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RESEARCH

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Traditional First Aid Practices for Lacerations among the Dayak Meratus Tribe: A Phenomenological Study

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Abstract

The Dayak Meratus tribe commonly practices traditional medicine that focuses on prevention and first aid for childbirth, injuries, and various illnesses. In treating lacerations, they use locally available materials such as ground coffee, amoxicillin powder, banana shoot leaves, and other plants. The practice poses a risk of infection due to poor hygiene and contaminated tools. The research aimed to explore and describe the lived experiences and meanings that Dayak Meratus tribes attribute to providing first aid for lacerations. This was a qualitative phenomenological study conducted with 25 Dayak Meratus community members with experience in traditional laceration treatment, selected through purposive sampling. The lived experiences of participants were captured through in-depth interviews and were analyzed thematically using Colaizzi's method. Four key themes emerged: (1) types of raw materials used to stop bleeding, (2) first aid practices for lacerations, (3) culturally influenced health-seeking behavior, and (4) wound healing duration. Overall, the Dayak Meratus tribe's traditional wound-care practices are diverse and locally resourceful. However, several practices appear to lack standardized, evidence-based guidance and may raise concerns regarding hygiene and safety. The study found that although some practices appeared effective, they were undermined by the lack of aseptic procedures. The study recommends improving the health education practice by integrating traditional culture and wisdom with modern medical safety standards.

Keywords: Traditional Medicine, First Aid, Dayak Meratus Tribe, Laceration, Wound Care, Qualitative Research.

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1. INTRODUCTION

The Meratus Mountains form the only major mountain range in South Kalimantan, Indonesia, spanning multiple regencies and shaping settlement patterns and livelihoods (Riana et al., 2022). Many communities in this region remain geographically isolated due to limited transport infrastructure and challenging terrain, where routine mobility may involve traveling on foot and clearing paths using long knives or machetes. Within this setting, the Dayak Meratus people live in close relationship with their environment and commonly rely on subsistence farming, hunting, and gathering (Kwirinus & Yuniarto, 2023; Murhaini & Achmadi, 2021). These daily activities, such as land clearing, tree climbing, harvesting, and carrying sharp tools, inevitably increase the risk of injury, particularly lacerations. However, access to healthcare services is often distant, requiring patients to travel through dense forest for prolonged periods, which is time-consuming and may compromise patient safety.

Traditional healing practices are deeply embedded in the cultural life of the Dayak Meratus and reflect inherited knowledge of local ecology, social norms, and community support (Anggerainy et al., 2017; Novrianti et al., 2020). Across Indonesia, indigenous medicinal knowledge has contributed valuable scientific insights; however, many practices remain insufficiently documented in a systematic and context-sensitive manner (Anggayasti et al., 2025; Az-Zahra et al., 2021). The Meratus ecosystem, in particular, provides diverse biological resources used as complementary and alternative treatments in local health traditions (Herman et al., 2021). For the Dayak Meratus, traditional medicine often serves as preventive and immediate first aid for childbirth, injuries, and other health concerns, especially where formal healthcare may be distant or difficult to access. Previous studies have shown that indigenous communities preserve health-related knowledge through botanical and ethnomedical practices passed down across generations (Gitima et al., 2025; Laksono et al., 2020; Montasir et al., 2023; Ndung'u et al., 2024; Nurma Wakhidatunnisa et al., 2025).

Lacerations appear to be a common injury among Dayak Meratus community members due to the rugged forest terrain and frequent use of sharp tools; when poorly managed, such wounds carry a high risk of infection (Mucci et al., 2020; Murhaini & Achmadi, 2021). In the Dayak Meratus context, laceration management reportedly involves the use of locally available materials such as ground coffee, amoxicillin powder, banana shoot leaves, and other plants believed to have hemostatic or astringent properties (Az-Zahra et al., 2021). However, some customary methods, such as applying crushed or chewed leaves by hand or using unwashed tools, may increase contamination and thereby elevate the risk of infection (Cedillo-Cortezano et al., 2024). Importantly, these practices should not be reduced to “non-compliance”; they may represent pragmatic, culturally coherent responses to injury within a setting shaped by geography, resources, and local meanings of health and healing.

Despite the clinical importance of safe wound first aid in remote settings, research on Dayak Meratus wound care has largely focused on ethnobotanical inventories and the presumed pharmacological properties of local plants (Az-Zahra et al., 2021; Haeruddin et al., 2017; Kellik Setiawan et al., 2025; Novrianti et al., 2020; Palangka Jaya et al., 2021). Much less is known about how the Dayak Meratus experience laceration first aid in everyday life, how they interpret its effectiveness, and how they assign meaning to healing practices within their social and environmental context (Anggerainy et al., 2017). The Dayak Meratus people were selected as the focus of this study because they represent an information-rich Indigenous community in which frequent exposure to laceration, geographical barriers to formal healthcare, and the continued use of traditional wound-care practices intersect in everyday life. To address this gap, this study adopts a phenomenological approach to explore participants' lived experiences, meaning-making processes, and subjective interpretations of first aid for lacerations. This study aims to explore the lived experience of the Dayak Meratus people in providing first aid for lacerations. The novelty of this study lies in examining laceration first aid as lived experience within a remote Indigenous community. Its contribution lies in demonstrating how cultural

practices, practical constraints, and limited access to healthcare shape wound-care behavior, thereby informing culturally responsive health education that enhances safety without disregarding local knowledge systems.

2. RESEARCH METHOD

This study employed a qualitative phenomenological design to explore the experiences of the Dayak Meratus tribe in providing first aid for lacerations. The phenomenological method was chosen to understand the meaning behind participants' behaviors, actions, and beliefs regarding wound care within their social and cultural contexts. This approach allows researchers to gain an in-depth understanding of lived experiences as perceived and accepted by community members.

The study was conducted in Halong District, a remote area in the Meratus Mountains of South Kalimantan Province, Indonesia. This area is characterized by challenging road access, mountainous terrain, and limited availability of health services such as Puskesmas (community health centers) or midwife clinics. Due to these conditions, residents often rely on traditional knowledge and locally available resources to manage common injuries, including lacerations.

A total of 25 participants were involved in this study. Participants consisted of members of the Dayak Meratus tribe. Participants were selected through purposive sampling to include individuals with relevant knowledge and experience in traditional first aid practices. The inclusion criteria were as follows:

1. Aged 18 years or older;
2. Indigenous Dayak Meratus members or long-term residents living in the Meratus area for ≥ 10 years;
3. Individuals who had experienced or provided first aid for lacerations;
4. Willingness to participate and provide informed consent.

Sampling continued until data saturation was reached. Saturation was determined when successive interviews no longer generated new codes, categories, or insights relevant to participants' experiences, meanings, and practices of laceration first aid, and when the existing themes were sufficiently rich and well developed.

Data collection was carried out through in-depth, semi-structured interviews conducted between December 2022 and January 2023. Interviews took place at participants' homes or other locations convenient for them and were conducted in the local language. When needed, a local interpreter assisted to ensure the meaning was accurate. Each interview lasted approximately 45–60 minutes and was audio-recorded with participants' consent. Field notes were also taken to record contextual observations and non-verbal expressions.

The interview guide included open-ended questions exploring:

1. Participants' experiences with lacerations and wound treatment;
2. Materials and methods used for first aid;
3. Cultural beliefs and taboos surrounding wound care;
4. Perceptions of effectiveness and healing outcomes.

All interviews were transcribed verbatim and, if necessary, translated into Bahasa Indonesia and English for analysis.

Data were analyzed using Colaizzi's phenomenological method. First, all interview transcripts and field notes were read repeatedly to obtain a sense of the whole. Second, significant statements regarding participants' experiences with laceration first aid were identified. Third, meanings were formulated from these significant statements. Fourth, the formulated meanings were grouped into thematic clusters based on shared patterns and interpretations. Fifth, these theme clusters were integrated into an exhaustive description of the phenomenon. Sixth, the fundamental structure of the experience was developed from this description. Finally, the findings were returned to several participants to validate whether the

analysis accurately reflected their lived experiences (Beck, 2021). Coding and analysis were conducted manually to enable close engagement with the data.

Trustworthiness was established using the criteria of credibility, dependability, confirmability, and transferability. Credibility was supported through prolonged engagement in the field, the use of probing questions during interviews, and triangulation between interview transcripts and field notes. Member checking was undertaken by summarising key points during the interviews and inviting participants to confirm or clarify their meanings. Dependability was strengthened by maintaining clear documentation of the research process, including the interview guide, coding decisions, and theme development, thereby providing an audit trail. Confirmability was further strengthened through researcher reflexivity. The primary researcher had no prior personal relationship with the participants and maintained reflexive notes throughout data collection and analysis to consider how the researcher's position, cultural distance, and interaction with participants might influence the interpretation of the data. Transferability was supported through a thick description of the study setting, participant characteristics, and cultural context, allowing readers to assess the relevance of the findings to other remote Indigenous communities.

The study adhered to the ethical principles of the Declaration of Helsinki. It was approved by the Internal Reviewer Board for Research Ethics of the Sari Mulia Banjarmasin University Commission of Research Ethics, under number 023/KEP-UNISM/XI/2022. All participants received information about the study purpose, procedures, voluntary participation, and confidentiality. Informed consent was obtained before interviews, and all identifiers were removed during transcription to protect anonymity.

3. RESULTS AND DISCUSSION

Table 1 describes the participants in this study. All participants met the inclusion criteria of being native to the Dayak Meratus community, having lived in the area for more than 10 years, and having experienced laceration injuries. The participants consisted of members of the Dayak Meratus tribe, including 32% male ($n=8$) and 68% female ($n=17$), aged between 18 and 54 years (mean=37). Only 24% had a primary school education ($n=6$); the rest had no formal education record (76%, $n=19$). The majority were farmers (56%; $n=14$), 20% were hunters ($n=5$), 12% were housewives ($n=3$), 8% were shamans ($n=2$), and 4% were merchants ($n=1$). All participants reported previous experience of lacerations. Of these, 28% ($n=7$) stated that they sometimes experienced laceration, while 72% ($n=18$) reported often experiencing laceration. All participants also had experience in treating lacerations. Most participants (88%, $n=22$) reported often treating lacerations, whereas 12% ($n=3$) reported sometimes doing so.

Table 1. Participants characteristics

Characteristics		Mean $\pm$ SD	Min – Max
Age		37 $\pm$ 8,24	18 – 54
		Frequency	%
Gender	Male	8	32%
	Female	17	68%
Education	No formal education	19	76%
	Primary school	6	24%
	Junior high school	0	0%
	Senior high school	0	0%
	Higher education	0	0%
Occupation	Housewife	3	12%
	Merchant	1	4%
	Shaman	2	8%
	Farmer	14	56%

Laceration experience	Hunter	5	20%
	Never	0	0%
	Sometimes	7	28%
	Often	18	72%
Laceration care experience	Never	0	0%
	Sometimes	3	12%
	Often	22	88%
Total participants		25	100%

Based on in-depth interviews, four major themes emerged, reflecting participants' experiences and perceptions of first aid for lacerations. The themes are (1) types of raw materials used to stop bleeding, (2) first aid practices for lacerations, (3) culturally influenced health-seeking behavior, and (4) wound healing duration. The themes are summarised in Table 2.

Table 2. The Result of the In-depth Interview

Theme	Participant	Result Summary
Types of Raw Materials Used to Stop Bleeding	P1, P3, P4, P5, P6, P7, P11, P17, P25	Participants commonly used natural ingredients such as banana shoots, taro stems, and local herbs, as well as household materials such as ground coffee, MSG, soap, and kerosene, to stop bleeding. These practices were based on traditional knowledge rather than formal medical guidance.
First Aid Practices for Lacerations	P2, P6, P7, P10, P14, P21	Wound care was performed immediately using chewed or pounded materials applied directly to the wound, often without attention to hygiene or sterility.
Culturally Influenced Health Seeking Behavior	P8, P10, P13, P15, P19, P20, P23	Participants commonly continued treatment at home using water rinses, herbal oils, or visits to shamans, reflecting cultural beliefs and limited access to formal health services.
Wound Healing Duration	P9, P12, P16, P18, P24	Bleeding often stopped quickly, but complete healing was generally slow. This pattern may reflect the use of non-sterile materials, although minor wound size and possible bioactive compounds in some plants may have supported eventual healing.

This study explored the traditional practices of the Dayak Meratus tribe in providing first aid for lacerations. The findings revealed four major themes: the types of raw materials used to stop bleeding, first-aid procedures, traditional wound-treatment practices, and the duration of the wound-healing process. Overall, the findings show that local knowledge and cultural practices strongly influence community-based health behaviors, particularly in remote areas with limited access to formal healthcare.

Types of Raw Materials Used to Stop Bleeding

P1 (35, Male, Hunter)

*"In the forest, I am rarely cut by my own machete, but pieces of wood or sharp thorns more often injure me. When I am in the forest, I use whatever treatment is available, such as **banana shoots**. I chew them first and then apply them to the wound."*

P3 (45, Male, Hunter)

*"I have had many wounds. Once, I was cut by a machete when I was chopping a tree trunk. The machete slipped and hit my thigh. I was afraid it would become infected, so I cleaned it immediately. I usually use **soap, or sometimes kerosene**. It does sting, but the wound feels clean afterward, and then I bandaged it. What matters is that I can still walk home."*

P4 (40, Male, Hunter)

*"I get cut quite often, but I am not as skilled in treating wounds as the older men. If the cut is small, I usually leave it or put **ground coffee** on it. If it is severe, I ask someone else for help."*

P6 (54, Male, Shaman)

*"People come to me when the bleeding does not stop. I know some local herbs that we believe can help close the wound. I crush them into a paste and say prayers as I prepare them. I usually use **taro sap** first, but if the wound starts to smell or swell, they should come to me for **herbal oil**. For us, healing is not only physical, but also related to spiritual strength"*

P11 (42, Female, Housewife)

*"When children get injured from falling or being cut by a machete, they come to me. Sometimes they cry, sometimes they do not, depending on how deep the wound is. Usually, I sprinkle **micin (MSG)** or **coffee ground** on it because it can stop the bleeding, although it does sting."*

Participants commonly used readily available natural and household materials to stop bleeding, such as banana shoots, taro shoots, ground coffee, and monosodium glutamate (MSG). These practices have been passed down through generations as part of their inherited knowledge of traditional medicine. The choice of materials reflects the tribe's dependence on its natural environment and its adaptive strategies for managing injuries in resource-limited settings (Nguyen et al., 2020). Several plants used by the Dayak Meratus, such as taro (*Colocasia esculenta*), banana shoots (*Musa* spp.), and Malabar Melastome, have been reported in previous studies to contain bioactive compounds with hemostatic and anti-inflammatory properties (Beltsazar et al., 2024; Widoyanti et al., 2023; Wudali et al., 2023). The sap of taro and banana stems is rich in tannins and flavonoids, which may accelerate clot formation and promote wound healing (Montasir et al., 2023). This scientific evidence partially supports the community's empirical knowledge, demonstrating that certain traditional materials indeed have therapeutic potential.

First Aid Practices for Lacerations

P2 (37, Male, Hunter)

*"If there is a cut wound in the forest, no, sir, we do not bring medicine. We believe plants are more effective. It depends on the wound. If it is deep, usually there is a lot of blood. **The way is, leaves or banana shoots are chewed or pounded with a stone until soft, then applied to the wound until it is all covered. After that, it is covered with cloth and tied. Yes, it becomes a bandage.**"*

P7 (52, Male, Shaman)

*"First aid must stop the bleeding, because if the bleeding does not stop, it can be dangerous. The way is: **if the wound is still new and clean, it can be treated directly, but if it is dirty, it needs to be cleaned first. It can use water, and if there is no water, it can use kerosene, so it also kills germs. Then wait until it dries in the air. If the bleeding does not stop quickly, coffee powder can be given to stop it immediately. After the bleeding stops, I apply herbs and wrap them with a cloth.**"*

P14 (39, Female, Farmer)

*"If I am wounded in the field, I will use whatever plants are available. Usually, taro stems are the most effective and easiest to get. **The way is to break the taro stem, apply the sap to the wound, and wait for it to dry. It hurts, but when the wound is covered with sap, the bleeding can stop. We believe the sap of the taro stem is a medicine, so the wound does not become infected.**"*

P21 (30, Female, Farmer)

"I use banana shoots mostly. I just mash them up and tie them on. Sometimes, the bleeding stops quickly."

The study found that first aid procedures among the Dayak Meratus tribe often deviate from standard medical recommendations. Participants commonly pounded raw materials with unwashed stones and applied the resulting paste directly to wounds with their bare hands. These non-sterile techniques reflect the community's limited access to health facilities and wound care education (Britto et al., 2024). Although these practices are deeply embedded in local culture, they carry a significant risk of infection and delayed wound healing. According to modern first aid principles, treatment for lacerations should involve cleaning the wound with sterile or clean water, applying a disinfectant, and covering it with sterile dressings (Britto et al., 2024). Lacerations disrupt the skin barrier, creating an open entry point for bacteria, dirt, and other foreign material. When raw materials are pounded with unwashed stones and then applied by bare hands, the wound may be exposed to additional contamination from the stone surface, the hands, and the surrounding environment (Calvo-Gomez et al., 2025). If the wound is not cleaned properly, these contaminants can remain in the tissue and trigger local infection, prolonged inflammation, delayed granulation, and slower epithelial repair. As a result, healing may take longer, and the risk of complications increases. The practices among the Dayak Meratus community highlight a gap between traditional health behaviors and evidence-based wound management. Nonetheless, the findings should be interpreted within the sociocultural context in which biomedical care may not be readily available.

Culturally Influenced Health Seeking Behavior

P8 (45, Male, Farmer)

"After the first day, I just kept it clean with water rinses from the well. If it starts to throb or gets 'angry' (red and swollen), I do not go to the town clinic—it is too far, and I cannot leave the crops. Instead, I go to see the ShamanShaman. They give me herbal oils to rub on the scab so it does not crack and bleed again. We trust the oils of the ShamanShaman."

P10 (43, Female, Housewife)

"I keep an eye on my children's cuts every morning. If the coffee crust falls off too soon, I just put more on. We do not have fancy bandages, so I just rinse them with water if they get dirty. If it does not look right after three days, I ask the elders for advice. We do not think about 'doctors' for a simple cut; it is something we handle in the kitchen."

P15 (38, Female, Farmer)

"Water is our main way to keep it clean. Every time I bathe, I let the water run over the cut. If it looks like it is struggling to close, I visit the ShamanShaman. He knows which plants can draw out the 'heat' from a wound. It is our tradition. Why would I spend money on the clinic when the ShamanShaman lives just down the path?"

P20 (33, Female, Farmer)

"If the wound stays wet and will not dry, I use dry soap or more MSG. It is the way we have always done it. If I get scared that the wound is 'spoiling,' I go to the ShamanShaman for a blessing and some pounded leaves. Access to the health center is difficult for us, so we rely on each other and our traditional knowledge."

P23 (25, Female, Farmer)

"Being younger, some people tell me to go to the nurse, but I do not have the time or money. I do what the others do: rinse with water and apply herbal oils. If the wound is deep, I keep it covered with a cloth and wait. If it is not better in a week, then the Shaman is the only one who can help. It is about our culture—we trust the plants and the elders."

The Dayak Meratus people primarily perform wound care at home, using locally available materials or seeking help from traditional healers (shamans). The use of oil, herbal mixtures, and shamanic rituals shows the integration of physical and spiritual healing in Meratus culture (Az-Zahra et al., 2021; Herman et al., 2021). They rarely rely on commercial medicine or formal health facilities. This health-seeking behavior pattern mirrors a broader trend observed in many Indonesian Indigenous communities (Widayanti et al., 2020). The pattern begins with self-medication, followed by a choice among a shaman, a health worker, or a combination of both. Click or tap here to enter text. Meta-ethnographic research suggests that shamanistic consultation is often driven by the perception of supernatural causes (Laksono et al., 2020; Widayanti et al., 2020). The study explores the experience of treating a laceration, a physically observable injury with a clearly visible cause. For these visible injuries, the community's primary response is self-treatment, with shamans serving as a secondary resource if the condition worsens. Therefore, this preference for traditional care is shaped by a confluence of geographical isolation, cultural paradigms, and a deeper trust in a shaman's efficacy over formal healthcare services. However, the reliance on unverified and non-sterile substances can increase the risk of wound contamination, prolonged healing, and potential complications. There is a need to refine these traditional wound care practices through targeted health education. This approach does not seek to reject cultural heritage, but rather to augment it by combining evidence-based medical protocols into the local context.

Wound Healing Duration

P9 (45, Female, Merchant)

"I see people coming to my shop with coffee or MSG plastered on their arms. It works for the blood—the bleeding stops. However, I notice they carry those scabs for a long time. They come back weeks later, and the mark is still there, dark and thick. It is effective for the emergency, but the body takes its own sweet time to forget the injury."

P12 (41, Female, Housewife/Farmer)

"The coffee and soap are very strong; they seal the wound like a lid on a jar. In that way, it is very effective. However, it does not 'heal' fast. The wound stays hard and sometimes oozes for many days. We just accept that a cut in the field means a month of carrying a scar. It is not like the medicine from the city that makes things disappear; our ways are slow, but they are what we know."

P16 (37, Female, Farmer)

"If I use taro stems, the stinging stops quickly. I think the plants have a 'power' that helps the skin. However, because we are always working in the dirt, the wounds often stay 'angry' and wet. Even if the bleeding stops in minutes, the hole in the skin might stay for two or three weeks. It heals eventually, so we call it a success, even if it is slow."

P18 (35, Female, Farmer)

"We do not expect the wound to go away overnight. Using chewed banana shoots is the best because the blood dries up right away. That is the most important part! As long as the blood is inside the body, we are happy. If it takes a long time to heal after that, it is just because we are farmers and we are always moving. The healing is 'good enough' for our life."

P24 (22, Female, Farmer)

"I have seen my friends use MSG, and the blood stops so fast it is like magic. However, the wound gets very crusty and ugly. Sometimes it gets a small quantity of pus because we do not use 'clean' bandages, just old cloth or leaves. It heals slowly, but it does heal. We are strong people; we do not need it to be perfect; we just need to be able to go back to the farm the next day."

Most participants reported that bleeding often stopped quickly after applying natural materials. It may be due to the mechanical pressure applied during bandaging as well as the presence of bioactive compounds, such as flavonoids, alkaloids, and tannins, which have been shown to promote hemostasis and tissue repair (Calvo-Gomez et al., 2025; Zulkefli et al., 2023). However, from the perspective of wound-healing theory, the closure of small lacerations may also occur through the body's natural healing mechanisms, including hemostasis, inflammation, proliferation, and remodeling, even in the absence of optimal first aid (Calvo-Gomez et al., 2025). Therefore, the relatively satisfactory healing outcomes reported in this study should not be attributed solely to the traditional materials used. Instead, healing may have resulted from a combination of natural physiological processes, the relatively small size of the wounds, and continued home-based care. Nevertheless, the frequent use of non-sterile materials and inadequate hygiene may have contributed to slower overall healing and increased the risk of contamination, despite the early cessation of bleeding (Figure 1).



Figure 1. The appearance of a laceration wound after being treated by the Dayak Meratus tribe

The findings of this study have several implications for community health promotion in remote and indigenous populations. First, recognizing and documenting indigenous wound care practices provides valuable insight into culturally embedded health systems. Second, there is a need for integrated health education programs that respect traditional practices while introducing evidence-based hygiene principles. Lastly, a collaboration between local health workers and traditional healers could bridge the gap between indigenous knowledge and modern medicine, improving safety and outcomes.

4. CONCLUSION

The experiences of the Dayak Meratus tribe show that the wound-healing process often takes a prolonged period, consistent with theoretical expectations. Although their first-aid practices frequently involve non-sterile materials and tools, the reported healing outcomes were generally satisfactory. This apparent contradiction may be explained by the relatively small size of the wounds, by the possibility that participants maintained ongoing wound care at home, or by the fact that, although the wounds were wide, participants understood proper bandaging technique, even if this was not described in detail during the interviews.

Overall, the study highlights the persistence of traditional wound-care practices that prioritize accessibility and cultural familiarity over medical sterility. While some traditional materials may contain natural compounds that promote wound healing, the continued use of unclean tools and non-sterile techniques poses potential health risks. Importantly, this study contributes to the existing literature by moving beyond ethnobotanical documentation to examine laceration first aid as a lived experience, revealing how cultural meaning, practical necessity, and limited access to healthcare shape wound-care behavior in everyday life. In doing so, it provides context-specific evidence to support culturally sensitive health education and

collaboration between local health workers and traditional healers to improve wound-care safety without disregarding Indigenous knowledge systems.

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