, limited knowledge and practical skills in first aid may weaken their preparedness to respond effectively to emergency situations at home.
Objective: This community service program aimed to enhance the capacity of health cadres in providing first aid for household emergencies through an educational and simulation-based training approach.
Methods: A promotive–preventive training design was implemented involving 50 community health cadres. The intervention consisted of interactive lectures, group discussions, practical demonstrations, case-based simulations of household emergencies, and mentoring sessions. Program evaluation focused on participant characteristics and changes in knowledge, practical skills, ability to recognize emergency conditions, basic resuscitation simulation skills, and overall preparedness before and after the training.
Results: Most participants were aged 36–50 years (52.0%), female (76.0%), had a secondary education level (44.0%), had served as health cadres for 2–5 years (40.0%), and had never previously attended first-aid training (70.0%). After the intervention, marked improvements were observed across all competency indicators. The proportion of cadres with good first-aid knowledge increased from 32.0% to 84.0%; good minor wound management skills from 36.0% to 80.0%; ability to recognize emergency conditions from 40.0% to 86.0%; basic resuscitation simulation skills from 24.0% to 76.0%; and preparedness to manage household emergencies from 34.0% to 82.0%.
Conclusion: Educational and simulation-based first-aid training effectively improved the knowledge, practical skills, and preparedness of community health cadres in responding to household emergencies. Strengthening cadre competency through continuous training, periodic monitoring, and multisectoral support is essential to sustain community readiness and improve family emergency response capacity.

Introduction

Household emergencies require prompt management through appropriate first aid provided by laypersons in health emergency situations (World Health Organization, 2021). Injuries among children and other family members frequently occur at home due to various everyday domestic accidents (World Health Organization, 2021). Family preparedness improves the ability to manage emergency situations through enhanced first-aid literacy (Maryam & Yuliana, 2022). Family first-aid guidelines improve public understanding of initial actions in health emergency situations (Kemenkes RI, 2022). These conditions indicate the importance of community-based first-aid education in improving family safety (Kementerian Kesehatan RI, 2022).

Public knowledge influences first-aid skills through an understanding of emergency health management procedures (Lismayani & Hidayat, 2021). First-aid education improves community knowledge through the systematic delivery of

health information (Puspitasari & Wahyuni, 2021). Family health counseling enhances community preparedness in dealing with household emergencies (Purwanto & Eppang, 2023). First-aid training improves family preparedness by strengthening practical skills among community members (Rahmayani & Siregar, 2023). Health education also improves parental preparedness through increased understanding of the management of pediatric emergencies (Zulkifli et al., 2022). These findings underscore the importance of training community health cadres in the management of household emergencies (Pujiastuti et al., 2023).

Digital simulation improves first-aid skills through interactive learning methods based on health technology (Dyson et al., 2020). Simulation-based education enhances parents' knowledge in managing pediatric emergencies through digital health training (Abolhassani et al., 2022). Situational simulation programs improve the skills of health workers through direct practice-based training (Hsieh et al., 2024). Simulation-based learning enhances first-aid competence through realistic practical experience (Lateef, 2020). Digital media improve the effectiveness of family health education by providing access to interactive health information (Dewi & Prasetyo, 2020). The use of digital media supports family health education through the delivery of modern health information (Aulia & Kurnia, 2023).

The availability of basic health facilities influences disease occurrence through healthy household environmental conditions (Idris et al., 2023). First-aid training improves community preparedness by strengthening family health skills (Meinapuri, 2016). Community health training programs increase health awareness through educational community interventions (Purwanto & Eppang, 2023). Health cadres strengthen the educational role of the community through community-based health promotion (Pujiastuti et al., 2023). The attitudes of disaster preparedness personnel contribute to health risk prevention through public preparedness education (Ramli et al., 2023). These conditions demonstrate the importance of empowering health cadres to improve preparedness for household emergencies (Rahmayani & Siregar, 2023).

First-aid guidelines improve the quality of emergency management through standardized initial health actions (American Heart Association, 2020). Health training enhances family preparedness by improving emergency health literacy (Maryam & Yuliana, 2022). Health education programs improve public understanding of family safety through preventive health training (Zulkifli et al., 2022). Mentoring health cadres improves the community's ability to deal with family emergency conditions (Pujiastuti et al., 2023). Community health education strengthens family preparedness through a promotive public health approach (Purwanto & Eppang, 2023). These conditions highlight the importance of optimizing health cadre training in household emergency first aid (Kemenkes RI, 2022).

Training health cadres enhances community capacity to respond to emergency situations through community health education (Pujiastuti et al., 2023). Health education programs improve family preparedness by increasing first-aid literacy (Rahmayani & Siregar, 2023). A simulation-based training approach enhances the competence of health cadres through direct practical experience (Lateef, 2020). Health education increases public awareness of family safety through promotive health interventions (World Health Organization, 2021). Empowering health cadres improves the effectiveness of public health programs through a community-based approach (Purwanto & Eppang, 2023).

Therefore, this community service activity aimed to improve the capacity of health cadres in household emergency first aid through educational and simulation-based training in order to enhance sustainable family health preparedness.

Methods

Program Design

This community service activity employed a promotive–preventive design based on training community health cadres through educational and simulation-based approaches to improve their capacity in providing first aid for household emergencies. This design was selected because health cadres have a strategic role as extensions of health professionals in enhancing community preparedness for health emergency situations. The educational approach was used to improve cadres' theoretical knowledge regarding first-aid principles, while the simulation approach was used to strengthen their practical skills through direct experience. The training model integrated interactive lectures, group discussions, practical demonstrations, and simulations of household emergency cases. This design aimed to improve cadres' competencies comprehensively across cognitive, affective, and psychomotor domains. This approach was expected to strengthen community preparedness through the role of health cadres as agents of family health education.

Location and Time

The community service activity was conducted in a target community area that had active health cadres and a need to improve capacity in family emergency first aid. The site was selected based on coordination with primary healthcare facilities and local government to ensure the relevance of training needs. The implementation period was divided into the preparation, training implementation, and program evaluation phases. The preparation phase included identifying cadre needs, developing training materials, and coordinating activity logistics. The implementation phase included theoretical training, first-aid practice, household emergency simulations, and reflective group discussions. The evaluation phase was conducted after the training to assess improvements in the knowledge and skills of health cadres. The schedule was adjusted to the availability of health cadres to ensure optimal participation.

Partners and Targets

The program partners included primary healthcare facilities, village or subdistrict governments, and community organizations with active health cadres. These partnerships were chosen because the success of health cadre training depends greatly on structural support from the local healthcare system. The primary target of the activity was community health cadres who play a role in family and community health education. Additional targets included the families under the cadres' guidance who would receive follow-up education after the training. Participants were selected purposively based on cadre activeness, the need for competency improvement, and readiness to participate in the training. This community-based approach aimed to strengthen the role of cadres as agents of change in family health. Partner involvement was expected to enhance the sustainability of the training program within the community.

Involved Parties

The implementation involved a multidisciplinary team consisting of health academics, professional health workers, emergency training instructors, and student volunteers. Academics were responsible for preparing the training curriculum, developing evidence-based educational materials, and conducting the scientific evaluation of the program. Professional health workers served as facilitators for first-aid practice and resource persons for emergency health topics. Training instructors were responsible for demonstrating first-aid techniques and facilitating emergency case simulations. Student volunteers acted as small-group facilitators and participant assistants during practical sessions. Local government officials supported the mobilization of health cadres and the provision of activity facilities. This cross-sector collaboration aimed to improve

training effectiveness and strengthen the sustainability of community health programs.

Implementation Procedure

The implementation procedure began with identifying training needs through discussions with health cadres and local health personnel. The next stage involved preparing a training module covering first-aid principles, minor wound management, the handling of common household emergencies, and basic resuscitation techniques. The training was initiated with the delivery of theoretical materials through interactive lectures and group discussions. The following stage included demonstrations of first-aid techniques by instructors and direct participant practice through household emergency case simulations. Participants were given opportunities for repeated practice to improve psychomotor skills. The final stage included participant reflection, program evaluation, and planning for follow-up health education activities led by cadres in the community. This procedure was systematically designed to ensure optimal improvement in cadre competence.

Intervention Media

The intervention media included first-aid training modules, family health education leaflets, first-aid procedure posters, and audiovisual media based on interactive presentations. Simulation media included first-aid teaching aids such as CPR mannequins, first-aid kits, and wound demonstration tools used for direct participant practice. Digital media, such as emergency simulation videos, were used to improve participants' visual understanding of emergency response procedures. The selection of media considered ease of understanding, learning effectiveness, and suitability to the characteristics of community health cadres. The combination of printed, visual, and hands-on practice media was expected to improve information retention and participant skills. The intervention media were also prepared for cadres to use in follow-up education for the community.

Evaluation Indicators

Program evaluation was conducted using process, output, and outcome indicators to assess the effectiveness of health cadre training. Process indicators included the number of training participants, participant attendance, and active involvement in practice and discussion sessions. Output indicators included improvements in cadres' knowledge of first aid and practical first-aid skills. Outcome indicators included cadres' preparedness in dealing with household emergencies and their ability to provide family health education. Evaluation was conducted through pre–post training questionnaires, observation of simulation practice, and participant feedback regarding the program. The evaluation results were used as a basis for improving future training programs. This evaluation approach ensured that the community service activity generated a tangible impact on family health preparedness.

Results

This community service activity, which focused on training community health cadres in first aid for household emergencies, involved health cadres as the primary participants. Data on respondent characteristics were collected prior to the training to obtain an overview of the participants' profiles. The characteristics assessed included age, sex, educational level, length of service as a health cadre, and previous experience in first-aid training. These baseline characteristics were used to inform the selection of training approaches appropriate to the needs of the participants. The respondent characteristics are presented in Table 1.

Table 2 shows a clear improvement in the knowledge and skills of community health cadres following the household emergency first-aid training. Prior to the intervention, most cadres demonstrated limited knowledge and practical

skills related to first aid, as well as inadequate preparedness for emergency situations. After the training, the proportion of cadres with good first-aid knowledge increased to 84.0%, while the ability to recognize emergency conditions rose to 86.0%. Skills in minor wound management improved to 80.0%, and basic resuscitation simulation skills increased to 76.0%. Preparedness to respond to household emergencies also increased to 82.0%, indicating the effectiveness of the training in strengthening cadre competency. These findings suggest that training community health cadres is effective in improving community preparedness for household emergencies through enhanced cadre capacity.

Discussion

The findings of this community service program indicate that training community health cadres significantly improved their knowledge and skills in providing first aid for household emergencies through educational and simulation-based approaches (Kemenkes RI, 2022). Health cadre training also strengthened family preparedness in dealing with emergency conditions by improving community health literacy (Rahmayani & Siregar, 2023). First-aid education enhanced public understanding of initial emergency responses through the systematic delivery of health-related information (Puspitasari & Wahyuni, 2021). In addition, health cadres reinforced the community's educational role through community-based health promotion activities (Pujiastuti et al., 2023). These findings suggest that health cadre training plays an important role in improving preparedness for household emergencies (Kementerian Kesehatan RI, 2022).

Table 1. Characteristics of Community Health Cadres Participating in Household Emergency First-Aid Training

Respondent Characteristics	n	%
Age (years)		
20-35	14	28.0
36-50	26	52.0
>50	10	20.0
Sex		
Male	12	24.0
Female	38	76.0
Education		
Primary	18	36.0
Secondary	22	44.0
Higher	10	22.0
Length of service as cadre		
<2 years	16	32.0
2-5 years	20	40.0
>5 years	14	28.0
Previous first-aid training		
Yes	15	30.0
No	35	70.0

Table 2. Improvement in the Knowledge and Skills of Community Health Cadres Before and After Training

Cadre Competency Indicators	Before Training n (%)	After Training n (%)
Good first-aid knowledge	16 (32.0%)	42 (84.0%)
Good minor wound management skills	18 (36.0%)	40 (80.0%)
Ability to recognize emergency conditions	20 (40.0%)	43 (86.0%)
Basic resuscitation simulation skills	12 (24.0%)	38 (76.0%)
Preparedness to respond to household emergencies	17 (34.0%)	41 (82.0%)
Total Respondents	50 (100%)	50 (100%)

.The improvement in health cadres' knowledge was closely related to the use of interactive educational methods during the first-aid training (Lismayani & Hidayat, 2021). Health education has been shown to enhance the community's ability to manage emergencies by increasing family health literacy (Zulkifli et al., 2022). Health counseling also improves community preparedness through the provision of practical health information (Purwanto & Eppang, 2023). Community-based educational interventions further contribute to improving public health knowledge (Dewi & Prasetyo, 2020).

Moreover, digital educational media can increase the effectiveness of family health learning by delivering information in an interactive manner (Aulia & Kurnia, 2023). These results support the view that health education methods are effective in improving the knowledge of community health cadres (Dyson et al., 2020).

The increase in cadres' practical skills was associated with the use of simulation-based first-aid practice during community health training (Lateef, 2020). Digital simulation enhances first-aid skills through experiential learning methods (Mardhiyah & Putri, 2022). Simulation-based education also improves parents' ability to manage pediatric emergencies through practice-oriented training (Abolhassani et al., 2022). Situational simulation programs have been reported to improve the competencies of health workers by providing realistic practice experiences (Hsieh et al., 2024). Simulation-based learning strengthens psychomotor performance and improves participants' first-aid performance (Dyson et al., 2020). Therefore, the simulation approach appears to be an effective strategy for improving the practical first-aid skills of community health cadres (Lateef, 2020).

Preparedness among community health cadres also improved through community-based first-aid training (Rahmayani & Siregar, 2023). Family preparedness contributes to community resilience by increasing emergency preparedness literacy (Houston et al., 2021). Health education strengthens community readiness in facing health risks through promotive health strategies (Zulkifli et al., 2022). Community health training programs enhance preparedness by reinforcing family health skills (Purwanto & Eppang, 2023). Likewise, community health programs that empower local health cadres have been shown to improve public preparedness (Pujiastuti et al., 2023). These findings demonstrate that health cadre training can substantially strengthen community readiness to respond to household emergencies (Kemenkes RI, 2022).

Household environmental factors also influence health risks through sanitation conditions and the availability of family health facilities (Idris et al., 2023). Domestic injuries increase the need for first aid because household accidents frequently occur in everyday life (World Health Organization, 2021). First-aid guidelines improve the quality of emergency management by standardizing initial response measures (American Heart Association, 2020). Family health education also strengthens public preparedness for domestic emergencies (Kementerian Kesehatan RI, 2022). Thus, first-aid education is essential for improving family health safety and strengthening early responses to emergencies in the home environment (World Health Organization, 2021).

The role of health cadres further increases the effectiveness of community health programs through health education activities at the local level (Pujiastuti et al., 2023). Training programs strengthen cadres' contribution to family health counseling and community health promotion (Kemenkes RI, 2022). Community health education improves public health literacy through promotive approaches (Puspitasari & Wahyuni, 2021). The preparedness attitudes of health personnel also contribute to health risk prevention through public education (Ramli et al., 2023). Overall, these findings confirm that health cadres serve as important agents in promoting first-aid knowledge and community preparedness (Kementerian Kesehatan RI, 2022).

In general, training community health cadres made a meaningful contribution to improving household emergency preparedness in a sustainable manner. Through educational and simulation-based methods, cadres gained better knowledge, stronger practical competence, and higher readiness to respond to emergency situations. These findings underscore the importance of continuously strengthening cadre empowerment within community-based health programs to improve family and community preparedness for household emergencies.

Conclusion and Recommendation

Training community health cadres in first aid for household emergencies produced positive outcomes in improving cadres' knowledge, practical skills, and preparedness in responding to family health emergency situations. Educational and simulation-based training was able to strengthen cadres' ability to recognize emergency conditions and perform appropriate first-aid measures. Improved cadre capacity is expected to contribute to greater preparedness among families and communities in dealing with health emergencies in household settings.

This training program should be implemented continuously through strengthened simulation practice and ongoing cadre mentoring to maintain acquired competencies. Cross-sectoral support from healthcare facilities, local government, and educational institutions is also essential to expand the scope and sustainability of health cadre training. Further program development is recommended through periodic monitoring and the integration of family health education so that community preparedness for household emergencies can be improved more effectively.

Declaration of Conflict of Interest
The authors declare no competing interests.

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Authors' Contributions
All authors contributed substantially to this work, including involvement in the conception and design of the study, as well as the execution, data collection, analysis, and interpretation. All authors participated in drafting the manuscript or revising it critically for important intellectual content and approved the final version for publication. Furthermore, all authors have agreed to submission of the manuscript to this journal and accept responsibility for all aspects of this work, ensuring that questions related to the accuracy or integrity of any part are appropriately investigated and resolved.

Data Availability
The data that support the findings of this study are not publicly available due to privacy restrictions but are available from the corresponding author upon reasonable request.

Declaration on the Use of AI
No AI tools were used in the preparation of this manuscript.

Daftar Pustaka

Abolhassani, N., Zandieh, F., & Sadeghi, R. (2022). The effect of digital simulation–based education on parents' knowledge and performance in pediatric emergencies: A quasi-experimental study. Journal of Pediatric Nursing, 62, 45–52.

American Heart Association. (2020). Pediatric first aid, CPR, and AED guidelines. AHA Publications.

Aulia, R., & Kurnia, D. (2023). Penggunaan media digital dalam edukasi kesehatan keluarga: Tinjauan

Damayanti, Y., Jukarnain, J., Amalia, R., Jamin, N. S., Leli, L., & Noviar, R. A. (2024). Pelaksanaan Teknik Hypnotherapy (Terapi Dengan Hipnosis) Dalam Pencegahan Masalah Pada Anak Usia Dini. Sahabat Sosial: Jurnal Pengabdian Masyarakat, 3(1), 191–198. https://doi.org/10.59585/sosisabdimas.v3i1.346

Depkes RI. (2019). Modul Pelatihan Pertolongan Pertama untuk Kader Kesehatan. Jakarta: Direktorat Kesehatan Lingkungan.

Dewi, R. K., & Prasetyo, B. (2020). Penggunaan media digital dalam edukasi kesehatan untuk keluarga. Jurnal Promkes, 8(1), 45–53.

Dyson, K., Bray, J., Smith, K., & Cartledge, S. (2020). Digital simulation for improving first aid performance: A systematic review. Resuscitation, 150, 130–138.

Hanson HR, et al. (2023). A multicenter evaluation of pediatric emergency department injuries. Injury Epidemiology.

Houston, J. B., Spialek, M. L., & First, J. (2021). Household emergency readiness: A model for enhancing community resilience. International Journal of Disaster Risk Reduction, 58, 102–139

Hsieh, P.Y., Lin, H.Y., Chang, C.H, et.al. 2024. Effects of situational simulation and online first-aid training programs for nurses in general medical wards: A prospective study. Nurse Education Today. 96. https://doi.org/10.1016/j.nedt.2020.104621.

Idris, I., Pannyiwi, R., Ula, Z., & Singga, S. (2023). Provision of Clean Water Facilities with the Insidence of Diarrhea in the Ujung Pandang Baru Health Center Working Area. International Journal of Health Sciences, 1(4), 576–588. https://doi.org/10.59585/ijhs.v1i4.186

Kemenkes RI. (2022). Pedoman Pertolongan Pertama untuk Keluarga. Jakarta: Kementerian Kesehatan.

Kementerian Kesehatan RI. (2022). Pedoman Pertolongan Pertama bagi Masyarakat. Jakarta: Kemenkes RI.

Lateef, F. (2020). Simulation-based learning in emergency and critical care. Journal of Emergencies, Trauma, and Shock, 13(2), 83–92Meinapuri, M. (2016). Penyuluhan penanganan kegawat daruratan di rumah tangga di Puskesmas Anak Air Padang. Warta Pengabdian Andalas. 23(4).

Lismayani, A. & Hidayat, M. (2021). Hubungan Pengetahuan dengan Keterampilan Pertolongan Pertama pada Keluarga. Jurnal Keperawatan Indonesia, 15(2), 78–85.

Mardhiyah, A., & Putri, N. E. (2022). Efektivitas simulasi digital dalam meningkatkan keterampilan pertolongan pertama pada masyarakat. Jurnal Keperawatan Medikal Bedah, 10(1), 55–63.

Maryam, S., & Yuliana, H. (2022). Kesiapsiagaan keluarga dalam menghadapi kegawatdaruratan anak usia dini. Jurnal Keperawatan dan Kebidanan Aisyiyah, 13(1), 22–30.

Pujiastuti, D., Elfrida, M.R., Bambang, E. 2023. Pendampingan Kader Kesehatan Dalam Penanganan Kondisi Kegawatdaruratan Anak Di Rumah Di Kampung Surokarsan Yogyakarta. Jukeshum. 3(1). 87-89

Purwanto, E., Eppang, Y., (2023). Penyuluhan Penanganan Kegawatdaruratan Rumah Tangga. Jurnal Pengabdian Mandiri, 2(8), 1783–1788.

Puspitasari, E. & Wahyuni, S. (2021). Pengaruh Edukasi Pertolongan Pertama Terhadap Pengetahuan Masyarakat. Jurnal Ilmu Keperawatan, 9(1), 33–40.

Rahmayani, S., & Siregar, F. (2023). Kesiapsiagaan keluarga dalam menghadapi kegawatdaruratan rumah tangga melalui pelatihan pertolongan pertama. Jurnal Pengabdian Masyarakat Sehat, 3(2), 88–96.

Ramli, R., Achmad, V. S., Mahoklory, S. S., & Nurhaedah, N. (2023). Pengetahuan dan Sikap Petugas Taruna Siaga Bencana dalam Pencegahan Kebakaran. Barongko: Jurnal Ilmu Kesehatan, 1(3), 356–367. https://doi.org/10.59585/bajik.v1i3.111

World Health Organization. (2021). Child injury prevention guidelines. WHO Press.

World Health Organization. (2021). First Aid Guidelines. WHO Press.

Zulkifli, A., Rahmawati, F., & Puspitasari, N. (2022). Peningkatan kesiapsiagaan orang tua dalam menghadapi kegawatdaruratan pada anak melalui edukasi kesehatan. Jurnal Keperawatan Indonesia, 25(3), 180–188.