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วารสารสหเวชศาสตร์ มหาวิทยาลัยราชภัฏสวนสุนันทา

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พืชสมุนไพรที่ใช้สำหรับการรักษากลุ่มอาการทางผิวหนังในตำรายาหมอพร

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บทคัดย่อ

ตำรายาสมุนไพรตำรับหมอพรเป็นตำรายาที่เขียนและบันทึกโดยกรมหลวงชุมพรเขตอุดมศักดิ์ (หมอพร) ที่แล้วเสร็จเมื่อปี พ.ศ.2458 การวิจัยนี้เป็นการวิจัยเชิงพรรณามีวัตถุประสงค์เพื่อศึกษาชนิดของพืชสมุนไพรเฉพาะที่ใช้สำหรับการรักษากลุ่มอาการทางผิวหนังในตำรายาหมอพรที่เป็นภูมิปัญญาทางการแพทย์แผนไทย โดยรวบรวมตำรับยาและวิเคราะห์พืชสมุนไพรทั้งความถี่ในการใช้และข้อมูลทางด้านวิทยาศาสตร์ จากการศึกษานี้พบว่ามีการใช้สมุนไพรทั้งหมด 66 ชนิด จาก 36 วงศ์ ใน 78 ตำรับ สำหรับการรักษา 29 กลุ่มอาการทางผิวหนัง พบพืชในวงศ์ปาล์ม (Arecaceae) ที่มีการใช้มากที่สุด (ร้อยละ18) รองลงมาเป็นพืชในวงศ์ถั่ว *(Fabaceae/Leguminosae)* (ร้อยละ 14) วงศ์พลับพลึง (Alliaceae) (ร้อยละ 12) วงศ์มะเขือและขิง (Solanaceae, and Zingiberaceae) (ร้อยละ 11) ส่วนพืชสมุนไพรที่มีการใช้มากที่สุด ได้แก่ มะพร้าว *(Cocos nucifera* L.*)* (ร้อยละ 11) ตามด้วยมะนาว *(Citrus aurantifolia* Swingle*)* (ร้อยละ 5) กระเทียม หอมแดง และชุมเห็ดเทศ *(Allium sativum* L.*, Allium ascalonicum* L.*, Cassia alata* (L.) Roxb) (ร้อยละ 4) ส่วนของพืชที่มีการนำมาเตรียมตำรับยามากที่สุด ได้แก่ ผล (ร้อยละ37) และใบ (ร้อยละ30) การศึกษานี้เป็นรายงานแรกของข้อมูลทางวิทยาศาสตร์ของพืชสมุนไพรที่พบในตำรายาหมอพรโดยเฉพาะสูตรตำรับยาสำหรับกลุ่มอาการทางผิวหนังซึ่งสามารถช่วยในการอนุรักษ์ความรู้ภูมิปัญญาไทยทางด้านสมุนไพรและเอื้อต่อการวิจัยการพัฒนายาสมุนไพรที่ทันสมัยในอนาคต

คำสำคัญ : พืชสมุนไพร, หมอพร, กลุ่มอาการทางผิวหนัง, แพทย์แผนไทย

*** ผู้ประพันธ์บรรณกิจ**

วารสารสหเวชศาสตร์ มหาวิทยาลัยราชภัฏสวนสุนันทา

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Medicinal Plants Used for Treating Skin Conditions in Moh Phon's Thai Herbal Formularies

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ABSTRACT

Mor Phon's Thai herbal formularies were developed and recorded by His Royal Highness Prince Abhakara Kiartivongse, a royal son of King Rama V (Prince of Chumphon or Krom Luang Chumphon Khet Udomsak) until 1915. The purpose of this study was to elucidate traditional Thai medical wisdom regarding Mor Phon's Thai herbal formularies focus on skin conditions. Medicinal plants used for treating skin conditions in Mor Phon's Thai herbal formularies were compiled, authenticated and analyzed the frequency as well as reviewed on their scientific information. Sixty-six plant species from 36 families were mentioned in 78 different formulations for the treatment of 29 different skin conditions. The majority of the plant belong to the families of Arecaceae (18%), Fabaceae/Leguminosae (14%), Alliaceae (12%), Solanaceae (11%), and Zingiberaceae (11%). The most used plant species was Cocos nucifera L. (11%) followed by *Citrus aurantifolia* Swingle (5%), *Allium sativum* L., *Allium ascalonicum* L., *Cassia alata* (L.) Roxb (4%). Fruit (37%) and leave (30%) were the mostly used plant part to prepare the remedies. This study provides the first report on scientific information of plant materials used in Mor Phon's Thai herbal formularies for skin conditions which can help preserve the traditional medical knowledge and will facilitate future modern herbal drug development research.

Keywords: Medicinal plants, Mor Phon, Skin conditions, Thai traditional Formularies

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Introduction

Traditional medicine has a long-standing history of employing medicinal plants as a primary approach for treating various ailments, including skin conditions[1]. Throughout different cultures, the utilization of herbal remedies for dermatological issues has been widely practiced, encompassing a diverse array of plant species[2-4]. This study aims to delve into Moh Phon's herbal formularies for skin conditions, focusing on the composition of medicinal plants employed and providing valuable insights into their utilization and therapeutic potential.

The utilization of herbal remedies in traditional medicine for the treatment of skin conditions has deep historical roots that extend back centuries[5,6]. The wisdom passed down through generations to identify medicinal properties of plants for alleviating dermatological issues[7].

Moh Phon's collection of herbal formularies represents a valuable repository of this traditional knowledge. The traditional Thai medicine prescriptions of Moh Phon were developed, compiled, and recorded by His Royal Highness Prince Abhakara Kiartivongse, a royal son of King Rama V (Prince of Chumphon or Krom Luang Chumphon Khet Udomsak) or Moh Phon until 1915[8]. Passed down through the ages, these formularies contain detailed information about the specific plants used, the preparation methods, and the recommended dosages for various skin conditions. They offer a unique perspective on the therapeutic potential of medicinal plants and provide insights into the interplay between nature and human health[8,9].

Objective of the study

This study aims to examine the composition of the plants documented in Moh Phon's herbal formularies for skin conditions. By employing scientific methods, we seek to identify the plant families and species utilized, as well as the specific parts of the plants that are most commonly employed in traditional remedies. By analyzing the prevalence and distribution of these plant species, we can gain a deeper understanding of their therapeutic potential and their relevance in the context of traditional medicine.

Methods

Study design

This study used a descriptive research design.

Data Collection

Moh Phon's traditional Thai medicine formularies were collected from the second edition of Moh Phon's Thai Traditional Medicine Formulary[8]. After collecting, the formularies for skin conditions were screened and selected for further analyze of plants species. All plants materials in each formulation were listed and identified by specialist in Thai traditional medicine. Then, the scientific information of all plants was reviewed through the subscribed databases by the Chulalongkorn University, such as Pubmed, Science Direct, Medline, and Google Scholar.

Data Analysis

The findings from the reviewed studies focus on key parameters, such as scientific name, family, local name, habit, and part used, methods of preparation and administration were recorded for each plant species in the chapter of skin conditions of Moh Phon book. The statistical analysis was conducted in terms of relative frequencies.

Calculation of Frequencies

To determine the relative prevalence of different plant parts and habits, frequencies were calculated. The formula used to calculate the percentage was as follows:

Percentage = (Number of occurrences / Total number of observations) * 100.

The resulting percentage provided a standardized measure for comparison and analysis.

Ethical Consideration

The study approved by the Committee of the Graduate Program in Public Health Sciences, College of Public Health Sciences, Chulalongkorn University due to this this study doesn't involve in humans.

Results

In Moh Phon's herbal formularies, from Table 1 and Table 2, a total of 66 plant species from 36 families were identified. The most prevalent families were Arecaceae (18%), Fabaceae/Leguminosae (14%), Alliaceae (12%), Solanaceae (11%), and Zingiberaceae (11%) of the identified species, respectively. These plants were utilized for various parts, with fruit being the most commonly used, found 37% of the total plant parts used. The plants exhibited diverse habits, with herbs being the most common (36%), followed by shrubs (25%), trees (19%),

shrub/tree (10%), climbers (7%), and creeping plants (2%). The least common habit among the mentioned plants was the bush, representing 1% of the species.

Table 1 Medicinal plants used for treating skin conditions in Moh Phon's herbal formularies

Family	No.	Botanical name	Local name	Habit	Part used	%
Acanthaceae (5%)	*1.*	*Barleria lupulina* Lindl.	เสลดพังพอน	Bush	Leaf	1%
	2.	*Clinacanthus nutans* (Burm.f.) Lindau	พญายอ	Shrub	Leaf	1%
	3.	*Rhinacanthus nasutus* (Linn.) Kurz.	ทองพันชั่ง	Shrub	Leaf	1%
Agaeceae (2%)	*4.*	*Agave sisalana* Perrine	ป่าน	Herb	Ash(leaf)	1%
Alliaceae (12%)	*5.*	*Allium ascalonicum* L.	หอมแดง	Herb	Bulb	4%
	6.	*Allium sativum* L.	กระเทียม	Herb	Bulb	4%
Anacardiaceae (2%)	*7.*	*Spondias pinnata* (L.f.) Kurz	มะกอก	Tree	Fruit	1%
Amaranthaceae (2%)	*8.*	*Cyathula prostrata* (L.) Blume	หญ้าพันงูแดง	Shrub	Top-tip	1%
Apiaceae/Umbelliferae (8%)	*9.*	*Apium graveolens* L.	ขึ้นฉ่าย	Herb	Leaf	1%
	10.	*Centella asiatica* (L.) Urb.	บัวบก	Creeping plant	Stem	2%
	11.	*Coriandrum sativum* L.	ผักชี	Herb	Root, Fruit	1%
	12.	*Cuminum Cyminum* L.	ยี่หร่า	Herb	Fruit	1%
Apocynaceae (2%)	*13.*	*Calotropis gigantea* (L.) Dryand	รัก	Herb	Leaf	1%
Araceae (2%)	*14.*	*Colocasia esculenta* (L.) Schott	เผือก	Herb	Gum/latex	1%

Family	No.	Botanical name	Local name	Habit	Part used	%
Arecaceae (18%)	*15.*	*Areca catechu* L.	หมาก	Tree	Fruit	*1%*
	16.	*Cocos nucifera* L.	มะพร้าว	Tree	Shell	*11%*
Boraginaceae (2%)	*17.*	*Heliotropium indicum* L.	หญ้างวงช้าง	Herb		*1%*
Caricaceae (2%)	*18.*	*Carica papaya* L.	มะละกอ	Tree	Leaf	*1%*
Clusiaceae (5%)	*19.*	*Garcinia hanburyi* Hook F.	รงทอง	Tree	Gum	*1%*
	20.	*Garcinia mangostana* L.	มังคุด	Tree	Peel	*2%*
Convolvulaceae (2%)	*21.*	*Ipomoea aquatica* Forsk.	ผักบุ้งไทย	Herb	Leaf	*1%*
Cucurbitaceae (5%)	*22.*	*Coccinia grandis* (L.) J. Voigt.	ตำลึง	Climber	Leaf	*1%*
	23.	*Lagenaria siceraria* (Molina) Standl.	น้ำเต้า	Climber	Leaf	*1%*
	24.	*Momordica charantia* L.	มะระ	Climber	Fruit	*1%*
Dipterocarpaceae (5%)	*25.*	*Dipterocarpus alatus* Roxb.ex G.Don	ยางนา	Tree	Oil	*1%*
	26.	*Hopea odorata* Roxb.	ตะเคียน	Tree	Wood	*1%*
	27.	*Shorea siamensis* Miq.	เต็งรัง	Tree	Leaf	*1%*
Ebenaceae (2%)	*28.*	*Diospyros mollis* Griff.	มะเกลือ	Shrub	Fruit	*1%*
Euphorbiaceae (3%)	*29.*	*Euphorbia tirucalli* L.	พญาไร้ใบ	Shrub	Gum/latex	*1%*
	30.	*Mallotus nudiflorus* (L.) Kulju & Welzen	มะฝ่อ	Tree	Leaf	*1%*
Fabaceae/Leguminosae (14%)	*31.*	*Acacia concinna* (Willd.) DC.	ส้มป่อย	Shrub	Leaf	*1%*
	32.	*Cassia alata* (L.) Roxb.	ชุมเห็ดเทศ	Shrub	Leaf	*4%*

Family	No.	Botanical name	Local name	Habit	Part used	%
	33.	*Indigofera tinctoria* L.	คราม	Shrub	Leaf	*1%*
	34.	*Tamarindus indica* L.	มะขาม	Tree	Fruit	*2%*
	35.	*Uraria crinita* (L.) Desv. ex DC.	หญ้าตะขาบ	Shrub	Stem, Leaf	*1%*
Gramineae (3%)	*36.*	*Cymbopogon citratus* (DC.) Stapf	ตะไคร้	Herb	Stem	*2%*
Labiatae (3%)	*37.*	*Ocimum africanum* Lour	แมงลัก	Herb	Leaf	*1%*
	38.	*Ocimum tenuiflorum* L.	กระเพรา	Shrub	Leaf	*1%*
Lauraceae (3%)	*39.*	*Cinnamomum camphora* (L.) J.Presl	การบูร	Tree	Wood	*1%*
	40.	*Cinnamomum verum* J. Presl.	อบเชย	Tree	Bark	*1%*
Menispermaceae (2%)	*41.*	*Tiliacora triandra* (Colebr.) Diels	ย่านาง (เถาวัลย์เขียว)	Shrub	Bulb	*1%*
Musaceae (3%)	*42.*	*Musa sapientum* L.	กล้วยน้ำว้า	Tree	Fruit	*1%*
	43.	*Musa x paradisiaca* L.	กล้วยหอม	Tree	Peel	*1%*
Myristicaceae (2%)	*44.*	*Myristica fragrans* Houtt.	จันทน์	Tree	Seed, Flower	*1%*
Myrtaceae (3%)	*45.*	*Syzygium aromaticum* L. Merr. & Perry	กานพลู	Tree	Flower	*2%*
Oxalidaceae (2%)	*46.*	*Averrhoa bilimbi* L.	ตะลิงปลิง	Tree	Fruit	*1%*
Pedaliaceae (3%)	*47.*	*Sesamum indicum* L.	งา	Herb	Leaf, oil	*2%*
Piperaceae (5%)	*48.*	*Piper betle* Linn.	พลู	Climber	Leaf	*1%*

Family	No.	Botanical name	Local name	Habit	Part used	%
	49.	*Piper nigrum* L.	พริกไทย	Climber	Fruit	*2%*
Rubiaceae (2%)	*50.*	*Oldenlandia biflora* L.	น้ำค้างหมากดิบ	Herb	Stem	*1%*
Rutaceae (11%)	*51.*	*Citrus aurantifolia* Swingle	มะนาว	Tree	Fruit	*2%*
	52.	*Citrus hystrix* DC.	มะกรูด	Tree	Fruit	*2%*
	53.	*Citrus maxima* (Burm.) Merr.	ส้มโอ	Tree	Peel	*1%*
Salvadoraceae (2%)	*54.*	*Azima sarmentosa* (Blume) Benth. & Hook.f.	ต้นพงดอ	Shrub	Root	*1%*
Sapotuceae (2%)	*55.*	*Mimusops elengi* Linn.	พิกุล	Tree	Leaf	*1%*
Solanaceae (11%)	*56.*	*Capsicum frutescens L.*	พริกขี้หนู	Shrub	Fruit	*3%*
	57.	*Solanum melongena L.*	มะเขือยาว	Shrub	Fruit	*3%*
	58.	*Datura metel L.*	ลำโพง	Shrub	Fruit	*1%*
	59.	*Capsicum annuum* Linn.	พริกชี้ฟ้า	Shrub	Fruit	*1%*
	60.	*Nicotiana tabacum* L.	ยาสูบ	Shrub	Leaf	*3%*
Theaceae (2%)	*61.*	*Camellia sinensis* (L.) Kuntze	ชา	Shrub	Leaf	*1%*
Urticaceae (2%)	*62.*	*Gonostegia pentandra* (Roxb.) Miq.	ขอบชะนางแดง	Herb	-	*1%*
Zingeberaceae (11%)	*63.*	*Curcuma longa* L.	ขมิ้น	Herb	Rhizome	*3%*
	64.	*Alpinia galanga* (L.) Willd	ข่า	Herb	Rhizome	*2%*

Family	No.	Botanical name	Local name	Habit	Part used	%
	65.	*Amomum krervanh Pierre* ex Gagnep	กระวาน	Herb	Fruit	*1%*
	66.	*Zingiber montanum* Roxb.	ไพล	Herb	Rhizome	*1%*

Table 2 Moh Phon's herbal formularies used for treating skin conditions

Skin condition	Formula No.	Plant No. from Table 1	Non-plant element	Method of preparation	Method of used
Bacterial infections					
1. Erysipelas (โรคไฟลามทุ่ง)	1	21	Ethyl alcohol	Pound	Apply to lesion
2. Pox/ Abscess (โรคฝี/หัวกำมะลอก)	1	5, 46	-	Pound	Poultice
3. Tetanus (บาดทะยัก)	1	-	Acetic acid (Vinegar)	-	Cover
4. Rotting toe (นิ้วเท้าเน่าเปื่อย)	1	20	Water, Alum	Rasp	Poultice
Fungal infections					
5. Tinea versicolor or	1	55	Sulfur, ethyl alcohol	Pound	Apply to lesion
6. Pityriasis versicolor (โรคเกลื้อน)	2	15	-	Cut	Apply to lesion
	3		Borax, rainwater	Mixed	Apply to lesion

Skin condition	Formula No.	Plant No. from Table 1	Non-plant element	Method of preparation	Method of used
	4	61	Borax, rainwater	Decoction	Apply to lesion
	5		*Oecophylla smaragdina*	Crush	Apply to lesion
	6	6	-	Pound	Apply to lesion
	7	36	Sodium chloride (Salt)	Pound	Apply to lesion
	8	51	Sulfur	Mixed	Apply to lesion
	9	57	Sulfur	Cut	Poultice
	10	33	Acetic acid (Vinegar)	Mixed	Apply to lesion
7. Tenea circinato (โรคกลาก)	1	3	Kerosene	Pound	Apply to lesion
	2	32, 6	Sodium chloride (Salt)	Pound	Apply to lesion
	3	63	Rainwater	Mixed	Apply to lesion
	4	32	-	Chew	Apply to lesion
	5	32	-	Pound	Apply to lesion
8. Impetigo/ ring worm (โรคพุพอง/ขี้กลากเหล็ก)	1	63, 16 19	Copper (II) sulfate	Mixed	Apply to lesion
9. Tinea crusis (โรคสังคัง)	1	58,16 60	-	Mixed and Squeeze	Apply to lesion
10. Athlete's foot or	1	51	-		Apply to lesion
11. Tinea pedis (โรคน้ำกัดเท้า)	2	28	-	Pound	Apply to lesion
	3		Sulfur, Kerosene	Pound and mixed	Apply to lesion

Skin condition	Formula No.	Plant No. from Table 1	Non-plant element	Method of preparation	Method of used
	4	7	-	Cut	Poultice
Parasitic infection					
12. Scabies (โรคหิด)	1	42, 16	Sulfur, rice flour	Fried	Eat/ Apply to lesion
	2	16	Dammar, sulfur	Digestion	Apply to lesion
	3	13, 32, 60, 16	Sulfur	Pound and digestion	Apply to lesion
	4	16	-	Burn	Apply to lesion
Rash					
13. Itchy rash due to poisoning (ผื่นคันเพราะถูกพิษ)	1	22	Calcium carbonate	Crumble	Apply to lesion
14. Itchy ashes from mosquitoes and gnats bite (ผื่นคันเพราะยุงและริ้นกัด)	1	63, 60 16	-	Pound and digestion	Apply to lesion
15. Rash (ผื่นคัน)	1	10	Calcium carbonate	Pound	Apply to lesion
	2	31	Water	Decoction	Apply to lesion
	1	66, 45 39, 26 16, 47	Salt, Calcium Hydroxide	Decoction	Apply to lesion
16. Rash in children (ผื่นคันในเด็ก)	1	24	Water	Decoction	Apply to lesion
Viral infections					

Skin condition	Formula No.	Plant No. from Table 1	Non-plant element	Method of preparation	Method of used
17. Herpes simplex/herpes zoster/eczema (เริม/งูสวัด/ขยุ้มตีนหมา)	1	23	Cow stool (dry)	Pound	Poultice
	2	16	water	Burn(ashes)	Apply to lesion
	3		Nautilus shell, rainwater	Rasp	Apply to lesion
	4		Goose stool, ethyl alcohol	Burn	Apply to lesion
	5	62	Calcium Hydroxide (Limewater)	Rasp	Apply to lesion
	6	17	Water	Pound	Apply to lesion
	7	2	Ethyl alcohol	Pound	Apply to lesion
	8	8	Ashes (wood), water	Pound	Apply to lesion
	10		Rabbit bone, ethyl alcohol	Rasp	Apply to lesion
	11		Red sulfur, ethyl alcohol	Pound	Apply to lesion
18. Warts (หูด)	1	47	Urine	Pound	Poultice
	2	38	-	Crush	Apply to lesion
	3	29	-	Cut	Apply to lesion
	4	14	-	Cut	Apply to lesion
	5		Acid soap, Calcium Hydroxide	Mixed	Poultice

Skin condition	Formula No.	Plant No. from Table 1	Non-plant element	Method of preparation	Method of used
Wound					
19. Animal bites (พิษสัตว์กัดต่อย)	1	51	Monosodium glutamate	Squeeze	Apply to lesion
	2	5	-	Crush	Apply to lesion
	3	5, 34	-	Pound	Apply to lesion
	4	56	-	Pound	Poultice
	5		Ammonia solution	-	Apply to lesion
	6	35	Ethyl alcohol	Pound	Poultice
	7	51	-	Rasp	Apply to lesion
	8	18	Calcium Hydroxide	Pound	Poultice
20. Acute wound (แผลสด)	1		Honeybee	-	Apply to lesion
	2	25	White sugar	Mixed	Apply to lesion
	3	50	Ethyl alcohol	Pound	Poultice
	1	10	-	Pound	Poultice
21. Acute and chronic wounds (แผลสดและแผลเรื้อรัง)	1	16, 49 6	Pure lead	Mixed	Apply to lesion
	2	41	-	Chew	Poultice
Unknown causes					
22. Itchy (โรคคัน)	1	53	Water	Decoction	Shower
23. Pityriasis alba (โรคเกลื้อนน้ำนม)	1	37	Mother's milk	Crush	Apply to lesion

Skin condition	Formula No.	Plant No. from Table 1	Non-plant element	Method of preparation	Method of used
24. Vitiligo (โรคด่างขาว)	1	59, 36, 5, 6, 49, 52, 64, 45, 11, 12, 65, 44, 40, 34, 16	Sodium chloride, shrimp paste, fish sauce, palm sugar	Decoction	Shower-steam
25. Vaginal itching (โรคคันทวารเบา)	1	30	-	Decoction	Drink
26. Scaling skin (โรคผิวหนังตกสะเก็ด)	1	51	-	Cut	Apply to lesion
27. Blister (แผลพุพอง)	1	20	Water, Calcium Hydroxide	Rasp	Apply to lesion
	2	27	Potassium permanganate	Pound	Apply to lesion
28. Cracked skin on palm and sold (ฝ่ามือฝ่าเท้าแตก)	1	43	-	-	Rub
29. Shoots on the soles (หน่อที่ฝ่าเท้า)	1	4	Sulfur (yellow), engine oil	Mixed	Apply to lesion

Fruits accounted for the highest percentage, comprising 37% of the total. Leaf was the second most prevalent, constituting 30% of the samples. The stem and bulb, representing 9% and 8% respectively. Rhizomes and flowers each contributed 6% and 3%, while the aerial parts made up 3%. Roots and seeds were less frequently observed, 2% and 1% respectively. It

is noteworthy that the top part of the plants and the remaining unidentified parts collectively represented 1% of the total. The methods of preparation used in the study were analyzed to determine their frequency and distribution. Among these methods, the most commonly employed was "Pound," accounting for 38% of the total methods. The next frequently used method was "Mix," comprising 14% Other prevalent methods included "Decoction" (11%), "Cut" (7%), and "Rasp" (7%,). Less commonly utilized methods included "Digestion" (4%), "Burn" (5%), and "Crush" (6%). Methods such as "Crumble," "Squeeze," "Chew," and "Fried" had lower percentages, each appearing only once or twice in the methods. The most common method of application was "Apply," accounting for 72%. "Poultice" was the second most utilized method at 17%, "Shower" represented 5% of the applications Lastly, "Drink" and "Cover" each constituted 2% and 1%, respectively. Additionally, "Rub" and "Eat" both made up 1% of the methods, each observed once.

Discussion and Conclusion

The utilization of medicinal plants in traditional remedies for skin conditions involves a wide range of plant parts, including leaves, fruits, stems, and roots/rhizomes. Fruit and leaf, in particular, play prominent role in traditional and herbal medicine due to their abundant phytochemical content, easy accessibility, cultural significance, diverse healing properties, and scientific validation. With their rich array of bioactive compounds and broad spectrum of therapeutic activities, leaves serve as valuable resources for addressing various health conditions[10-12].

The analysis of Moh Phon's herbal formularies revealed a variety of methods used to prepare the plants. In Mor Phon's formularies similar with some other studies, pounding was one of the most common method[13], and applying the plants to lesions was a common method for herbal treatment[14]. The incorporation of non-plant elements in herbal remedies underscores the comprehensive approach and cultural significance of these treatments for skin conditions[15].

The species that most frequently occurs, Cocos nucifera L., within Moh Phon's formularies, is also present in formulations from other countries, such as Vietnam[16]. But some previous studies reported the differences in the most frequent plants used for skin condition treatments such as in

Germany, Egypt, and China which common plant species used were Arnica montan[17], Alkanna Species[18], and Glycyrrhiza glabra L.[19], respectively.

It is recommended that future studies focus on identifying and characterizing the bioactive compounds present in these medicinal plants to fully comprehend their therapeutic mechanisms and explore their potential applications in modern medicine.

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