International Journal of Nursing and Midwifery Science (IJNMS)

http://ijnms.net/index.php/ijnms
ORIGINAL RESEARCH

e- ISSN: 2686-2123
p- ISSN: 2686-0538

EFFECT OF SIMULATION-BASED SPLINTING TRAINING ON KNOWLEDGE AND SKILLS OF DESTANA VOLUNTEERS: A PRE–POST EXPERIMENTAL STUDY

Yeni Nur Rahmayanti*, Fadma Aji Pramudita , Christiana Arin Proborini, Pipi Anonyma
Nursing Department , STIKes Mitra Husada Karanganyar, Indonesia
Nursing Departmant , AKPER Patria Husada Surakarta, Indonesia
Corresponding Email : yeninur2004@gmail.com

ABSTRACT

A disaster is an event or series of events that threaten and harm people's lives, caused by natural factors, non-natural factors, or human activity, resulting in material losses, loss of life, environmental damage, and psychological impacts. Matesih District has many steep slopes and experiences heavy rainfall. This situation resulted in extensive erosion, soil weathering, and landslides. One of the disasters that once struck Matesih was a landslide that resulted in several people suffering minor injuries. Injuries experienced by residents are usually related to the musculoskeletal system. This study aims to evaluate the impact of splinting training using simulation methods on the understanding and splinting skills of Destana volunteers in dealing with disasters. The methodology used in this study is a quantitative research type with a quasi-experimental design. There were 27 respondents who became the sample of this study, obtained through the Total Sampling Technique. Data were analyzed using the Wilcoxon Test. The results of the Wilcoxon Test showed a p-value of 0.000. This indicates the effect of splinting training using simulation methods on the understanding and splinting skills of Destana volunteers in dealing with disasters in Girilayu Village, Karanganyar. From these results, it can be concluded that splinting training using simulation methods can improve the understanding and skills of splinting, so that respondents are more active in participating in the training and can disseminate the splinting skills they have learned.

Keywords

Knowledge, Skills, Splinting training

INTRODUCTION

A disaster is an event or series of events that can threaten and harm communities, caused by natural or non-natural factors and human actions, resulting in material losses, loss of life, environmental damage, and mental impacts. Indonesia is an archipelagic country known for its location

in an active tectonic plate zone and for its tropical climate with high rainfall intensity and humidity. Due to these geographic and climatic conditions, Indonesia is vulnerable to disasters such as floods, volcanic eruptions, earthquakes, and landslides (BNPB, 2020).

Referring to the 2020 Indonesian Disaster Risk Index Data, Karanganyar Regency is one of the areas at high risk of landslides, with a landslide risk index value reaching 24.00, which is categorized as high. Matesih District is one of 17 Districts in Karanganyar Regency, based on Matesih District in 2020 figures, Matesih District has a population of 40,994 people who are vulnerable to the danger of landslides, consisting of 20,156 men and 20,838 women with a population density in Matesih District reaching 1,560 people / km², which is classified as very dense and the largest population distribution is in Matesih Village, namely 16.75% and the smallest distribution is in Gantiwarno Village, namely 6.74%. The number of disabled residents is 244 people, the largest of which is in Matesih Village with 65 people. And the vulnerable age population (elderly and toddlers), with the number of elderly people as many as 3889 people and toddlers as many as 3046 people, based on the demographic data, it states that around 40,994 people in Matesih District are estimated to be vulnerable to landslides and vulnerable to being affected if a landslide occurs. Efforts are needed to minimize losses, especially the social aspect (loss of life) due to landslides. The BPBD of Karanganyar Regency (2020) explains that there are several areas in Matesih District such as Koripan Village, Plosorejo Village, and Girilayu Village which are areas in the red zone prone to landslides.

Based on existing research, it appears that adolescents' understanding and skills regarding splinting are still very minimal. This level of understanding and skills can certainly influence how someone applies the concept. Individuals with understanding tend to be better able to provide assistance than those without. This is due to the fact that knowledge serves as a basis for thinking, which ultimately influences attitudes and abilities in providing splinting assistance (Dewiyanti et al., 2023).

Splinting is the act of fixing or immobilizing an injured body part using a rigid or flexible object as a fixator/immobilizer. Splinting is a common treatment for extremity trauma or immobilization of the trauma site, such as a splint, to maintain the position of a broken bone so it doesn't move and prevent contamination and complications. Splinting can be performed by any trained layperson (Listiana & Oktarina, 2019).

According to the National Disaster Management Agency (BNPB) in 2020, disaster response is a series of activities undertaken immediately in the event of a disaster to control the causes of the disaster and mitigate its impacts. Everyone is at risk from potential disasters, so activities and training aimed at improving disaster preparedness skills are necessary.

According to Listiana and Oktarina (2019), skills are the application of knowledge, so a person's skill level is related to their level of knowledge. According to Listiana et al., (2019) in the research of Listiana and Silviani (2020), education/training is a way to help individuals, groups, and communities to improve their skills, attitudes, and abilities to achieve goals. One method that can be used in implementing training is the role play method. Based on research from Mila. R. A., et al (2022), role play is a method of presenting subjects by showing situations or events experienced by people, ways or behaviors in social relationships. In the research of Rosyad et al (2025) animated videos can be used as learning/training media.

Based on the existing problem description, it can be concluded that there is still an inconsistency between the theory and facts of the phenomenon with the theory related to knowledge and skills of splinting. This is the basis for the research to conduct a related study, "Effect of simulation-based splinting training on the knowledge and skills of Destana volunteers: a pre-post experimental study."

METHOD

This research is a Pre-Experimental research type that uses a One Group Pretest And Posttest Design, namely in the design there is a pretest, before being given treatment. Thus the results of the treatment can be known more accurately, because it can be compared with the situation before being given treatment (Notoatmodjo, S. 2020). The study was conducted from September 2024 - June 2025 on 27 respondents using a total sampling technique. The population in this study were all Destana volunteers. The instrument used in the study was a questionnaire to measure knowledge of splinting with a total of 10 items and a checklist to measure the skills of volunteers after training.

RESULTS

Univariate Analysis

a. Table 1. Frequency Distribution Based on Knowledge Level Before and After the Splint Dressing Simulation

No	Knowledge level	N	(%)
	Before Simulation		
1	Good	4	14,8
2	Enough	9	33,3
3	Poor	14	51,9
	After Simulation		
1	Good	7	26
2	Enough	15	55,5
3	Poor	5	18,5
	Total	**27**	**100**

Based on Table 1. Frequency Distribution Based on Knowledge Level Before the splinting simulation, it shows that respondents had a level of knowledge that was lacking at most, 14 (51.5%). And the Frequency Distribution Based on Knowledge Level After the simulation shows that respondents had a level of knowledge that was sufficient at most, 15 (55.5%).

b. Table 2. Frequency Distribution of Skills Before and After the Splint Simulation

No	Skills	N	(%)
	Before Simulation		
1	Good	2	7,4
2	Enough	9	33,3
3	Poor	16	59,3
	After Simulation		
1	Good	9	33,3
2	Enough	14	51,9
3	Poor	4	14,8
	Total	**27**	**100**

Based on Table 2. Frequency Distribution Based on Skills Before the splinting simulation, it shows that the most respondents had insufficient skills, 16 (59.3%). Meanwhile, the Frequency Distribution Based on Skills After the simulation shows that the most respondents had sufficient skills, 14 (51.9%).

Bivariate Analysis

Tabel 3. *Uji Wilcoxon Sign Rank Test*

		N	*Mean Rank*	*Sum of Ranks*	Z	ρ
Before Knowledge After Knowledge	*Negative Ranks*	2[a]	2.50	5.00	-3.150	.000
	Positive Ranks	20[b]	10.33	206.60		
	Ties	5[c]				
	Total	27				
Skills Before Skills After	*Negative Ranks*	1[d]	2.00	2.00	-3.357	.000
	Positive Ranks	23[e]	11.93	226.60		
	Ties	3[f]				
	Total	27				

The results of the table above explain that the Wilcoxon Signed Rank Test obtained knowledge data before treatment and after treatment of -3.150 with an Asymp.

Sig (p) value = 0.000, Because the p-value = 0.000 <0.05, it can be concluded that there is an effect of splinting training on the knowledge of volunteers in Girilayu Village. While the Wilcoxon Signed Rank Test obtained skills before treatment and after treatment of -3.375 with an Asymp. Sig (p) value = 0.000. Because the p-value = 0.000 <0.05, it can be concluded that there is an Effect of Simulation-Based Splinting Training on the Knowledge and Skills of Destana Volunteers.

DISCUSSION

Univariate Analysis

a. Frequency Based on Knowledge Level Before and After the Splint Simulation

The research results showed that data before the splint treatment (pretest) was at most 14 people (51.9%) with insufficient knowledge. The pretest results showed that before being given splinting training, respondents' knowledge was still in the deficient category. The 14 respondents lacked knowledge because many of the volunteers had not received information regarding material regarding splints, there were still many volunteers who had not been exposed to splints.

Information is data obtained from an event and then transformed into a form that is useful and meaningful to the recipient, with the primary function of information being to increase knowledge. Experience can broaden one's knowledge, which can increase one's knowledge, whether the experience gained is positive or negative (Notoatmodjo, 2018).

The results of the study obtained data after the splinting treatment (posttest) showed that at most 15 people (55.5%) had sufficient knowledge and an increase in good knowledge of 7 people (26%). The posttest results showed that after being given splinting training, respondents' knowledge increased to the sufficient category, as many as 15 people and 7 people had good knowledge. This is because the volunteers had received a lot of information about splinting from the materials and training provided. There was an increase between before and after the splinting training.

Knowledge is the result of knowing that occurs after someone senses an object through the five human senses (Notoatmodjo, 2018). The level of knowledge of the respondents in this study is at the level of knowing (Know) and understanding (Comprehension). Knowing is a pre-existing memory after observing an object but is still poorly interpreted in everyday life. Understanding is an attitude that not only knows but is also able to interpret an object correctly (Rolly, R., et al. 2020). Factors that influence knowledge are information is data obtained from an event and then converted into a form that can be useful and has meaning for the recipient of the information where the main function of information itself is to increase knowledge. Experience can expand one's knowledge, which can increase one's knowledge both positive and negative experiences (Notoatmodjo, 2018).

b. Frequency of Skills Before and After the Splint Simulation

The pretest results showed that before the splinting training, most volunteers 16 people (59.3%) were still in the insufficient category. This was because most volunteers lacked experience and basic skills in performing splints. Nine volunteers had sufficient skills due to their lack of basic skills in performing splints.

The results of the posttest analysis obtained data on the skills of 9 people (33.3%) who had good skills after treatment. This was because they had high enthusiasm and self-motivation in participating in providing splints, 14 people (51.9%) who had sufficient skills after treatment because the volunteers were less active in the training activities provided and were embarrassed to go forward to practice.

Motivation is a desire within a person to perform various actions, this motivation is what drives someone to perform actions according to the procedures that have been taught. Expertise is the ability that a person has that will make them skilled in performing certain skills (Notoadmodjo, S. 2018). So there is an increase between before and after the splinting training. Volunteers' skills have

increased more seen through motivation and participation in participating in the splinting training, curiosity and desire to learn shown by volunteers through simulations. Volunteers participated in the simulation and then directly practiced the splinting process on fractures in this process. Most volunteers carried out the simulation with a good assessment of doing according to the material they followed.

Skills are the application of knowledge so that a person's skill level is related to the level of knowledge (Notoadmodjo, S. 2018). The skill level of respondents in this study is that volunteers have high motivation and basic skills, curiosity about the splint material through simulation.

So this research is in accordance with previous research conducted by Sari Dwi (2015) in Listiana et al (2019), the results of data collection after the splinting training showed an increase in student skills, which can be seen before the training from 10.0% good skills to 53.3% and a decrease in poor skills from 66.7% to 10.0%.

The researcher's opinion regarding skills is that this improvement is inseparable from the training provided. Training was provided through hands-on practice using teaching aids (Dewiyanti et al. 2023). However, respondents were first given the opportunity to view a splinting video, then given an example by the research team and then tried to practice independently by looking at the images in the leaflet and PPT that had been distributed. The practical method applies and adapts theory to real-world conditions. Therefore, with these three training methods, skill levels showed changes after the training.

Bivariate Analysis

The effect of splinting training on knowledge, using the Wilcoxon Signed Ranks Test which shows the results of the knowledge value there are 2 Negative Ranks and Mean Rank = 2.5 and Sum of Ranks = 5 which means there is a decrease in rank of two people, average rank = 2.5 and number of ranks = 5. Positive Ranks = 20, Mean Ranks = 10.33 and Sum of Ranks = 206.60 which means there is an increase in rank of 20, average rank = 10.33 and the number of ranks after treatment = 226.60. The results of this study based on the Wilcoxon Signed Rank Test obtained knowledge data before treatment and after treatment of -3.150 with an Asymp. Sig (p) value = 0.000, Because the p-value = 0.000 <0.05, it can be concluded that there is an effect of splinting training on the knowledge of volunteers in Girilayu Village. This is due to the volunteers' varying abilities to remember and understand splinting material. Increasing a person's knowledge requires understanding to re-explain the information obtained. Remembering and understanding are crucial dimensions of the learning process. The level of splinting knowledge is inseparable from the provision of training. The training was delivered using lectures and question-and-answer methods, as well as the distribution of leaflets on splinting material and simulations by the research team.

According to Nurnaningsih, N., et al. (2021), knowledge is the result of knowing, which occurs after an individual senses a particular object. According to Ernasari et al. (2021), knowledge is defined as a domain that is crucial in shaping an individual's behavior (overt behavior). Knowledge is information about the truth of a concept obtained through observation using the senses, which enables an individual to know and understand the concept being learned. Increasing the level of knowledge can indirectly change behavior in action. Knowledge will influence individuals in implementing the concepts learned (Warouw, 2018).

Another factor influencing knowledge levels is disaster experience, which can increase awareness and prevent the greater impact of a disaster. The majority of respondents in this study had experience with disasters such as earthquakes, and some had experience with floods and fires (Hoffman and Muttarak, 2017).

Previous research that supports that conducted by Ernasari et al. (2021) The results of the statistical test showed $\rho = 0.000$, so it can be concluded that there is a significant difference in the simulation group before and after being given splint dressing

training. In the video group, the average score before training was 4.74 (SD = 0.886) and after training increased by 7.06 (SD = 1.259). At the skill level, there was a significant difference between the group given training with the simulation method and the group with the video method (ρ = 0.000), so it can be concluded that training using the video method can improve knowledge of fracture management faster than training using the simulation method. Research according to Warouw Jessicha (2018), can also be seen that there is a significant difference between the average value before being given health education and the average value after being given health education. Where the average value after being given health education (62.19) is higher than the average value before being given health education (44.6), it can be concluded that there is a significant influence of providing health education on the level of knowledge about first aid splinting for long bone fractures in class X students of SMK Negeri 6 Manado, so Ho is rejected and Ha is accepted.

The results of this study based on the Wilcoxon Signed Rank Test obtained skills before treatment and after treatment of -3.375 with an Asymp. Sig (p) value = 0.000. Because the p value = 0.000 <0.05, it can be concluded that there is an effect of splinting training on the skills of volunteers in Girilayu Village.

The volunteers' skill improvement demonstrated that the training provided was highly beneficial in enhancing their splinting skills (Yunus, P., et al. 2023). This skill improvement was inseparable from the training itself. The training was delivered through hands-on practice using props. However, respondents were first given the opportunity to view a splinting simulation, then given an example by the researcher and then tried to practice independently by looking at the images in the distributed leaflets. The practical method applied and adapted theory to real-world conditions. Therefore, with these three training methods, skill levels showed changes after the training (Marsudiarto & Avinda Rahtasia, 2020).

According to Listiana and Oktarina (2019), skills are the application of knowledge, so a person's skill level is related to their level of knowledge. Knowledge, as the basis for an individual's ability to perform skills, is influenced by two factors.

The results of the study above are in line with the theory that motivation is a desire within a person to perform various actions, this motivation is what drives a person to carry out actions according to the procedures that have been taught. Expertise is the ability that a person has that will make them skilled in performing certain skills (Listiana et al., 2019). This can lead to an increase in skills between before and after the splinting training. The results of this study indicate that there is an effect of splinting training on the knowledge and skills of volunteers. Therefore, it is hoped that community leaders and volunteers in Girilayu Village will be able to collaborate with health workers, community health centers and hospitals or authorities regarding first aid for injuries so that they can assist volunteers in providing care for disaster victims who have suffered injuries.

CONCLUSIONS

The results of the level of knowledge of volunteers about splinting before being given 14 people with the highest percentage (51.9%) knowledge before treatment is insufficient. The results of the level of knowledge of volunteers about splinting after being given treatment are 15 people (55.5%) knowledge after treatment is sufficient. The results of volunteer skills about splinting before being given treatment are 16 people with a percentage (59.3%) of skills before treatment is insufficient. The results of volunteer skills about splinting after being given treatment are 14 people with the highest percentage (51.9%) after treatment is sufficient. There is an Effect of Simulation-Based Splinting Training on the Knowledge and Skills of Destana Volunteers with a p-value of 0.000 or ≤ 0.05.

REFERENCES

Ariyani, S. P., Rahma., Wijaya., & Irma Mustikasari. (2024). Pengaruh Simulasi First Aid Balut Bidai Terhadap Pengetahuan Dan Keterampilan Pada Mahasiswa Semester 6 Di Universitas 'Aisyiyah Surakarta. JHN: Journal of Health and Nursing,2(2), 78–89. https://doi.org/10.58738/jhn.v2i2.579

Badan Penanggulangan Bencana Daerah. 2019. Data Rekab Bencana Longsor Kecamatan Matesih. Karanganyar: Badan Penanggulangan Bencana Daerah

Badan Nasional Penanggulangan Bencana 2022, 62. https://siaga.bnpb.go.id/hkb/pocontent/uploads/documents/Buku_Saku10Jan18_FA.pdf

Dewiyanti, Kamriana, Zainuddin, Alwi, & Rahmadani, F. . (2023). Pengaruh Edukasi Berbasis Video Terhadap Pengetahuan Balut Bidai Pertolongan Pertama Fraktur Tulang Pada Masyarakat Di Wilayah Kerja Puskesmas Polongbangkeng Selatan: The Effect of Video-Based Education on Bone Fracture First Aid Knowledge Wrap in Communities in Polongbangkeng Selatan . *Jurnal Ilmiah Keperawatan (Scientific Journal of Nursing)*, *9*(1), 142-148. https://doi.org/10.33023/jikep.v9i1.1374

Ernasari, E., Kaelan, C., & Nurdin, A. A. (2021). The Effect of Splint Dressing Training on Knowledge of Fracture Management in PMR Members at Vocational Schools in Makassar City. *An Idea Health Journal*, *1*(02), 36–42. https://doi.org/10.53690/ihj.v1i1.32

Listiana, D., Effendi, Oktavia, A.R. (2019). Pengaruh Pelatihan Balut Bidai terhadap Pengetahuan dan keterampilan Siswa/I Palang Merah Remaja (PMR) di SMA N. 4 Kota Bengkulu. CHMK Nursing Scientific Journal, Vol. 3, No. 2. 145-156.

Gede P, Sang. Modul Manajemen Bencana. Bali : Fakultas Kedokteran Universitas Udayana. 2017

Khambali. Manajemen Penanggulangan Bencana, Yogyakata: CV. Andi. 2017

Listiana, D., & Silviani, Y. E. (2020). Pelatihan Balut Bidai terhadap Keterampilan pada Mahasiswa/I Keperawatan. *Jurnal Keperawatan Silampari*, *4*(1),265–273. https://doi.org/10.31539/jks.v4i1.1715

Luh Putu E. P. (2023) Pengaruh Pelatihan Balut Bidai Terhadap Tingkat Pengetahuan Dan Keterampilan Remaja Klub Voli Di Desa Kalibukbuk. Skripsi. Institut Teknologi Dan Kesehatan Bali. Denpasar.

Marsudiarto, Avinda Rahtasia. (2020). Pengaruh Pemberian Video Dan Simulasi Terhadap Praktik Balut Bidai Fraktur Terbuka Pada Kejadian Kecelakaan Lalu Lintas Di Wilayah Kelurahan Mojosongo Surakarta.Skripsi.Stikes Kusuma Husada Surakarta

Metrikayanto, W. D., Saifurrohman, M., & Suharsono, T. (2018). Perbedaan Metode Simulasi dan Self Directed Video terhadap Pengetahuan, Sikap dan Ketrampilan Resusitasi Jantung Paru (RJP) Menggunakan i-Carrer Cardiac Resuscitation Manekin pada Siswa SMA Anggota Palang Merah Remaja (PMR). Jurnal Care 6(1), 79-91. https://doi.org/10.33366/jc.v6i1.792

Mila R. A., Maula M. S dan Galih S. A. (2022) Pengaruh Pelatihan Balut Bidai Dengan Metode Roleplay

Dan Media Animasi Terhadap Keterampilan Balut Bidai Anggota Ksr-Pmi Surakarta Dalam Tanggap Bencana. Skripsi. Universitas Kusuma Husada Surakarta.

Nurnaningsih, N., Romantika, I. W., & Indriastuti, D. (2021). Hubungan Pengetahuan dan Sikap Perawat dengan Penatalaksanaan Pembidaian Pasien Fraktur di RS X Sulawesi Tenggara. *Holistic Nursing and Health Science*, *4*(1),8–15. https://doi.org/10.14710/hnhs.4.1.2021.8-15

Dahlan, MSopiyudin (2019) Besar Sampel dalam Penelitian Kedokteran dan Kesehatan. Epidemiologi Indonesia

Hoffmann R, Muttarak R. (2017). Learn from the Past, Prepare for the Future: Impacts of Education and Experience on Disaster Preparedness in the Philippines and Thailand. *Journal World Devlopment*. Vol. 96:32–51.

Notoatmodjo, S. (2017).Ilmu Perilaku Kesehatan, Jakarta : Rineka cipta

Notoatmodjo, S., (2020). Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta

Robi Amri, Mohd, dkk,. Risiko Bencana Indonesia. Jakarta : BNPB. 2016

Rolly, R., Monica, T., & Johana, T. (2020). Kesiapsiagaan Masyarakat Daerah Rawan Bencana Gunung Meletus Melalui Pengetahuan dan Keterampilan Balut Bidai Pada Luka Trauma di desa Wioi dan Tumaratas Dua Sulawesi Utara. Media Kesehatan Politeknik Kesehatan Makassar, XV(2),262-271. https://doi.org/10.32382/medkes.v15i2.1319

Rosyad, M. H. F. A., Utami, R. D. P. ., & Wulanningrum, D. N. (2025). Pengaruh Pelatihan Video Dan Simulasi Pertolongan Pertama Fraktur Dengan Teknik Balut Bidai Terhadap Tingkat Pengetahuan Dan Keterampilan Pada Pmr Sman 5 Surakarta. *Indonesian Journal of Public Health*, *3*(3), 816–828. Retrieved from https://jurnal.academiacenter.org/index.php/IJOH/article/view/853

Setiyaningrum, T. S., Maharani, R., Wicaksono, H., Febriana, A. D., Iksan, R. R., & Yeni, R. I. (2024). Pengaruh Metode Simulasi terhadap Pengetahuan dan Keterampilan Siswa/I dalam Penanganan Kegawatdaruratan Sekolah di SMK Kesehatan Fahd Islamic School. MAHESA : Malahayati Health Student Journal, 4(4), 1392–1401. https://doi.org/10.33024/mahesa.v4i4.14154

Subandono, J., Maftuhah, A., Ermawan, R., Nurwati, I., Kirti, A. A. A., Qodrijati, I., Mutmainah, Listyaningsih, E., & Tandiyo, D. K. (2019). Pembebatan dan Pembidaian. Buku Pedoman Keterampilan Klinis, 1–41.

Sumadi, P. L. (2020). Pengaruh Pelatihan Pertolongan Pertama pada Kecelakaan terhadap Keterampilan Penanganan Fraktur pada Anggota PMR Di SMP Negeri 2 Kuta Utara. *Jurnal Keperawatan Muhammadiyah, 5(1)*, 19-23. http://dx.doi.org/10.30651/jkm.v5i1.2874

Warouw, J. A., Kumaat, L. T., & Pondaag, L. (2018). Pengaruh Pendidikan Kesehatan dan Simulasi terhadap Keterampilan tentang Balut Bidai Pertolongan Pertama Fraktur Tulang Panjang pada Siswa Kelas SMK Negeri 6 Manado. E-journal Keperawatan (e-Kp) 6 (1), 1-8. http://jurnal.stikesaisyiyahpalemba

ng.ac.id/index.php/Kep/article/view/369

Wiguna, S., Syauqi., Shalih Osmar., dkk. (2020). *Indeks Resiko Bencana Indonesia.* Jakarta : Badan Nasional Penanggulangan Bencana.

Yunus, P., Damansyah, H., Umar, A., & Monoarfa, S. (2023). Pelatihan Pertolongan Pertama Balut Bidai pada Siswa PMR di SMKN 2 Limboto. Jurnal Kreativitas Pengabdian Kepada Masyarakat (PKM), 6(1), 132–140. https://doi.org/10.33024/jkpm.v6i1.8058