Plastic surgery is defined by Gaspare Tagliacozzi (1545-1597) as the art devoted to repairing congenital or acquired defects\(^1\). The name is derived from the Greek language “Pastikos”, meaning to mold or to shape. Plastic surgery is among one of the most important fields in surgical problems, the single most diverse specialty in the medical field, based on principles rather than specific procedures in defined anatomic location\(^2\).

Plastic surgery consists of two majors fields: reconstructive surgery and cosmetic surgery. Its roots lie in reconstruction aspects, which are the surgical techniques to reconstruct abnormal structure or deformities to return to normal condition. The reconstruction procedures are used in many aspects, including the craniofacial surgery, microsurgery, nerve surgery, and hand surgery. Craniofacial Surgery, developed by Tessier in 1965\(^3\), is the surgery that involves the area of cranium and face, and the cooperation of plastic surgeon and neurosurgeon. Microsurgery is a repair of small vessels and nerves by the use of operating microscope and includes the micro vascular free tissue transfer. This has contributed to evolution of plastic surgery in reconstruction of soft tissue and bone, including variety of skin flaps. Cosmetic surgery involves restoring restructures to improve individual’s external appearance\(^5\).

Plastic Surgery in Thailand

The early history of plastic surgery in Thailand is not exactly known. However, the plastic surgery procedures that were performed during its initial period included cleft lip and cleft palate repairs and skin graftings. In the year 1924, there was a record of Dr. TP Nobel who worked as the Head of the Surgical Department in Siriraj Hospital, Bangkok, the only Medical School in Thailand at that time. He was an Orthopedist but had developed many fields of surgery to teach the medical students. At that time, “cleft lip surgery was performed only in the mild case in order to demonstrate and teach surgical techniques and the results of the improvement that could be provided to the patient for the medical students and other doctors”\(^4\).

In 1977, the Thai Medical Council accepted the formal training program in plastic surgery in Thailand. The first batches of graduated plastic
Fig. 23 The ceremony opening of the Tawanchai Center and the Tawanchai Foundation.

Fig. 24 The Collaborative work of the Tawanchai with hospitals in Lao PDR.

Fig. 25 The First Thai International Congress on Interdisciplinary Care for Cleft Lip and Palate 2003 (TICPC2003).

Fig. 26 The KKU plastic surgery residents and the first two batches of plastic surgeons.

The field of plastic surgery includes basic plastic surgery and related subjects, flaps and grafts, microsurgery, implants & biomaterials, plastic surgery of the integument, head and neck, upper extremity and hand surgery, trunk and breasts, lower extremity and the genitourinary system, practice of plastic surgery, craniofacial anomalies craniomaxilllary surgery, craniofacial surgery, microsurgery, burns and aesthetic surgery. The comprehensive management involves community-based care, evidence-based medicine and health-service research in plastic surgery(37) and the 21st century learning skills will be the direction of the plastic surgery program. The plastic surgery and innovation in medicine may include innovation and research, innovation and plastic surgery, composite tissue transplantation, collaboration, documentation, data gathering and regulation(38).

What is already known on this topic?
Plastic surgery was defined and consists of 2 majors fields: reconstructive surgery and cosmetic surgery.

What this study adds?
This study presents the history, challenges and perspective of the university plastic surgery unit in the northeast of Thailand. Many initiatives including patients care, educational program and researches are presented with current and future perspectives.

Acknowledgement
The author thanks all mentors, teachers, colleagues, residents and patients and their families for their dedication and supports to the development of KKU plastic surgery. The present study was supported by the Tawanchai Foundation for Cleft Lip-Palate and Craniofacial Deformities and the Center of Cleft Lip-Cleft palate and Craniofacial Deformities, Khon Kaen University, in Association with the Tawanchai Project.

Potential conflicts of interest
None.

The Center of Cleft Lip-Cleft palate and Craniofacial Deformities, Khon Kaen University under the Tawanchai Royal Granted Project
References

6. Uttaravichien T, Kuptanond C. Department of Surgery. In: Faculty of Medicine, Khon Kaen University, editor. 40th Year Faculty of Medicine, Khon Kaen University. Khon Kaen: Klungnanawittaya; 2012: 163-9.
3 ทหาระของประเทศไทยและมุมมองผ่านวัชรยศสตรีศตวรรษพิม 4 ทวีป ด้าน ที่สำคัญคือ ศักยกรรมเสริมสร้างและศักยกรรมเสริมสร้างโดย
มาสตรายที่ที่สังคมศึกษาและศึกษาโดย.

สาระสำคัญของศิลปะประเทศไทยและศิลปะศิลปะเสริมสร้าง ในประเทศไทยศิลปะศิลปะเสริมสร้างในระดับระดับประถมศึกษาเป็นการพัฒนาทางศิลปะและกำลังจิตอย่างต่อเนื่อง ในปี พ.ศ. 2530 โดยมีการพัฒนาศิลปะศิลปะเสริมสร้าง และศิลปะศิลปะเสริมสร้าง ในภาคีรัฐศิลปะศิลปะ โรงแรมกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกรีนกร�
in the project: 50% of the participants had very good satisfaction and 46.43% had good satisfaction with the coverage of the project. Above half of the respondents reported having an opportunity in learning and sharing experience in caring for patients with cleft lip and palate (57.14%) and overall, they satisfied with the project (60.71%) (Table 4).

**Discussion**

Feeding difficulties were the most common problem encountered by all families including holding the child, rhythm of feeding, a choked flow out through the nose, unfamiliar with the device used in feeding. This was supported by a study of Pathumwiwathana et al (14) that examined the promotion of exclusively breastfeeding for infants with CLP for the first six months after birth. Parents had received training in breastfeeding at the postpartum wards, Srinagarind Hospital. It was found that there were 20 cases could be achieved having breast feeding since at the hospital. However, after babies were discharged from the hospital, only two were breastfed for six months. This highlights the difficulties of mothers in breastfeeding when there was no assistance or supervision from nurses.

This study recorded the emotions of parents who delivered babies with cleft lip and palate immediately in their own “When I first saw my baby, I was scared and cried till death”, “I fainted when I saw my baby’s face”, “Having mixed feelings both love and feeling poor for my baby who was borne with deformities unlike other normal babies”. Providing information soon after the birth would greatly benefit the family as a whole as their feeling express after getting information as “but the doctor said it is curable. I then feel better(15)”. The present study revealed the mental problems of patients and their families who had stress, anxiety and difficulties in making their mind to accept the baby, which were consistent with the results from the home visit project by Augsornwan et al (15).

A network with volunteers created by implementing camps provided opportunities for patients and their families to acquire knowledge, share their experiences and learning from the families with similar problems (Family group support). This would strengthen family bonding and form group of friends between families having similar facial deformities. This corresponds to results of the “Teaching life skills by the activities from the integration project (16)”. Teenagers faced bullying due to physical appearance and voice changes. This in turn stressed parents and children not to speak out, disclose the their inner thoughts and prevented them being photographed while travelling or on social occasions. The camp provided chanced to gain confidence and being assertive while facing society. After the implementation of the project, the satisfaction level varied among the families. However, the satisfactory levels were between high to the highest degree about the project on addressing an opportunity in learning and sharing experience in caring for patients with CLP.

**Table 1.** Demographic data of participants of the project

<table>
<thead>
<tr>
<th>Demographic data</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients and families</td>
<td>12 (43)</td>
</tr>
<tr>
<td>Volunteers (CLP patients)</td>
<td>5 (18)</td>
</tr>
<tr>
<td>Mentor (nurses)</td>
<td>5 (18)</td>
</tr>
<tr>
<td>Lecturers and staff</td>
<td>6 (21)</td>
</tr>
<tr>
<td>Total</td>
<td>28 (100)</td>
</tr>
</tbody>
</table>

**Table 2.** Patient’s characteristics and current treatment

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean age</th>
<th>Diagnosis</th>
<th>Current treatment</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>4 (33.34%)</td>
<td>4 years Unilateral CLP (2) - In the stage of speech training</td>
<td>Khon Kaen</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Monitoring for ears and hearing examination every 6 months - Preparation for dental hygiene</td>
<td>Kalasin</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Precaution of dental caries for orthodontic treatment.</td>
<td>Maha Sarakham (2)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8 (66.66%)</td>
<td>12 years 2 months Bilateral CLP (3) - In the stage of speech training.</td>
<td>Rene-Et</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Oral hygiene care, preparations for bone grafts and orthodontic treatment.</td>
<td>Maha Sarakham (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kalasin (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Khon Kaen (3)</td>
<td></td>
</tr>
</tbody>
</table>