

Integrated nursing practice: The outlying areas of Thailand

“Improvement of maternal and child health care in Northeast Thailand: The ISAAN initiative”

Puangtip Chaiphibalsarisdi* Donna Huddleston**

Sithichai Egoramaiphol*** Prapatsri Shawong****

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Problem : *The study was conducted under H.M. King's Initiative Project, organized by the Internal Security Operations Command Royal Thai Army. Thus the Thai government developed and implemented the “ISAAN-KHIAW” project to improve agriculture, thereby improving the economy, education, and health of the ISAAN people. Another name for northeastern part of Thailand is simply called “ISAAN” while the word “KHIAW” is a Thai word which means “Green”. The seventeen provinces of Northeast Thailand have the lowest per capita income in the country. Poverty cycles, closely related to the “growing seasons” have to contributed to a lowered quality of life. In ISAAN area crops often failed, which attributed to poor soil due to irregular rainfall. Prior to the implementation of the ISAAN-KHIAW project, lack of education and poverty lead to poor outcomes for maternal and child health.*

Objective : *1. to assess the health status of pregnant and postpartum women, child-rearing mothers and children under age 5; 2. to search for the appropriate means in improving the maternal and child health for a better quality of life; and 3. to develop the means to supplement women's income in order to support the improvement of maternal and child health through adequate nutrition.*

* Faculty of Nursing, Chulalongkorn University, Bangkok 10330, Thailand. (Cpuangti@chula.ac.th)

** Premier Hospice, Indiana, U.S.A. (dhudd@netnitco.net)

*** Faculty of Science and Technology, Thammasat University, Pathumthani 12121, Thailand. (sithichE@isep.or.th)

**** Nursing division, Khonkaen Hospital, Khonkaen 40000, Thailand.

Setting : *Kanuan and Khoksoong villages in the district of Koodkhang, Amphur Nongruar, Khonkaen province*

Design : *This research and development project was a quasi-study of community health nursing that allow full participation of the villagers. The study was designed of the combination of qualitative and quantitative approaches.*

Results : *The results of the study are as follows:*

- 1. Maternal and child health as well as child rearing are still influenced by the elderly of the village.*
- 2. After training, the villagers had increased their knowledge about maternal and child health significantly at a level of .001.*
- 3. After training, the volunteers were able to provide counselling about maternal and child health correctly and confidently.*
- 4. The villagers were very pleased to listen to the audiotapes in the ISAAAN dialect for local air time on the radio.*
- 5. The villagers attended the cooking demonstrations with pleased in tastes and how to care for the utensils.*
- 6. After training, the villagers were able to produce the handcrafts at a good level and were able to earn an average of 50 Baht per day.*
- 7. After training, the eight men were moderately able to construct 6 looms with a line to work the shuttle, while the nine women were able to weave at a good level.*
- 8. The villagers had increased their knowledge and were able to supplement their income to provide better self care and child rearing.*
- 9. The nutritional status of children under age 5 was improving. At the Kanuan village, the percentage of second degree malnutrition decreased from 18 percent in 1990 to 4 percent in 1992, and the percentage of first degree malnutrition decreased from 43 percent in 1990 to 35 percent in 1992. The decrease of malnutrition was also found in the Khoksoong village, where the percentage of first degree malnutrition decreased from 47 to 33 in 1992.*

Conclusion : *The remarks from this research and development study, which integrated qualitative and quantitative methods, provided data for researchers to allow the full participation of the villagers. The optimal outcomes of the study revealed the necessity of occupational training for increasing income simultaneously with the development of the maternal and child health program. For instance, there should be at least 10 looms for each village since weaving is an important supplemental occupation to keep families together.*

Key words : *Integrated nursing practice, Outlying areas of Thailand, Maternal and child health, Northeast Thailand, ISAN.*

Reprint request : Chaiphibalsaridsi P. Faculty of Nursing, Chulalongkorn University, Bangkok
10330, Thailand

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ปัญหา : วิจัยนี้ได้รับการสนับสนุนจากโครงการมหาวิทยาลัยเพื่อพัฒนา ภาคตะวันออกเฉียงเหนือ ตามโครงการน้ำพระทัยจากในหลวง สำนักงานผู้บัญชาการทหารบกงบประมาณปี พ.ศ. 2533-2535 ภายใต้โครงการอีสานเขียว อนึ่งประชาชนใน 17 จังหวัดภาคตะวันออกเฉียงเหนือมีรายได้น้อยกว่าประชาชนภาคอื่น มีการเรียกชื่อ "อีสาน" แทน ภาคตะวันออกเฉียงเหนือ วงจรของความยากจนมีความสัมพันธ์กับผลผลิตทางเกษตรที่ต่ำซึ่งนำไปสู่คุณภาพชีวิตที่ด้อย ประชาชนในภาคอีสานมีรายได้น้อยเพราะมีผลผลิตทางเกษตรต่ำ อันสืบเนื่องมาจากสภาพดินที่ด้อยคุณภาพ และฝนที่ไม่ตกตามฤดูกาลนอกจากนี้โอกาสที่ได้รับการศึกษาเกี่ยวข้องกับรายได้ของครอบครัว การขาดการศึกษาและความยากจนจึงนำไปสู่ปัญหาด้านสุขภาพอนามัยของแม่และเด็ก

วัตถุประสงค์ : 1. เพื่อประเมินสภาพสุขภาพของหญิงตั้งครรภ์ หญิงหลังคลอด หญิงขณะเลี้ยงดูบุตร และเด็กที่มีอายุต่ำกว่า 5 ปี
 2. เพื่อแสวงหาวิธีการที่เหมาะสมสำหรับการพัฒนาสุขภาพอนามัยแม่และเด็กเพื่อนำไปสู่การมีคุณภาพชีวิตที่ดีขึ้น
 3. เพื่อพัฒนาอาชีพและรายได้ของสตรี อันเป็นการส่งเสริมการพัฒนาอนามัยแม่และเด็กให้มีประสิทธิภาพขึ้น สถานที่ทำการศึกษา: หมู่บ้านชนวน และหมู่บ้านโคกสูง ตำบลกุดกว้าง อำเภอหนองเรือ จังหวัดขอนแก่น

รูปแบบการวิจัย : โครงการวิจัยและพัฒนา (Research and Development) แบบกึ่งทดลองโดยการปฏิบัติการพยาบาลอนามัยชุมชน โดยให้ชาวบ้านมีส่วนร่วมทุกขั้นตอน (Participation Action Research) โดยการผสมผสานการวิจัยเชิงคุณภาพและเชิงปริมาณเข้าด้วยกัน

ผลการศึกษา : 1. การอนามัยแม่และเด็กตั้งแต่การตั้งครรภ์จนการเลี้ยงดูบุตรยังคงมีอิทธิพลจากแม่เฒ่าและพ่อเฒ่าในหมู่บ้าน
 2. หลังการอบรม ฯ ชาวบ้านมีความรู้เรื่อง อนามัยแม่และเด็ก เพิ่มขึ้นอย่างมีนัยสำคัญทางสถิติที่ระดับ .001

3. หลังการอบรม ฯ อาสาสมัครประจำคุ้มสามารถให้คำปรึกษาแนะนำการดูแลเรื่องอนามัยแม่และเด็กได้อย่างถูกต้อง และมั่นใจ
4. ชาวบ้านพึงพอใจในการรับฟังเทปบันทึกเสียงภาษาอีสาน เรื่อง อนามัยแม่และเด็กในระดับมาก
5. ชาวบ้านได้เห็นตัวอย่างการสาธิตปรุงอาหารที่มี คุณภาพ พึงพอใจมากในรสชาติและวิธีการดูแลเครื่องใช้ที่ถูกสุขลักษณะ
6. หลังการอบรมฯ ชาวบ้านสามารถทำผลิตภัณฑ์จากเชือกกล้วยและผักตบชวาได้ในระดับดี และมีรายได้เฉลี่ย วันละ 50 บาท
7. หลังการอบรมฯ ชาวบ้านผู้ชาย จำนวน 8 คนสามารถสร้างกักระตุกได้ 6 หลังในระดับพอใช้ และชาวบ้านผู้หญิง จำนวน 9 คนสามารถทอผ้าด้วยกักระตุกได้ในระดับดี
8. ประชาชนได้รับความรู้ และสามารถนำความรู้จากการอบรมที่หลากหลายทำให้มีอาชีพเสริม มีรายได้มากขึ้นเพื่อประยุกต์ใช้ในการดูแลตนเอง และเลี้ยงดูบุตรหลานได้ดีขึ้น
9. ภาวะโภชนาการของเด็กแรกเกิดจนอายุ 5 ปี ดีขึ้น ในบ้านชนวนพบว่า ภาวะทุโภชนาการระดับ 2 ลดลงจาก ร้อยละ 18 ในปี พ. ศ. 2533 เหลือ ร้อยละ 4 ในปี พ.ศ. 2535 และภาวะทุโภชนาการ ระดับ 1 ลดลงจาก ร้อยละ 43 ในปี พ. ศ. 2533 เหลือ ร้อยละ 35 ในปี พ. ศ. 2535 ในบ้านโคกสูงพบว่า ภาวะโภชนาการระดับ 1 ลดจาก ร้อยละ 47 เหลือ ร้อยละ 33 ในปี พ. ศ. 2535

สรุป : มีข้อสังเกตว่าการวิจัยและพัฒนาแบบผสมผสานทั้งการวิจัยเชิงคุณภาพและการวิจัยเชิงปริมาณจะทำให้ผู้วิจัยได้ข้อมูลสำคัญนำไปสู่การให้ประชาชนมีส่วนร่วมได้มากขึ้น และได้ผลลัพธ์เป็นอย่างดีโดยเฉพาะการผสมผสานการพัฒนาอาชีพ และรายได้เป็นสิ่งจำเป็นอย่างยิ่ง ที่จะต้องพัฒนาควบคู่กับการพัฒนาสุขภาพอนามัย นอกจากนี้จำเป็นต้องมีการพัฒนาที่มากพอดังเช่นปริมาณกักระตุกควรมีอย่างน้อยหมู่บ้านละ 10 หลัง เพราะการทอผ้าเป็นรายได้ที่สำคัญของชาวบ้านเพื่อช่วยให้ครอบครัวได้อยู่ร่วมกัน

คำสำคัญ : การปฏิบัติการพยาบาลอนามัยชุมชน, อนามัยแม่และเด็ก, ตะวันออกเฉียงเหนือ, อีสาน

Thailand has successfully completed several major community healthcare projects. In collaboration with the community, Thai nursing faculty has demonstrated their expertise to participate in these important projects, which have assisted community members to improve the quality of life in several critical areas, including maternal and child health. This expertise also includes an understanding of the local economy and its effects on healthcare. It also includes competency in creating and initiating self-sustaining healthcare programs for the community. Furthermore, as Thai nursing faculty demonstrates competency in community healthcare, their schools, the nursing colleges and universities are becoming the hub for nursing care project training for other countries. Increasingly, to promote the success of developing their own programs, nurses from Bhutan, Sri Lanka, Myanmar (Burma), Malaysia, and Bangladesh seek additional training from skilled Thailand nursing faculty members. These programs range from safe motherhood to public health nursing, to caring for patients with AIDS, and to creating other womens' health projects. One of the more famous projects conducted in Thailand is the ISAAN Initiative, which this paper describes. The authors hope this description assists others in planning, initiating, and completing similar projects in other countries.

Under H.M. King's Initiative Project, Internal Security Operations Command Royal Thai Army, "ISAAN-KHIAW" was planned to improve the quality of life of the people in the northeastern part of Thailand. Another name for northeastern part of Thailand is simply called "ISAAN". The word "KHIAW" is a Thai word which means "Green". The seventeen provinces of ISAAN have the lowest per capita income in the

country. Poverty cycles, closely related to the "growing seasons" have contributed to a lowered quality of life. As in other parts of the world, in Thailand, opportunity for education is often linked to family income. Prior to the implementation of the ISAAN-KHIAW project, lack of education and poverty lead to poor outcomes for maternal and child health in the ISAAN area.

In the early 90's, approximately 70 percent of the ISAAN people depended on agriculture to make their living. However, agriculture could not support such a large population of farmers, crops often failed. The crop failure was attributed to poor soil for growing crops (saline, sandy, or silty) or irregular rainfall, thought to be due to deforestation as the Thai government estimates that only 14% of natural forests remained. Also, lack of abundant, fresh water; and unfavorable weather conditions impeded crop development. Most of the water for the area came from natural and manmade wells, and many of the wells contained saline water. The hot, arid desert-like climate of ISAAN and its inhospitable soil had great impact on agriculture and the health of the people. Thus, the Thai government developed and implemented the "ISAAN-KHIAW" project to improve agriculture, thereby improving the economy, education, and health of the ISAAN people. The word "KHIAW" is a Thai word which means "Green."

The ISAAN-KHIAW project was organized by the Thai military who collaborated with various universities in the country. The first cycle of the project was conducted between 1988-1992. The main financial support came from the Thai government. Secondary to the "greening" of ISAAN, the Thai government implemented other programs for improving the quality of life. The ISAAN initiative, the improvement of

maternal and child health care in two villages in the ISAAN area, was one such program. Our nursing research project "Improvement of Maternal and Child Health in Northeast Thailand: the ISAAN Initiative" was supported by the larger project, ISAAN-KHIAW. For ISAAN-KHIAW, the list of community healthcare needs was lengthy, with maternal and child healthcare at the top. (Table 1).

Table 1. Community healthcare needs identified for the ISAAN Area of Thailand.

Adequate nutrition for all ages
Maternal and Child Healthcare
- immunizations
- care of common illness
- basic health information and health education
Transportation, information and access to health care
Clean water for daily consumption
Essential medications
Proper toilet facilities (sanitation)
Basic maternal and child healthcare

ISAAN Family

The typical ISAAN family members work as rice farmers. Prior to the ISAAN-KHIAW project, the family was nomadic, earning money by following the sugar cane harvest, cutting sugar cane for approximately 50 Baht (2 US dollars)/day. The entire family moved, children helping as they could as they followed the harvesting of the sugar cane fields. Early marriages for women were the norm. Unemployment was high, education was not seen as a priority by the family, and healthcare was in the hands of older members of the family. Lack of community healthcare

led to an infant mortality rate in the ISAAN area that was higher than Bangkok's. Formal sources for knowledge about the physiology of the body, health promotion and health prevention activities were limited.

Description of Thai Extended Family

The elders in the ISAAN community were seen as a vital link to other family members. Extended families with revered elderly members were the norm. Younger family members there have been taught from an early age "to listen and obey". Thus any maternal and child healthcare interventions must involve the entire family to be effective. The customs of the villages in the ISAAN area reflect the economic hardship and are incorporated into village religious life. For example, the main holiday celebration in the ISAAN area is the Thai New Year. The Thai New Year, known as Songkran Day, falls between April 13-16 every year. The working people with their children return to their hometowns to pay respect to their parents and other revered elderly village members. Buddhism is the primary religion of Thailand and the ISAAN area. During the Thai New Year, "Pa-par" takes place. "Pa-par" is an organized donation drive arranged by pious Buddhists. The Buddhist monks accept money as well as necessary items for daily life at designated locations and specified times. The proceeds go to the Buddhist temple or wat.

Integrated Nursing Practice

Integration of nursing into the community requires an interdisciplinary team and community representation.⁽¹⁾ The researchers who were the ISAAN initiative planners posited that interdisciplinary planning, community involvement and respect,

facilitation of community self-help, appropriate technologies, family approach, basic health services, and an economy that supports family groups promotes a competent community. The integrated nursing practice is based in the framework of Primary Health Care (PHC) as described by McElmurry⁽²⁾ with improvement of quality of life (QOL) as the main outcome. The framework enhances and promotes the declaration of Alma-Ata in regard to primary health care.⁽³⁾ Internationally, maternal and child healthcare is one of the eight essential areas to be initiated and continued in health care. Using PHC as a framework adds to the validity of maternal and child healthcare as an essential area of international health that is relevant to the needs of a community such as the ISAAN area of Thailand.

Quality of Life

Quality of life as described by Sooksamrid and Suwan⁽⁴⁾ has been adopted by the Royal Thai government to improve the well being of the Thai people. Table 2 lists the eight elements comprising the Thai Quality of Life Framework.

Table 2. Eight elements of Thailand's quality of life framework.

1. Adequate food
2. Home ownership
3. Health education
4. Family safety
5. Improved farming
6. Family planning
7. Participation and curiosity in development of self/family/community
8. Moral values

These eight elements have been developed by an interdisciplinary group. The eight elements along with 32 indicators have been used as criteria to assess and evaluate communities throughout Thailand.

Methods

Setting / sample

The setting for this integrated nursing practice in community health project were two outlying villages in the Khonkaen province of ISAAN. The first two years of the project were focused in the village of Kanuan. In the third year, the project was expanded to a neighboring village, Khoksoong. Both villages are in the district of Koodkhang, Amphur Nongruar.

For the ISAAN initiative, the targeted population were women who were pregnant, women immediately postpartum, women who were breast-feeding, and children under 5 years of age. The community volunteers who were recruited from the villages were both women and men who had volunteered to participate in the health development of their communities without pay. Most of the volunteers already had leadership positions in their villages.

ISAAN Initiative Objectives

To improve the maternal and child healthcare outcomes in two villages in the ISAAN area through integration of nursing practices within the community.

1. to assess the health status of pregnant and postpartum women, child-rearing mothers and children up to 5 years old
2. to search for the appropriate means in improving the maternal and child health for a better quality of life
3. to develop the means to supplement

women's income in order to support the improvement of maternal and child health through adequate nutrition To meet the objectives of the ISAAN initiative, a three-year plan was instituted (see Table 3).

Table 3. 3 - year plan for the maternal and child healthcare: ISAAN Initiative.

Phase	Description	Intervention	Major finding (s)
Year 1	Community participation	Identify key informants	Need inter and intrasectoral involvements
	Set priorities with community	and resources	
	Training 2 research assistants	Ethnographical study	Maternal and child health were influenced by elderly
	Interdisciplinary team formed	Training villagers on "maternal and child health"	Increase knowledge at .001 level
	Mobile unit	Health services approximately every 3 months; prenatal care and breast feeding women, assessment of malnutrition for children, under age 5 and older children	Inadequate nutrition for women who were pregnant and breast feeding Malnutrition in children under age 5 at level 1 and level 2
		health screening for adult individuals, link to transportation for medical attention / hospitalization, and health education	Some minor health problems in adult individuals
			Health education alone was not effective in changing nutritional status of the children
	Recruitment & training of community volunteer	Counselling and health education the villagers at home	The volunteers were able to provide counselling and health education correctly and confidently
	Audiotapes	ISAAN dialect with air time on radio	Increased knowledge by "word of mouth" with cultural appreciated
Year 2	Supplemental income project	Training in handcrafts	Trainees performed at moderate level
	Cooking demonstrations	Meal preparation with return demonstrations	Changes in way families prepared meals
	Continue health mobile unit and community volunteer		
Year 3	Supplemental income project (Conducted in 2 villages)	Training in handcrafts for both villages	Trainees performed at good level and increased family income 50 Baht per day
	Supplemental income project	Training in hand-weaving for both villages	The male trainees were moderately able to construct the looms
	Continue health mobile unit and community volunteer		The female trainees weaved at good level Decrease in malnutrition in children under age 5

The first task included community assessment and developing priority interventions. Both primary data and secondary data were analyzed as part of the community assessment. With the support of the government, the secondary data was used as the baseline. For the initial primary data, two trained research assistants who were local to the area, and senior public health students lived in the community for a month collecting data. The research assistants lived with the selected key informants and their families. Most of the key informants were women. One key informant was a well-known, traditional midwife who had delivered many babies in the village. The two research assistants also observed and participated in the celebration of the Thai New Year.

In the structure of government's rural development plans, the ISAAN-KHIAW project leaders had set up a local committee for each district called, "Committee for coordination in the District" or simply "CCD". The CCD was comprised of four key persons from ISAAN-KHIAW, representing education, agriculture, healthcare, and an administrator from the district. The researchers who conducted the ISAAN

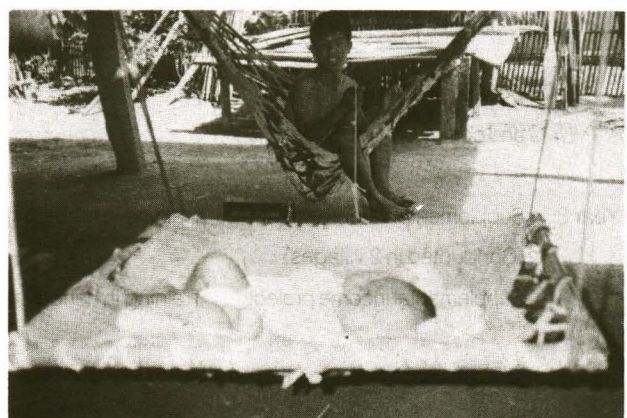
initiative collaborated with the four key persons and recruited and trained community members to form the interdisciplinary healthcare team. In other words, in successful community health nursing practice, the nurse works with, and coordinates care from, several disciplines to provide integrated nursing care.

Health Education

A lesson plan was developed for the community volunteers. Also audiotapes, in the ISAAN dialect, of maternal and child healthcare educational information were prepared for distribution and for radio air time. It seems to work very well in the village setting and the audiotapes enhanced the "word of mouth."

Community Participation in Self-Help

One community volunteer was assigned to 10 households. The community volunteers were trained in relevant knowledge of maternal and child healthcare and in methods of teaching. The community volunteers visited in the home to provide health education to the family members. For this project, if the mother or the child needed additional medical attention or



Community volunteer

hospitalization, the community volunteer assisted them in finding needed transportation. The community volunteer also recorded any visit or contact with the family on a simple form that was returned to the nurse.

Provide Basic Nursing Service:

As part of the outreach for maternal and child healthcare, the researchers organized a mobile health unit. The "healthmobile" was equipped to handle the following activities: prenatal care, breast examination, checking body weight for nutritional assessment of the children, screening for hypertension and diabetes mellitus, and heart and lung assessment. In addition, the nursing staff was able to provide some essential drugs.

Thus integrated nursing practice was used for outreach through community volunteers to improve the overall maternal and child healthcare in two villages in the ISAAN area. The community health nursing faculty from Chulalongkorn University spearheaded this ISAAN initiative. Data on lived experience, values and beliefs in relation to maternal healthcare and issues about the quality of life were collected using an ethnographic approach. Following the data collection, priorities were set and interventions were designed to target areas that would improve maternal and child healthcare outcomes in the community.

After the first year, it was noted that although the community people had more knowledge about health promotion and disease prevention, health



Cooking demonstrations

practices remained unchanged. Therefore, the nursing researchers found that education alone was not enough: families in the village needed more income to purchase adequate food for the mother or the child. Thus, the researchers added additional strategies in the second year of the intervention.

In the second year of the study, cooking demonstrations were initiated along with introducing cottage industries to supplement family income. The cottage industries were based on natural resources. The villagers identified several readily available and abundant plants, including banana plants, hyacinths, and reeds. With assistance from the government, the people in the village felt that they could readily use the available local resources to make products to sell to supplement their family income. For this, skilled trainers came from Bangkok.

Cottage Industry:

Artisans came from Bangkok and trained village members to use the inner stems of banana trees in making beautiful hand crafted products. For the training process, the Thai government appointed a trainer who lived with the villagers. After a - 14 day



training period, 17 participants (15 women and 2 men) had passed the course. The nursing researchers awarded the top three outstanding women with a certificate. After the training, most of the villagers used their newly acquired cooking skills and continued producing the handbags for sale. They made handbags whenever they had free time. However as they only made handbags during their free time, the villagers were unable to accept large orders. Nevertheless, the income from making the handbags, per day, was equivalent to being laborers in the sugar cane fields.

Simultaneously with the training in crafts, the nursing researchers set up an innovative way to improve the nutritional status of all the villagers, thus improving the status of women who were pregnant or breast feeding and children under age 5. The researchers demonstrated healthful, nourishing meals based on foods that could be obtained locally or foods that had been dried, such as pork, that could be transported to the village without spoiling. Women, men and teens in the village gave return demonstrations of meal preparation and learned how to cook nutritious meals based on the basic food groups.



Training in handcrafts

For the third year, the researchers expanded the intervention to the neighboring village of Khoksoong. A second group of 26 women consisting of 15 women from both villages and 11 students (grade 6, ages 13-14) were trained in handicrafts.

In order to encourage people not to move away from their families, an additional occupational training program is needed in order to supplement individual and family income and to promote unity. The researchers wanted to demonstrate that improvement of family income together with health education will improve the health status of the people, especially mothers and children.

Findings

The villagers were receptive to the maternal and child healthcare education from both the nurses and the audiotapes in the ISAAN dialect aired on radio. However, changes in the local economy were required to bring about changes in healthcare practices. In addition, resources from outside the villages were needed. The resources from Bangkok facilitated a rapid change in the economy, leading to acceptance of new ways to prepare meals, thereby improving maternal and child healthcare.

Mobilization of Resources:

In year two, to meet the objective to improve maternal and child healthcare outcomes, adequate nutrition was seen as an essential element. The integrated nursing practice team looked to the ISAAN-KHIAW project for assistance. Together with the larger overall project participation and community involvement, the nursing research team implemented the community care plan. With additional income, the

families were able to remain in the village and purchase adequate food.

During the second year of the project, the training program for home industries was added. The work of making banana stem products became a family project. Family members, including children, helped i.e. harvesting and cutting the banana tree stems, carrying them to the place of preparation, and preparing the banana strips for use in the handicrafts. Several of the villagers started designing their own patterns for handbags.

A family approach was seen as an appropriate means for outreaching in the Thai culture. Although there is a strong, international stigma against using children in the labor force, the children's involvement in the making of the handicrafts was not in a factory setting nor were the children forced to work. The cooking demonstrations also appealed to the young women ages 10 and up who participated in the training. One thirteen-year-old girl influenced change in her entire family by learning cooking practices and arranging for her family to be trained as artisans.

The revered elderly were also impacted on by the demonstrations. The older people in the village liked the new ways. A sixty-year-old woman told us,

"I learned how to make my handbag from the banana stems by watching a girl who had been trained. Here I can put my personal belongings in it. We have plenty of banana trees to make handbags." After a combined handicraft training sessions with cooking demonstrations, a new grandfather commented,

"I will buy dried shredded pork for my new grandson when he can eat."

In addition, the participants discussed some myths about the meaning of food in their culture. During the postpartum period, it was common for women to eat only rice and salted fish, no vegetables. On the other hand, women who were breast feeding ate large quantities of vegetables, and no meat. In the family, vegetables were usually reserved for only women who were breast feeding. As the healthcare team worked within the village, cooperation and participation among the local people increased.

Community volunteers became the keys to community change. For example, the malnutrition of children under five years of age was one of the top priorities identified under the ISAAN Initiative. The community volunteers helped to identify a group of children who were malnourished.

In Kanuan, the community volunteers assessed the nutritional status of children under age 5 by assessing the ratio of weight to age. In the first year of the study, we found that 43% of the identified

population had 1st degree malnutrition and 18% had 2nd degree malnutrition. At the end of year three, 1st degree malnutrition had decreased to 35% and 2nd degree malnutrition had decreased to 4%.

For Khoksoong, on the third year of the project, the initial nutritional assessment found that almost half, 47% of the children had 1st degree malnutrition and 12% had 2nd degree malnutrition. After the intervention of health education of the volunteers, the third assessment found the decreased of 1st degree malnutrition to 33%. For the 2nd degree were the same due to the premature babies.

In summary, the ISAAN Initiative supported the people in the villages to remain with their families in their own homes. The people in both villages were cooperative and participated in projects as trust developed among them, the healthcare team, and the community volunteers. The success in one village led to the trained villagers sharing their newly acquired expertise with an additional village.



Training in hand-weaving

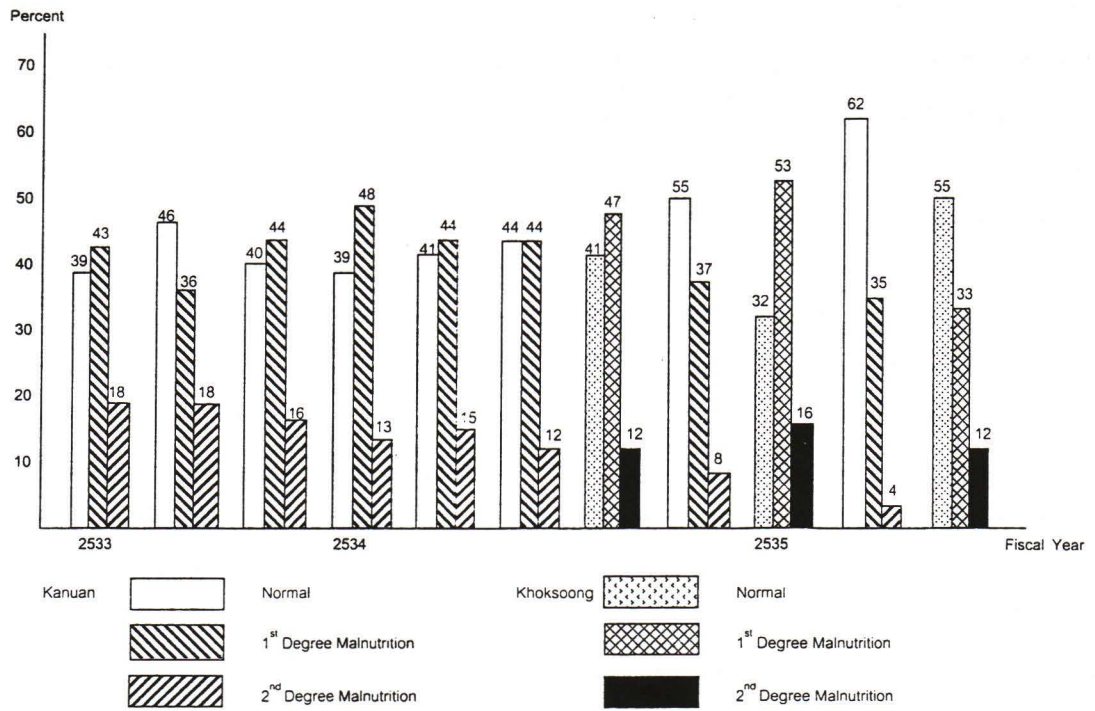


Figure 1. Nutritional level of children under age 5, Kanuan and Khoksoong villages.



Assessment of malnutrition

Discussion / implications

Economic development has a great impact on health behavior, but economic development alone will not change health behavior. A combination of economic changes, knowledge, and healthcare interventions planned to involve the community in its own healthcare are needed. In two Thai villages, integrated nursing practice improved maternal and child healthcare outcomes by working with an interdisciplinary team to improve the economy, collaborating with government officials, and involving the members of the village in their own healthcare. Furthermore nursing provided the activities needed for successful outcomes. Nursing fostered community involvement throughout the project by identifying key people in the villages and training community volunteers. The community volunteer approach was seen as one of the most effective ways of promoting healthcare education in the community. The community volunteer plays an important role by integrating "traditional ways" with community nursing practice interventions.

Providing health education for teenage girls might be an effective way to sustain a healthy population. We believe that school is the best place to learn healthy life style skills. As education is mandatory only to the 6th grade in Thailand, we strongly recommend mandatory education through the 12th grade and, if economically feasible, 4 years of college as an ultimate goal.

The researchers have several other recommendations. At the village level, the researchers recommend improved record-keeping that will allow measurement of the improvement in maternal and child health statistics, including births, deaths, illnesses

and malnutrition. Premature infants need to be followed up on by nurses or physicians to provide intensive well-baby care. Well-baby care and well-child care should be the standard and extend at least to age five or more. Supplemental food programs for children should be a national priority.

Improved training of community volunteers who have the good of the community at heart should be encouraged. These community volunteers should be trained in several different areas of healthcare in addition to maternal and child healthcare.

The villages that participate in improving their own healthcare should be commended for small successes and encouraged to develop skills that can improve health "for all." In the ISAAAN area, through integrated nursing practice and an interdisciplinary planning team, relevant ideas and resources for the benefit of the community were developed. However, the interdisciplinary planning was incomplete and not sufficient for a comprehensive primary health care approach. Thus, the team added the input of community members and solicited the cooperation of the community through volunteers. As the community people added their own needs, strengths and weaknesses to the healthcare planning list, the project workers introduced and negotiated for items which would contribute to health promotion and disease prevention. The revised list of elements included adequate and nourishing food, home ownership, health education, family as the basic unit of the community, and limited family size. Community interest in this project was initiated and sustained throughout the project and the project leaders were careful to listen to and incorporate the values and beliefs of the community.

In summary, we believe integrated nursing practice can be used to outreach to other communities in other countries. Primary health care was integrated into the community through nursing practice in two Thai villages in the ISAAN area. This integration required government backing. Community involvement, interdisciplinary teams, and local economic development were the first steps in improving the maternal and child healthcare outcomes of the two villages in northeastern Thailand.

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