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Community health promotion for sustainable well-being using the wisdom of traditional medicine practitioners of Isan, Thailand

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Abstract. *Phon-Ngam P. 2025. Community health promotion for sustainable well-being using the wisdom of traditional medicine practitioners of Isan, Thailand. Asian J Ethnobiol 8: 324-331.* This study employed a Participatory Action Research (PAR) approach to investigate and promote community health and sustainable well-being through the ethnomedical knowledge and practices of Traditional Medicine Practitioners (TMPs) in Isan, Thailand. The study aimed to: (i) explore the roles, knowledge, and practices of TMPs in enhancing community health and resilience, (ii) develop and implement a community health promotion model grounded in traditional medicine wisdom, and (iii) evaluate the effectiveness and sustainability of the implemented model. Participants included TMPs, community leaders, health officers, and local villagers. Data were collected through in-depth interviews, focus group discussions, participatory brainstorming sessions, and observation of traditional health practices. Findings indicate that TMPs play a crucial role in preserving cultural heritage, providing accessible and contextually relevant healthcare, and strengthening community cohesion and resilience. However, challenges such as limited recognition by formal health systems, insufficient mechanisms for knowledge transfer to younger generations, and weak integration with contemporary medical practices were identified. The proposed health promotion model emphasizes systematic documentation of traditional knowledge, collaborative engagement between TMPs and public health officers, and capacity-building initiatives to ensure the sustainable application of ethnomedicine in community health. The integrated model enhanced intergenerational learning, cultural preservation, and community empowerment while aligning with Sustainable Development Goals (SDGs 3, 4, 11, and 15). Integrating traditional medicine wisdom through participatory approaches strengthens cultural identity and contributes to ethnobiology, ethnomedicine, and community health promotion. The findings provide adaptable insights for similar cultural and ecological contexts worldwide, supporting sustainable well-being and complementing modern public health systems.

Keywords: Ethnomedicine, local wisdom, sustainable well-being, traditional knowledge

INTRODUCTION

Health promotion has become a global priority as communities strive for sustainable well-being amidst rapid social, economic, and environmental transitions (Murray et al. 2019, 2020). In Southeast Asia, particularly in the Isan region of Thailand, traditional medicine has long played a central role in maintaining community health (Tongma and Srisopha 2020; Onchomchan 2020). Rooted in indigenous knowledge, local practitioners provide not only preventive and curative care but also culturally grounded approaches that align with the holistic needs of their populations (Phon-ngam et al. 2024).

Traditional medicine in Isan extends beyond herbal remedies. It encompasses practices, beliefs, and social values that connect health to cultural identity and community resilience (WHO 2019). Studies indicate that communities widely trust Traditional Medicine Practitioners (TMPs) for common illnesses, chronic conditions, and spiritual health, yet their contributions remain underrepresented in formal health systems (Peltzer et al. 2020). Globally, the integration of traditional medicine into health systems is recognized as vital for achieving Sustainable Development Goals (SDGs), particularly those linked to health equity, cultural preservation, and sustainable development (WHO 2013).

The World Health Organization (WHO) has emphasized that strengthening universal health coverage requires incorporating traditional medicine, especially in areas where biomedical services are limited (WHO 2019). Regional studies highlight that Thailand can enhance the application of indigenous health knowledge, creating inclusive models that strengthen both primary healthcare and community participation (Lim et al. 2020; Nguyen et al. 2021). Despite this recognition, TMPs are often marginalized in national health policies due to structural barriers, such as limited policy support, insufficient research engagement, and broader global trends that undervalue indigenous knowledge systems (Kongthong et al. 2021).

The Isan Region presents a particularly valuable context for research. The areas share cultural and linguistic roots, along with long-standing healing traditions that persist despite modernization (Phon-ngam et al. 2024). Rural communities face challenges, including poverty, migration, and limited healthcare infrastructure, highlighting the potential role of TMPs in bridging formal and informal health systems to strengthen community well-being (Murray et al. 2019). Drawing on TMPs' wisdom allows communities to create culturally relevant and cost-effective strategies that

enhance trust, participation, and sustainability in health promotion (Smith and Chen 2023).

This study employs Participatory Action Research (PAR) to explore the integration of TMPs' knowledge into community health promotion in selected areas of Thailand (Baum et al. 2016). PAR is a practical and inclusive methodology that engages communities in identifying problems, co-creating solutions, and sustaining outcomes (Reddy et al. 2023). By involving TMPs, local leaders, health officials, and community members, this approach ensures that traditional knowledge is not only documented but also actively applied in meaningful ways (Nguyen et al. 2019; Lim et al. 2020). Importantly, PAR contributes to empowerment by positioning local stakeholders as active agents of change rather than passive recipients of external interventions

The significance of this research lies in three main areas. First, it addresses a critical gap by systematically examining Traditional Medicine Practitioners' (TMPs) contributions to community health promotion in the transboundary Isan–Lao context (Phon-ngam et al. 2024). Second, it contributes to theoretical debates on how indigenous knowledge informs sustainable health models that align with both local culture and global health frameworks (Murray et al. 2019). Third, it provides practical implications for policy and practice, offering models that policymakers, educators, and healthcare providers can adapt to strengthen community health systems (Tongma and Srisopha 2020; Smith and Chen 2023).

This study emphasizes the importance of recognizing and integrating traditional medicine wisdom into contemporary health promotion. By leveraging TMPs' strengths through participatory approaches, communities in Thailand can enhance resilience, equity, and sustainability in health. This research contributes not only to local development but also to global discussions on sustainable health promotion, cultural preservation, and the integration of indigenous wisdom into modern systems of care. The objectives were to: (i) Investigate the role and practices of traditional medicine practitioners in promoting community health and sustainable well-being, emphasizing ethnomedical knowledge and cultural practices; (ii) develop and implement a community health promotion model using traditional medicine wisdom; (iii) evaluate the implementation of community health promotion models using traditional medicine wisdom.

MATERIALS AND METHODS

This study employed a Participatory Action Research (PAR) approach to explore and document the ethnomedicine knowledge of Traditional Medicine Practitioners (TMPs) in the Isan region and to integrate this knowledge into sustainable community health promotion. Conducted between January and August 2024, the research focused on three rural districts in Loei, Udon Thani, and Buriram Provinces in the northeastern region of Thailand, purposively selected for their active traditional medicine practices, cultural richness, and strong community engagement. The study emphasized both the preservation of traditional knowledge and its contribution to sustainable community health systems.

PAR was selected because it ensures that communities are active participants in defining problems, generating solutions, and applying knowledge, thereby fostering empowerment and sustainability. This approach is particularly suitable for ethnomedicine research, as it respects cultural norms, promotes intergenerational knowledge transmission, and strengthens community capacity.

Participants

A total of 48 participants were recruited, including TMPs, community residents, and local public health officers. Participants were selected using purposive sampling based on three criteria: residence in the study area for at least ten years, direct experience with traditional medicine (as practitioners, patients, or collaborators), and willingness to engage in all stages of the PAR process. The sample size was determined by the principle of data saturation, ensuring that data collection continued until no new themes emerged. Although interviewers were aware of participants' identities during data collection, confidentiality was strictly maintained by excluding personal identifiers in transcripts, analysis, and reporting. The characteristics of participants and data collection details are summarized in Table 1.

Table 1. Participant characteristics and data collection summary

Role/group	n	Sex (M/F)	Age range (years)	Province	Data type	No. of sessions	Avg. duration (min)
Traditional Medicine Practitioners (TMPs)	15	8/7	35-70	Khon Kaen, Mukdahan, Nakhon Phanom	In-depth interview	15	60-90
Community leaders	9	6/3	40-65	Same as above	Focus Group Discussion (FGD)	3	90
Health officers	6	2/4	30-55	Same as above	Interview	6	45-60
Local villagers	18	9/9	25-70	Same as above	Observation, FGD	3	60
Total	48	25/23					

Data collection

Multiple qualitative techniques were employed to ensure methodological triangulation and depth of understanding. Data were collected from 48 participants, including Traditional Medicine Practitioners (TMPs), community residents, and local public health officers across three provinces in northeastern Thailand. The study used (i) in-depth interviews, (ii) Focus Group Discussions (FGDs), and (iii) participatory workshops.

For in-depth interviews, semi-structured questions were designed to explore the roles, experiences, and challenges of TMPs, as well as community perceptions of traditional healing and health promotion. Sample guiding questions included: "How do you transfer your traditional knowledge to younger generations?" and "What challenges do you face in integrating traditional practices with public health programs?" Each interview lasted 45-60 minutes.

FGDs were conducted with groups of TMPs and community members across generations to discuss the sustainability of traditional medicine and community well-being. Each FGD included 6-8 participants and lasted approximately 90 minutes. Discussions focused on cultural transmission, health-seeking behavior, and community collaboration.

Participatory workshops were organized in each province to co-develop strategies for sustainable cultivation and documentation of traditional knowledge. Each workshop consisted of three sessions: (i) sharing experiences and challenges in local health practices, (ii) group analysis and prioritization of sustainable approaches, and (iii) collaborative planning for community health promotion. The workshops were facilitated by the research team with support from community leaders and health officers using participatory tools such as brainstorming, ranking, and mapping. Data were recorded through audio recordings, observation notes, and workshop outputs. Data saturation was achieved when no new codes or themes emerged.

Research phases

The research was implemented in three phases: (i) Phase 1: Exploration of knowledge and practices documenting TMPs' knowledge, practices, and community acceptance. (ii) Phase 2: Development and implementation of a community health model, participatory workshops, and working group meetings to co-create and apply a sustainable health promotion model. (iii) Phase 3: Evaluation of the implementation of community health promotion models using traditional medicine wisdom

Data analysis

Data were transcribed and analyzed using thematic analysis (Braun and Clarke 2006). NVivo 12 software (QSR International) supported coding and theme development. Themes included (i) TMPs' knowledge and practices, (ii) community acceptance and health outcomes, and (iii) challenges and opportunities for integrating ethnomedicine into health promotion. Member checking and triangulation enhanced credibility and rigor.

An inductive narrative thematic analysis approach was employed following Braun and Clarke (2006). All interviews were audio-recorded, transcribed verbatim, and participants were invited to review and confirm interpretations through member checking to ensure credibility.

Ethical considerations

Ethical approval was obtained from the Institutional Review Board of Shinawatra University, Thailand. Written informed consent was obtained from all participants prior to participation. Anonymity and confidentiality were maintained throughout data collection, analysis, and reporting**.**

RESULTS AND DISCUSSION

Role and practices of Traditional Medicine Practitioners (TMPs)

Findings from the in-depth interviews revealed that Traditional Medicine Practitioners (TMPs) in the Isan region provide healthcare based on ethnomedicine knowledge inherited through generations. Their learning processes are primarily oral and experiential, emphasizing observation, memorization, and apprenticeship. Treatments often involve compound formulas combining multiple herbs tailored to specific illnesses.

Insights from the Focus Group Discussions (FGDs) confirmed that TMPs play a critical role in preserving cultural identity, providing accessible healthcare, and enhancing community resilience. Community members expressed deep trust in TMPs and viewed traditional healing as complementary to modern medicine.

Data from the Participatory Action Research (PAR) workshops further highlighted challenges, including declining youth participation, insufficient documentation, inconsistent dosages, and limited formal recognition from the public health system. Participants collaboratively identified opportunities for integration through participatory forums, collaborative training, school herbal gardens, and public engagement via learning media and community caravans.

Development and implementation of a community health promotion model

Based on Phase 1 findings, a three-component community health promotion model was developed to strengthen sustainable well-being through education, participatory engagement, and application of ethnomedicine, addressing integration challenges with local public health systems**.** The community health promotion model can be summarized in Table 2.

The three models complement each other. Model 1 enhances practical skills and engages youth. Model 2 ensures knowledge preservation and broad accessibility. Model 3 strengthens community engagement and public awareness, supporting holistic and sustainable well-being**.**

The presents comparative summary of Knowledge, Attitudes, and Practices (KAP) outcomes across the three

models was shown in Table 3, which summarizes the baseline KAP outcomes of participants across the different health promotion models, collected prior to any intervention. Table 3 provides an overview of participants' initial knowledge, attitudes, and practices. These trends highlight that while each model strengthens different aspects of community health, the integrated approach ensures intergenerational learning, cultural preservation, and community self-reliance.

Evaluation of implementation

The three-component model was evaluated for participant satisfaction, engagement, knowledge acquisition, and sustainability. The reported outcomes reflect participants' perceptions rather than objectively measured improvements in community health. Table 4 presents KAP outcomes of all 48 participants, assessed using a structured survey developed in collaboration with PAR groups. The survey was administered directly to participants during PAR sessions. Overall, the evaluation confirms that the integrated model effectively enhanced traditional medicine knowledge, reinforced community participation, and promoted sustainable well-being. Qualitative feedback emphasized increased confidence, practical skills, and understanding of ethnomedicine among participants, particularly in youth and community engagement contexts.

The study demonstrates that a structured, three-component model combining school-based activities, learning media, and community dissemination can systematically apply local ethnomedicine knowledge to promote sustainable community health. The integrated approach strengthens intergenerational learning, cultural preservation, and community self-reliance while aligning with multiple SDGs (3, 4, 11, and 15). The findings support the effectiveness of participatory models for embedding traditional knowledge into contemporary health promotion strategies.

Table 2. A three-component community health promotion model

Model	Key activities	Target participants	Main outcomes	SDGs alignment
1. Promoting Herbal Knowledge Among Youth	Hands-on workshops, school herbal gardens, integration into curriculum	Students, teachers, volunteers	Improved practical herbal skills, teamwork, and health awareness	SDG 3, SDG 4, SDG 15
2. Learning Media and Knowledge Dissemination	Books, e-learning materials, dissemination to schools, libraries, TM associations	Students, community members	Knowledge acquisition, accessibility, and long-term preservation	SDG 3, SDG 4, SDG 15
3. Dissemination to the community	Health check-ups, herbal treatments, workshops, exhibitions, and collaboration with public health officers	Community members, TMPs, and public health officers	Increased public awareness, knowledge use, and community engagement	SDG 3, SDG 11, SDG 15

Note: The alignment with Sustainable Development Goals (SDGs) is detailed as follows. For rows 1 and 2 (SDG 3, 4, 15), SDG 3 (Good Health and Well-being) is supported by enhanced community access to healthcare and preservation of traditional practices; SDG 4 (Quality Education) is addressed through intergenerational knowledge transfer, participatory learning, and community workshops; SDG 15 (Life on Land) is linked to sustainable cultivation and conservation of medicinal plants. For row 3 (SDG 3, 11, 15), SDG 3 focuses on community health improvement; SDG 11 (Sustainable Communities) reflects strengthened social cohesion and collaborative community initiatives; SDG 15 emphasizes conservation of biodiversity and sustainable use of local medicinal plants. The proposed model is adaptable to other culturally and ecologically similar communities through systematic documentation and participatory engagement.

Table 3. Summary of Knowledge, Attitudes, and Practices (KAP) outcomes across health promotion models

Model	Knowledge	Attitude	Practice	Key observation
1. Promoting Herbal Knowledge Among Youth	High	Moderate	Moderate	A hands-on approach enhanced practical skills and engagement
2. Learning Media and Knowledge Dissemination	Moderate	Moderate	Low	Improved knowledge acquisition and long-term preservation
3. Dissemination to the community	High	High	High	Strong overall improvement through participatory community-wide engagement

Table 4. Participant satisfaction and engagement scores

Model	Satisfaction (Mean/5)	Engagement (Mean/5)	Knowledge acquisition (Mean/5)	Sustainability/ Integration (Mean/5)	Qualitative summary
1. Promoting Herbal Knowledge Among Youth	4.62	4.65	4.60	4.58	High satisfaction and engagement reported; KAP data indicate only moderate practical application; hands-on mentorship needed to enhance youth practice
2. Learning Media and Knowledge Dissemination	4.50	4.40	4.55	4.35	Clear and usable materials; moderate dissemination; supports long-term learning
3. Dissemination to the community	4.47	4.42	4.50	4.35	High satisfaction and engagement; stronger community awareness and practice

Note: Table 4 scores are based on a validated 16-item survey using a 5-point Likert scale. Items assessed Satisfaction, Engagement, Knowledge Acquisition, and Sustainability/Integration. Higher scores indicate greater satisfaction, engagement, and application of knowledge. KAP: Knowledge, Attitudes, and Practices

Discussion

Role of Traditional Medicine Practitioners (TMPs)

The findings indicate that TMPs in Isan contribute significantly to sustainable community health through holistic practices, encompassing herbal medicine, ritual therapies, and physical rehabilitation. While declining youth interest and limited formal recognition present challenges, participatory interventions such as school-based herb programs and learning media foster intergenerational knowledge transfer.

TMPs play a central role in providing culturally relevant health services within the community. However, integration with formal health systems remains weak. To strengthen collaboration, mechanisms such as joint training programs, referral systems, and co-designed health initiatives can be considered. Comparative insights from other regions, such as India and South Africa, demonstrate that structured integration of traditional practitioners with formal health services enhances both service delivery and community trust (Chaturvedi et al. 2021). These findings support the applicability of the proposed community health promotion model in culturally similar contexts, emphasizing the value of participatory engagement and collaborative frameworks

These results align with Community Empowerment Theory (Zimmerman 2021), demonstrating that engagement and skill-building enhance both individual and collective capacity. Similarly, Experiential Learning Theory supports the effectiveness of hands-on activities in developing practical competence. The promotion of local herbal cultivation not only preserves cultural knowledge but also contributes to biodiversity and environmental sustainability, supporting SDG 3, 4, 11, and 15 (WHO 2019; National Center for Complementary and Integrative Health 2024).

Comparatively, ethnomedicine interventions in Southeast Asia, such as school-based herbal education in Vietnam and community health caravans in Laos , reported similar trends in knowledge retention and youth engagement. (Nguyen et al. 2019) Globally, studies in India and South Africa indicate that participatory, TMP-centered approaches improve both health literacy and community cohesion, demonstrating the replicability and cross-cultural relevance of such models (Peltzer et al. 2020; Reddy et al. 2023). This suggests that TMP integration within educational and community frameworks is a consistent factor in sustainable ethnomedicine interventions.

Community health promotion models

The study's three-component model of school-based youth engagement, learning media, and community caravans demonstrates that structured, participatory, and media-supported interventions can sustainably enhance community well-being.

Model 1: Promoting herbal knowledge among youth engaged students, strengthened practical skills, and fostered health self-reliance.

Model 2: Learning media and knowledge dissemination enabled self-directed, intergenerational knowledge transfer and documented local wisdom.

Model 3: Dissemination to the community (traditional medicine caravan) enhanced public understanding, acceptance, and application of traditional remedies.

These approaches illustrate that experiential learning combined with community engagement strengthens social cohesion and cultural continuity. Similar ethnomedicine interventions across SE Asia and globally reinforce these findings, showing that multi-component, participatory models are more effective than single interventions in sustaining knowledge and practice (Onchomchan 2020; Peltzer et al. 2020). Notably, the integrated model in this study uniquely combines school-based, media, and community strategies, allowing both intergenerational learning and broad community reach, which is less emphasized in prior research. Local herbal practices also reduce reliance on industrial pharmaceuticals, highlighting both environmental and public health benefits. This aligns with studies in India where community-based herbal initiatives reduced medication costs and promoted sustainable health behaviors (Reddy et al. 2023).

As shown in Table 5, the three-component model in this study demonstrates both breadth and depth compared to prior ethnomedicine interventions in SE Asia and globally. Unlike Nguyen et al. (2019), which focused mainly on youth engagement, which emphasized community caravans, our integrated approach combines youth, media, and community engagement, enabling both intergenerational knowledge transfer and broad public participation. Global studies by

Peltzer et al. (2020) and Reddy et al. (2023) also underscore the value of participatory TMP-centered interventions, confirming that engagement, skill-building, and experiential learning are critical for sustainable ethnomedicine initiatives (Reddy et al. 2023). This comparative analysis highlights the novelty and effectiveness of the integrated model in enhancing community well-being, preserving cultural heritage, and supporting SDGs.

Evaluation of implementation

The integration of participatory and experiential approaches demonstrates significant potential for sustainable health promotion, as supported by prior studies and ethnological perspectives. The implemented community health promotion model engaged TMPs and community members effectively, resulting in positive perceived outcomes among participants. Given the short study timeframe, future longitudinal studies are recommended to evaluate long-term impacts on community health and cultural preservation.

Empowering communities: Research highlights that participatory health initiatives foster community ownership, enhance skill development, and strengthen social capital (Murray et al. 2019; Onchomchan 2020). From an ethnological perspective, empowerment is rooted in collective identity and kinship networks, which encourage shared responsibility for health outcomes.

Preserving cultural heritage: Ethnological theory emphasizes the importance of symbolic systems, rituals, and oral traditions in sustaining community identity (Closser et al. 2022). Systematic documentation and intergenerational transmission of Traditional Medical Practices (TMPs) ensure that indigenous knowledge is not only preserved but also contextualized within cultural meanings (Phon-ngam et al. 2024).

Supporting Sustainable Development Goals (SDGs): Evidence indicates that community-based health practices contribute to SDG 3 (good health and well-being), SDG 4 (quality education), SDG 11 (sustainable communities), and SDG 15 (life on land) (Smith and Chen 2023). Ethnological insights show that health and environment are intertwined through cultural adaptation and ecological knowledge, reinforcing the relevance of TMPs in achieving these global goals.

Complementing modern health systems: Studies confirm that integrating TMPs with biomedical approaches enhances accessibility and cultural sensitivity, while improving community trust in public health systems (Kongthong et al. 2021). Ethnological frameworks underline the coexistence of pluralistic medical systems, where traditional and modern practices interact dynamically to build resilience in health care delivery.

Participatory, educational, and media-based strategies emerged as effective and sustainable mechanisms for promoting holistic health, cultural preservation, and community empowerment. Compared with similar interventions in SE Asia and globally, this study highlights the added value of integrating multiple approaches, youth, media, and community caravan, in one cohesive model. In summary, the evaluation demonstrates that participatory and experiential models grounded in ethnological theory not only validate the role of TMPs in community health but also highlight their broader contributions to cultural sustainability and global development agendas.

Table 5. Comparative overview of ethnomedicine interventions

Study/Region	Intervention type	Target group	Key activities	Key outcomes	Notes/Lessons
This study (Isan, Thailand)	Three-component model: Youth, Learning Media, Community Caravan	Students, community members, TMPs	Hands-on workshops, school herbal gardens, learning media, health caravans	Increased knowledge, practical skills, engagement; intergenerational knowledge transfer; strengthened community cohesion	Integrated three approaches: participatory and media-supported, aligned with SDG 3, 4, 11, 15
Nguyen et al. (2019) (Vietnam)	School-based herbal education	Students	Workshops, herbal gardens	Improved herbal knowledge; youth engagement	Focused mainly on youth; less community-wide impact
Peltzer et al. 2020 (South Africa)	Participatory TMP-centered interventions	Local community	Training, community workshops	Improved knowledge and health literacy; strengthened cultural practices	Emphasized participatory methods; limited integration with schools or media
Reddy et al. (2023) (India)	School + community integration	Students, community	Workshops, media dissemination, community outreach	Enhanced knowledge retention, practical skills, and sustainable application	Multi-component model; shows environmental and cost benefits; similar to this study's integrated approach

Youth engagement

The study identified a declining interest among youth in traditional medicine, with many students showing limited engagement in TMP-led activities and Table 3 indicates only moderate improvement in attitudes and practice. These findings suggest that while school-based programs can raise awareness, they are insufficient alone to foster meaningful behavioral change. Structured hands-on activities, mentorship, and continuous follow-up are needed to enhance youth participation and practical application of traditional knowledge. School-based programs were the primary strategy used to introduce young people to these practices; however, these initiatives alone may not be sufficient to sustain long-term interest. To address this limitation, future research could explore innovative strategies that align with youth preferences and contemporary learning styles, such as digital platforms, gamification, and interactive participatory approaches. Such methods could complement school-based programs by making traditional medicine more engaging and accessible to younger generations.

Promoting youth engagement in traditional medicine is critical not only for preserving cultural knowledge but also for ensuring the continuity of community health practices. By integrating TMP-centered interventions with youth-focused strategies, communities can foster intergenerational learning, strengthen cultural heritage, and enhance the sustainability of community health promotion models.

Limitations and strengths

This study has several limitations that should be acknowledged. First, it focused on evaluating participants' perceptions and processes rather than objectively measured health outcomes, which limits the ability to determine the direct impact on community health. Second, the findings may not be generalizable to other regions or populations because they reflect the specific cultural and contextual characteristics of the study site. Lastly, although data saturation was pursued during fieldwork, some important viewpoints may have been overlooked, potentially affecting the comprehensiveness of the findings and limiting the scope of interpretation.

Despite these constraints, the study also demonstrates several notable strengths. The use of Participatory Action Research (PAR) effectively involved community members at every stage of the study, ensuring contextual relevance, inclusivity, and empowerment. In addition, the collaborative development of survey instruments and data collection tools with traditional medicine practitioners, local residents, and public health officers strengthened both the cultural sensitivity and the credibility of the data gathered. This participatory approach not only enhanced methodological rigor but also fostered community ownership of the research outcomes.

Recommendations

Policy recommendations should focus on strengthening the formal recognition and integration of Traditional Medicine Practitioners (TMPs) within Indonesia's public health framework. The government should establish policies that formally acknowledge TMPs as complementary health actors, ensuring their practices are regulated and monitored for quality and safety. Standardized guidelines for herbal dosages and preparation must also be developed to prevent variability in treatment effectiveness and potential health risks. This integration not only supports the sustainability of indigenous knowledge systems but also enhances accessibility to affordable healthcare in rural and remote areas.

Practical implementation efforts should prioritize educational and community-based initiatives. School programs and community herbal gardens can promote intergenerational knowledge transfer, youth engagement, and practical skills in traditional plant-based medicine. Participatory activities such as the *Traditional Medicine Caravan* could further strengthen public awareness, fostering collaboration between TMPs, communities, and local health offices. In addition, the use of educational media—such as books, digital modules, and e-learning platforms—can broaden public access to TMP knowledge and encourage self-directed, lifelong learning that supports the national agenda for community health resilience.

For future research, longitudinal and cross-cultural studies are needed to evaluate the long-term health and social outcomes of TMP-centered interventions. Such studies should analyze how community-based integration affects public health indicators, economic sustainability, and cultural preservation. Researchers should also investigate effective strategies to maintain youth involvement and succession in traditional medicine practice. Furthermore, comparative studies across regions could explore the most suitable integration models between TMP systems and modern healthcare, offering evidence-based pathways for inclusive and culturally grounded public health development.

In conclusion, this study demonstrates that participatory, TMP-centered interventions can enhance community health promotion and preserve cultural knowledge in the Isan region of Thailand. Through three complementary components—school-based herbal learning, community health caravans, and the development of learning media—the Participatory Action Research (PAR) approach successfully promoted intergenerational knowledge transfer, strengthened practical health skills, and deepened local engagement. These outcomes highlight the pivotal role of Traditional Medicine Practitioners (TMPs) in bridging indigenous wisdom with modern public health systems, contributing directly to the achievement of Sustainable Development Goals (SDGs) 3 (Good Health and Well-being), 4 (Quality Education), 11 (Sustainable Communities), and 15 (Life on Land). The findings offer practical insights for integrating traditional medicine into community-based health initiatives and present a replicable model that reinforces cultural identity, enhances youth participation, and supports the scalability and sustainability of local health promotion systems.

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