

**ANALYZING THE IMPACT OF THAI HERBAL MEDICINE ON
CONSUMER PERCEPTION AND BEHAVIORS: A FOCUS ON
COUGH RELIEF PRODUCTS**



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ANALYZING THE IMPACT OF THAI HERBAL MEDICINE ON CONSUMER PERCEPTION AND BEHAVIORS: A FOCUS ON COUGH RELIEF PRODUCTS

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ABSTRACT

This study utilized a quantitative research approach, gathering data from 143 consumers in Bangkok, Thailand, through online questionnaires. The research employed the Jamovi software for descriptive statistics and regression analysis to investigate the impact of consumer perception, satisfaction, perceived quality, and attitudes towards herbal medicine on their purchase intentions.

The results underscore the crucial importance of perceived quality in shaping consumer purchasing choices, with a strong regression coefficient demonstrating its substantial influence. Surprisingly, customer satisfaction did not significantly impact purchase intentions, suggesting that other factors, such as perceived quality, hold a more pivotal role in consumer decision-making. The demographic analysis uncovered a notable interest in herbal remedies among younger consumers, aged 25-34, highlighting a shift towards alternative medicinal approaches within this age group.

The study emphasizes the crucial role of perceived product quality in the consumer decision-making process for Thai herbal cough relief products. It suggests that manufacturers and marketers should prioritize product quality and efficacy to fulfill consumer expectations. Additionally, the research reveals a rising trend among younger consumers towards embracing herbal remedies, indicating potential market expansion opportunities.

KEY WORDS: HERBAL MEDICINE/CONSUMER PERCEPTION/ PURCHASE INTENTION/ PERCEIVED QUALITY/ ATTITUDE TOWARD HERBAL MEDICINE

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CHAPTER I

INTRODUCTION

1.1 Background

Herbal medicine is a plant-based medicine that is perceived as a natural ingredient with no preservatives or colorings within the medicine. According to (Chourasia et al., 2022), the term 'herb' within the herbal word shows the alternative expression towards medicinal plants as temporary or permanent treatment and spices for food flavors and colorings. Thai herbal medicine has been used for centuries as a remedy for coughs, providing effective relief without the potential side effects of pharmaceutical options. In recent years, with the growing popularity of natural health trends among consumers, Thai herbal medicine has gained even more recognition and usage (Chankaewan, 2016). Additionally, the market for Thai herbal medicine has seen an increase in demand, with more consumers turning to it as their preferred option for cough relief. This can be seen through the rising sales of Thai herbal medicine products (Thai Drug Systems, 2020), further supporting the notion that consumer preferences have shifted towards this traditional approach. Furthermore, consumer behavior towards cough relief products has also been greatly influenced by the availability and accessibility of Thai herbal medicine (Chankaewan et al., 2016). With its widespread availability in pharmacies and stores, coupled with its reputation as a natural alternative, more consumers are choosing Thai herbal medicine over other options.

1.2 Problem Statement and Research Purpose

The surge in the herbal product industry has made it challenging for consumers to access accurate information, particularly regarding herbal medicinal products. This lack of reliable information has led to a growing trend of consumer interest in herbal products, including cough relief medicines. However, the existing research on consumer behavior towards herbal cough relief products is limited.

Therefore, there is a need for focused consumer behavior research on the cough relief medicine to understand consumer perceptions, preferences, and behaviors towards herbal cough relief products.

The research project aims to explore consumer perceptions and attitudes towards herbal cough relief products. It seeks to identify the factors influencing consumer decision-making when choosing cough relief products and to uncover consumer preferences and expectations regarding the effectiveness and safety of herbal cough relief medicines. Additionally, the research aims to gain insights into consumer experiences and satisfaction with the cough syrup. By achieving these objectives, the research project will provide comprehensive insights into consumer behavior towards herbal cough relief products. This will lead to an enhanced understanding of consumer preferences and expectations, ultimately resulting in improved consumer satisfaction and product effectiveness.

1.3 Research Question

How do consumer perceptions, and attitude towards Thai herbal cough relief products influence their purchase decision-making process?

CHAPTER II

LITERATURE REVIEW

2.1 Dependent Variable

2.1.1 Purchase Intention

Purchase intention is the plan to buy a specific product or service within a designated time (Widyaningtyas, 2023). On the other hand, it is a planned behavior that a consumer is willing to buy a certain product. Behavior is influenced by the intention to perform the action consumers buy. Intentions represent a person's conscious motivation or decision to exert effort to perform the behavior. Purchase intention can be useful by understanding the possibility of a customer that leads to a purchasing decision. There are some factors that motivate consumers in purchasing. One of them is that they make purchases based on their previous experience. The experience of purchasing lasts longer and will remain in consumers' mindset. So, (Kwankhao, et al., 2020) pointed out that they will immediately start evaluating on the products they purchased and the result of the purchasing experience toward the products will be kept in their mindset for a very long time. Purchase intention in Thai herbal medicine (Win, 2018) refers to the likelihood or willingness of consumers to buy Thai herbal medicine products. It encompasses the decisions and behaviors of consumers based on their attitudes, beliefs, and knowledge about the efficacy, safety, and benefits of Thai herbal remedies.

2.2 Independent Variables

2.2.1 Customer Satisfaction

Customer satisfaction in herbal medicine refers to the overall experience and perceived effectiveness of the treatment, as well as the quality of service provided by practitioners. Factors such as personalized care, accessibility, affordability, and safety

all contribute to customer satisfaction in herbal medicine (Boon et al., 2023). Herbal medicine is often seen as an alternative or complementary approach to traditional Western medicine. It utilizes natural products and remedies that have been used for centuries in various cultures around the world. The use of herbal medicine has gained popularity in recent years due to its potential benefits and minimal side effects compared to pharmaceutical drugs. However, customer satisfaction is a crucial factor in determining the success and credibility of this practice. A satisfied customer is more likely to continue using herbal medicine and recommend it to others, contributing to its growth and acceptance in modern healthcare systems (Abd Hamid, 2020). Additionally, factors such as personalized care from knowledgeable practitioners create a sense of trust between patients and providers, leading to higher levels of satisfaction with their treatment outcomes (Boon et al., 2023).

2.2.2 Consumer Perception

Consumer perception is a process by which individuals organize and interpret their sensory impressions to give meaning to their environment (Robbins & Judge, 2013). Herbal medicine has been used for centuries across different cultures, and its popularity continues to grow in modern times. One of the factors contributing to this is consumer perception. According to (Widyaningtyas et al. 2023), a key influencer of consumer perception is cultural beliefs. Different societies may have varying attitudes towards herbal medicine, affecting their willingness to use it as a form of treatment or prevention. Additionally, marketing tactics also play a role in shaping consumer perception. Advertisements that promote the benefits and effectiveness of herbal medicine can sway individuals towards choosing it over other forms of medication. Furthermore, personal experiences with herbal medicine can greatly impact how consumers view its efficacy and reliability. The framework model proposed by (Widyaningtyas et al. 2023) aims to predict consumer intentions in purchasing herbal products based on these influencers, providing valuable insights for marketers and researchers alike. Additionally, it allows for more responsible use of herbal medicine, promoting its potential benefits while minimizing potential risks.

2.2.3 Perceived Quality

The use of herbal medicine is deeply ingrained in many cultures and has been passed down through generations. As a result, the perceived quality of these traditional remedies may vary depending on cultural beliefs and practices. A study conducted in Pulung Dowo found that there is a relationship between the community's perception of using traditional medicine and their overall quality of life (Restyana et al., 2020). This highlights the importance of understanding how cultural beliefs can affect the perceived effectiveness of herbal medicine. For example, some may view herbal remedies as ineffective due to their reliance on modern Western medicine, while others may see it as a more natural and holistic approach to healing. By acknowledging these differences in perception, we can gain a better understanding of how herbal medicine can be integrated into modern healthcare systems without compromising its cultural significance. This not only benefits individuals who prefer traditional medicine but also promotes diversity and inclusivity within the healthcare industry. Ultimately, recognizing the impact of culture on perceived quality can lead to improved access to herbal remedies for those who value its role in their health and well-being.

2.2.4 Attitude towards Herbal Medicine

Attitude is a combination of thoughts, feelings, and actions towards something or someone. It shapes our interactions with the world and influences how we perceive and respond to situations. According to (Ortmeyer, 1949), "Measurement of any phenomenon pre-supposes a proper definition and an analysis of the concept under consideration." Attitude can be positive or negative, and it can change over time due to experiences and external factors. It also plays a significant role in our decision-making process, as our attitudes can affect the choices we make.

According to a study conducted by (Hussain et al. 2023), attitudes towards herbal medicine vary greatly among different cultures and regions, influenced by factors such as traditional beliefs, personal experiences, and exposure to alternative medicine practices. For instance, traditional beliefs can greatly impact one's perception of herbal remedies compared to those who have not been exposed to them before. Additionally, personal experiences with alternative medicine may also shape one's attitude towards it. As defined by (Leke, 2022), this variable refers to the level of agreement or disagreement with the effectiveness and safety of herbal remedies.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Proposed Conceptual Framework

The conceptual framework in Figure 3.1 depicts the relationship between the independent variables (Customer satisfaction, Consumer Perception, Perceived Quality, Attitude towards Herbal Medicine) and the dependent variable (Purchase Intention).

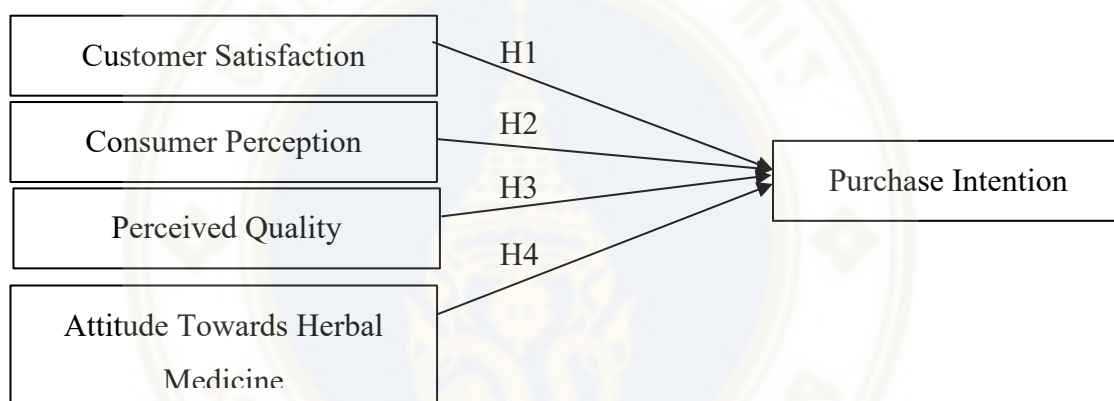


Figure 3.1 Proposed Conceptual Framework

3.2 Population and Sample Size

The study focused on consumers in Bangkok, Thailand. According to the World Bank, as of 2023, the Bangkok city's population stands at approximately 10 million people (Fred Arnold et al., 2023). This figure provides a comprehensive overview of the diverse and dense population residing in Thailand's capital city, making it a significant area of study for consumer behavior, especially in relation to Thai herbal medicine for cough relief.

For this study, a sample size of 143 participants from the Bangkok area has been data collected. Surveys have been administered online to reach a broader audience efficiently. Data were analyzed by using Jamovi, focusing on descriptive statistics, and regression analysis to understand the factors influencing consumer perceptions and behaviors.

3.3 Research Design

The research employed quantitative methods, utilizing both primary and secondary sources. The theoretical basis relies heavily on secondary resources such as books, journals, and articles, while direct input from consumers will be gathered through a survey using structured questionnaires. The questionnaire used in the survey consisted of four sections focusing on factors such as customer satisfaction, perceived quality, consumer perception, attitude towards herbal medicine, and purchase intention. At the beginning of the survey, there are screening questions concerning the participants. These questions are used to determine if participants meet specific requirements essential for the study. The second section consists of general questions that are typically open-ended, allowing participants to provide detailed responses with basic information about the topic. The third section details the elements that impact consumer decisions to buy herbal cough remedy products. The survey questions use a Likert scale from 1 to 4, with options ranging from 'strongly disagree' to 'strongly agree' to gauge measurement. The last section contains demographic details about participants such as gender, age, level of education, occupation, and income.

CHAPTER IV

RESULTS

4.1 Descriptive Analysis

For descriptive research, the online questionnaire was published on social media during March. The respondents were recruited through personal contacts and snowball sampling. All the 143 questionnaire respondents were mostly Thai nationals of both genders, aged 18-50 years old and living in Bangkok. Out of all the 143 respondents, there were a total of 104 respondents who use Thai herbal medicine.

4.1.1 Summary of Respondent Demographic

Table 4.1 Summary of Respondent Demographic

(n=104)

	Age	Gender	Income	Education
N	104	104	104	104
Missing	0	0	0	0
Mean				
Median				
Standard deviation				
Minimum				
Maximum				

The analysis in table 4.1 investigated a group of 104 individuals, guaranteeing a full set of data without any absent information in important factors like age, gender, income, and education. This comprehensive dataset enables a strong examination of how demographic factors impact the study results.

4.1.2 Age

Table 4.2 Frequencies of Age

(n=104)

Age	Counts	% of Total	Cumulative %
18-24	31	29.8 %	29.8 %
25-34	46	44.2 %	74.0 %
35-43	24	23.1 %	97.1 %
45-54	3	2.9 %	100.0 %

The data from table 4.2 illustrates a significant clustering of individuals aged 25-34, making up 44.2% of the entire sample, emphasizing a prevailing demographic in the research. When combined with those in the 18-24 age bracket, these two groups account for a considerable 29.8% of the total participants, revealing a predominantly youthful profile. In contrast, those between 35-44 years old constitute 23.1%, while the 45-54 age category represents only 2.9%.

4.1.3 Gender

Table 4.3 Frequencies of Gender

(n=104)

Gender	Counts	% of Total	Cumulative %
Female	48	46.2 %	46.2 %
Male	56	53.8 %	100.0 %

The dataset of table 4.3 has a balanced gender distribution, with males at 53.8% and females at 46.2%. This balance highlights the diversity of participants, suggesting insights applicable to both genders.

4.1.4 Income

Table 4.4 Frequencies of Income

(n=104)

Income	Counts	% of Total	Cumulative %
15,000 THB - 30,000 THB	41	39.4 %	39.4 %
30,001 THB - 50,000 THB	37	35.6 %	75.0 %
50,001 THB - 70,000 THB	24	23.1 %	98.1 %
70,001 THB - 100,000 THB	2	1.9 %	100.0 %

The dataset of table 4.4 shows a concentration in lower to middle income brackets. 39.4% earn between 15,000 to 30,000 THB and 35.6% earn between 30,001 to 50,000 THB - totaling 75% of the population. The bracket of 50,001 to 70,000 THB makes up 23.1%. The highest bracket is 70,001 to 100,000 THB at only 1.9%.

4.1.5 Education

Table 4.5 Frequencies of education

(n=104)

Education	Counts	% of Total	Cumulative %
Bachelor's degree	44	42.3 %	42.3 %
Higher than master's degree	20	19.2 %	61.5 %
Master's degree	40	38.5 %	100.0 %

The dataset of table 4.5 participants has high academic achievements where 42.3% have a bachelor's degree, and 57.7% have postgraduate qualifications (38.5% master's degree, 19.2% higher degrees).

4.2 Reliability Analysis

Table 4.6 Reliability Analysis

(n=104)

Variables	Number of Items	Cronbach's α
Customer Satisfaction	6	0.886
Consumer Perception	6	0.87
Perceived Quality	6	0.991
Attitude towards Herbal Medicine	6	0.882
Purchase Intention	6	0.883

The table 4.6 illustrates that the Customer Satisfaction construct, measured by 6 items, showed robust internal consistency (Cronbach's alpha = 0.886), indicating a reliable instrument. Consumer Perception, evaluated using 6 items, exhibited high reliability (Cronbach's alpha = 0.87), affirming the scale's soundness. Perceived Quality, assessed by a 6-item scale, achieved a Cronbach's alpha of 0.991, showcasing high reliability. Attitude towards Herbal Medicine, measured with 6 items, reflected excellent internal consistency (Cronbach's alpha = 0.882), underscoring the scale's dependability. Purchase Intention, gauged through a 6-item scale, recorded a Cronbach's alpha of 0.883, indicating a highly reliable scale for predicting consumers' intent to purchase.

4.3 Mean Score Analysis

Table 4.7 Mean Score Analysis

(n=104)

Variables	Mean
Customer Satisfaction	3.21
Consumer Perception	3.3
Perceived quality	3.19
Attitude towards Herbal Medicine	3.13

The table 4.7 presents the average scores for four key variables examined in the research study. The mean score of 3.21 for Customer Satisfaction suggests a moderate level of satisfaction among participants with the provided goods or services. The mean score of 3.30 for Consumer Perception indicates a slightly more positive outlook, reflecting participants' overall perceptions of the product or service being investigated. Similarly, the mean score of 3.19 for Perceived Quality suggests a generally favorable perception of the quality of the product or service among participants. However, the mean score of 3.13 for Attitude towards Herbal Medicine indicates a somewhat less positive attitude towards this specific aspect of the research inquiry.

4.3.1 Descriptive results of each item in every variable

Table 4.8 Descriptive result of each item variable

(n=104)

Indicator	Mean	SD
CS 1	3.37	0.608
CS 2	3.13	0.608
CS 3	3.26	0.638
CS 4	3.17	0.66
CS 5	3.16	0.684
CS 6	3.25	0.603
CP 1	3.13	0.664
CP 2	3.09	0.609
CP 3	3.27	0.611
CP 4	3.17	0.614
CP 5	3.24	0.661
CP 6	3.24	0.646
PQ 1	3.48	0.887
PQ2	3.32	0.781
PQ 3	3.26	0.668
PQ 4	3.21	0.649

Table 4.8 Descriptive result of each item variable (cont.)

Indicator	Mean	SD
PQ 5	3.29	0.759
PQ 6	3.51	0.949
ATM 1	3.14	0.682
ATM 2	3.13	0.641
ATM 3	3.28	0.699
ATM 4	3.27	0.661
ATM 5	3.22	0.659
ATM 6	2.46	0.736

The table 4.8 provided lists the mean and standard deviation (SD) for individual items under the constructs of Customer Satisfaction (CS), Consumer Perception (CP), Perceived Quality (PQ), and Attitude towards Herbal Medicine (ATM). The question that has the highest mean score is from Customer Satisfaction, stating that “I prefer to take herbal cough relief products that meet my expectations.” with a mean score of 3.37. On the other hand, the lowest mean score is from Attitude towards Herbal Medicine with the mean score of 2.46 stating “I don’t like to consume any kind of medicine”.

4.4 Factor Analysis

Principal Component Analysis

Table 4.9 Component Analysis

(n=104)

	1	2	3	4	5	6	Uniqueness
PS 2	0.736						0.366
PS 3	0.708						0.375
PS 6	0.611						0.505
CS 1		0.856					0.253
CS 5		0.749					0.277

Table 4.9 Component Analysis (cont.)

	1	2	3	4	5	6	Uniqueness
CP 6			0.848				0.263
CP 2			0.767				0.347
CS 3				0.779			0.333
CP 1				0.762			0.286
PQ 4					0.835		0.274
PQ 2					0.744		0.354
ATM 3						0.703	0.377
ATM 6						0.695	0.277
ATM 1						0.647	0.321

Note. 'oblimin' rotation was used

The table 4.9 presents the factor loadings, with loadings above 0.4 considered significant. Each item loaded strongly on one factor, indicating that the item uniquely represents that construct. Items PS2, PS3, and PS6 had significant loadings of 0.736, 0.708, and 0.611, respectively, on Perceived Safety, suggesting they measure the same underlying construct. On Consumer Satisfaction, items CS1 and CS5 had strong loadings of 0.856 and 0.749, respectively, indicating a high correlation with this factor. Items CP6 and CP2 had strong associations with Consumer Perception, with loadings of 0.848 and 0.767, respectively. Items CS3 and CP1 primarily loaded on Convenience, with loadings of 0.779 and 0.762. Perceived Quality was predominantly defined by items PQ4 and PQ2, with loadings of 0.835 and 0.744. Attitude towards Herbal Medicine loadings were significant for ATM3, ATM6, and ATM1, indicating a strong representation on this factor with loadings of 0.703, 0.695, and 0.647, respectively.

4.5 Linear Regression

4.5.1 Model Fit Measures

Table 4.10 Model Fit Measures

(n=104)

Model	Adjusted R ²	F	df1	df2	p
1	0.185	4.89	6	97	< .001

4.5.2 Omnibus ANOVA Test

Table 4.11 Omnibus ANOVA Test

(n=104)

	Sum of Squares	df	Mean Square	F	p
Perceived Safety	0.0123	1	0.0123	0.0428	0.836
Customer Satisfaction	0.519	1	0.519	1.8136	0.181
Consumer Perception	0.0675	1	0.0675	0.2358	0.628
Convenience	0.2645	1	0.2645	0.9243	0.339
Perceived Quality	5.0765	1	5.0765	17.7414	< .001
Attitude towards Herbal Medicine	0.6116	1	0.6116	2.1373	0.147
Residuals	27.7556	97	0.2861		

The table 4.11 present the result of the Omnibus ANOVA test using Type 3 sum of squares revealed that Perceived Quality significantly influences the dependent variable ($F(1, 97) = 17.7414, p < .001$). However, Perceived Safety, Customer Satisfaction, Consumer Perception, Convenience, and Attitude towards Herbal Medicine did not show statistically significant effects. The variance explained by each predictor and their F statistics suggest that Perceived Quality is the only significant predictor in this analysis, while the Residuals line indicates the unexplained variance in the model.

4.5.3 Model Coefficients

Table 4.12 Model Coefficients

(n=104)

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	0.3288	0.356	0.925	0.357	
Perceived Safety	0.0274	0.132	0.207	0.836	0.0192
Customer Satisfaction	0.1438	0.107	1.347	0.181	0.1264
Consumer Perception	0.056	0.115	0.486	0.628	0.0461
Convenience	-0.1001	0.104	-0.961	0.339	-0.0934
Perceived Quality	0.4817	0.114	4.212	< .001	0.3956
Attitude towards Herbal Medicine	0.1852	0.127	1.462	0.147	0.1442

The regression analysis in table 4.12 indicates that Perceived Quality is a significant predictor of the outcome variable, with a strong effect size. None of the other predictors were statistically significant. The intercept, representing the expected value of the dependent variable when all predictors are at zero, is not significant.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussions

The study revealed that the perceived quality of Thai herbal cough relief products has a significant impact on consumer purchase decisions, as demonstrated by a robust regression coefficient of 0.4817 ($p < .001$) for the perceived quality factor. This finding underscores the critical importance that consumers place on the quality and effectiveness of herbal remedies. This insight aligns with the observations made by Chankaewan (2016), who noted the growing consumer demand for high-quality herbal products in Bangkok, suggesting a broader shift towards natural health alternatives among the population. The research highlights the paramount significance that consumers attach to the quality and efficacy of herbal cough relief products in Thailand. The strong regression coefficient of 0.4817 ($p < .001$) for perceived quality indicates that this factor has a substantial influence on consumers' purchase intentions. This finding suggests that Thai consumers place a high value on the reliability and effectiveness of herbal remedies and are willing to make purchasing decisions based on their perceptions of product quality. This shift in consumer preferences underscores the importance for manufacturers and marketers of herbal cough relief products to prioritize the quality and effectiveness of their offerings in order to meet the evolving needs and expectations of the Thai consumer market.

The study's findings provide a more nuanced understanding of the factors influencing purchase intention for traditional medicines, in contrast to the suggestion made by Chokevivat and Chuthaputti (2020) that customer satisfaction is a primary driver. While the current study found a positive relationship between customer satisfaction and purchase intention (with an estimate of 0.1438), this relationship was not statistically significant ($p = 0.181$). This suggests that other factors, such as perceived quality, may play a more crucial role in the decision-making process for Thai herbal cough relief products among consumers in Bangkok. The study presents a more complex

and multifaceted picture of the drivers of purchase intention in the traditional medicine market, highlighting the need to consider a range of factors beyond just customer satisfaction when understanding consumer behavior in this context.

5.2 Conclusions

Majority of the 104 respondents responded in descriptive research are male, aged between 25-34 years old, income ranging from THB 15,000- 30,000. They hold at least a bachelor's degree, with no underlying health issues and routinely take some health products. The data highlights a particularly strong representation within the 25-34 age group, suggesting that this younger, urban demographic is increasingly drawn to the appeal of herbal remedies. This emerging trend underscores a significant shift in consumer behaviors, as younger individuals are demonstrating a growing preference for alternative medicinal approaches in their pursuit of health and wellness. The findings indicate that herbal medicines are gaining traction among this segment of the population, potentially signaling a broader societal movement towards more holistic and natural healthcare solutions.

The research findings presented in this study have profound implications for various stakeholders in the herbal products industry. For producers, the results underscore the critical importance of prioritizing and effectively communicating the quality and safety attributes of their herbal offerings. This places a heightened responsibility on producers to be transparent about their manufacturing processes, source of raw materials, and adherence to established quality standards. For consumers, the study serves as a timely reminder of the necessity to make informed decisions when purchasing and using herbal products. Consumers must be discerning and scrutinizing the quality, efficacy, and safety claims made by producers before incorporating these products into their health and wellness regimens. This study highlights the need for consumers to be proactive in researching and understanding the true nature of the herbal supplements they consume.

5.3 Further Study Recommendations

1. Promoting Thai herbal medicine through pharmacy stores: Research has shown that pharmacists are one of the most commonly accessed sources of information for consumers, and they are a significant influencing factor in people's purchasing decisions regarding medication. Pharmacies can serve as a vital conduit for increasing the usage of traditional Thai medicinal products. Consumers often rely on the expertise and recommendations of pharmacists when selecting healthcare products, making these establishments a prime location to raise awareness and encourage the adoption of Thai herbal medicines. By leveraging the trusted relationship between pharmacists and their customers, this approach has the potential to meaningfully expand the reach and utilization of Thailand's rich herbal medical traditions.

2. Increase Research and Development: Thai herbal medicine companies should increase their research and development efforts to better understand the efficacy and quality of their products. This is in response to the survey finding that all respondents wanted more research to support the reliability of these products. Additionally, the text suggests that the company should collaborate with the industry to support this R&D process, as respondents expressed more trust in products certified by the FDA.

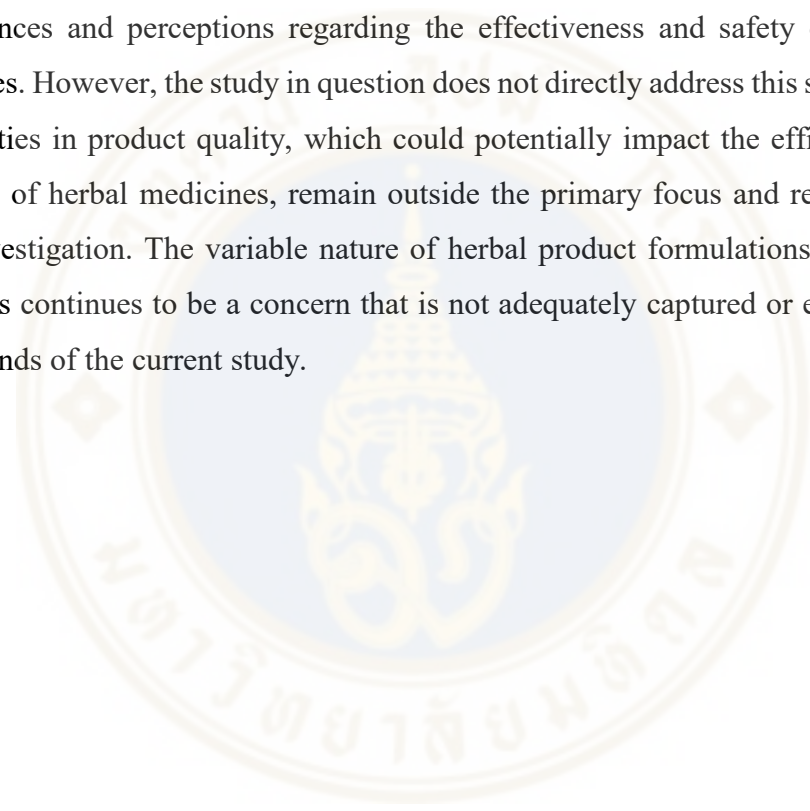
3. The adjusted R-squared value of 0.185 indicates that the model only accounts for 18.5% of the variation in the intention to purchase decision. This suggests that there are numerous other factors that need to be explored through qualitative studies and further investigated through quantitative studies to identify the key drivers behind the purchase of herbal medicines.

5.4 Limitations

The study's sample was limited to consumers residing in Bangkok, which represents a specific urban demographic within the population. Bangkok has a population of approximately 10 million people (Fred Arnold et al., 2023), and the sample size of 143 respondents may not adequately capture the diverse range of perspectives and experiences present throughout the city. This geographical limitation means that the findings of the study may not be fully representative of the broader consumer landscape within the country, as the urban setting of Bangkok could potentially differ significantly

from other regions or rural areas in terms of consumer behavior, preferences, and socioeconomic factors. The relatively small sample size, in comparison to the large population of Bangkok, further suggests that the study may have overlooked or underrepresented certain segments of the consumer base, limiting the generalizability of the results to the entire city, let alone the entire nation.

The quality and composition of herbal products can fluctuate significantly. Herbal medicines often exhibit substantial variability in their formulations and overall manufacturing processes. This inherent lack of consistency may influence consumer experiences and perceptions regarding the effectiveness and safety of these natural remedies. However, the study in question does not directly address this significant issue. Disparities in product quality, which could potentially impact the efficacy and safety profiles of herbal medicines, remain outside the primary focus and research scope of this investigation. The variable nature of herbal product formulations and production methods continues to be a concern that is not adequately captured or examined within the bounds of the current study.



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Screening Questions

1. Do you currently live in Bangkok?
 Yes No (End of survey)
2. Have you ever consumed herbal cough relief medicine before?
 Yes No (End of survey)

General Questions

1. How often do you buy health-related medicine when a family member falls ill?
 Weekly Monthly Rarely As needed.
2. How frequently do you use herbal medicine to address health issues?
 Regularly Occasionally Rarely
3. Where do you usually purchase herbal medicines?
 Pharmacy Online Market Hospital

Specific Questions

There will be 30 question items measured with Four-point Likert scales from 1. “Strongly disagree”, 2. “Disagree”, 3. “Agree” and 4. “Strongly agree”.

Independent Variables

No.	Statements	1	2	3	4
Customer Satisfaction					
1.	I prefer to take herbal cough relief products that meet my expectations.				
2.	I believe that satisfied customers tend to recommend products more often.				
3.	I like herbal cough relief medicine because it has fewer side effects.				
4.	I think that satisfied customers are more likely to have positive intentions toward herbal medicine.				

No.	Statements	1	2	3	4
5.	I feel satisfied with herbal cough relief medicines because they don't contain artificial ingredients.				
6.	I appreciate a company that values my feedback and works on improving customer satisfaction.				
Consumer Perception					
1.	I prefer herbal cough relief medicine which can be consumed every day.				
2.	I like herbal cough relief medicine because it is great for treating long-term sickness.				
3.	I love herbal cough relief medicines because they come from natural plants.				
4.	I love taking herbal cough remedies because they're a safe choice compared to western medicine.				
5.	I want herbal cough relief products to be readily available in local stores.				
6.	I believe herbal cough relief medicines need more research and development.				
Perceived Quality					
1.	I think herbal cough relief products with high-quality provide better performance.				
2.	I believe perceived quality greatly influences my product choices.				
3.	I think high-quality herbal cough relief products are worth the extra cost because they offer better benefits.				
4.	I prefer high-quality herbal medicines because they make me feel confident in their effectiveness and durability.				
5.	I love when an herbal product's perceived quality matches its intended purpose.				
6.	I like herbal cough relief products that have been certified by the Food and Drug Administration (FDA).				

No.	Statements	1	2	3	4
Attitude towards Herbal Medicine					
1	I prefer modernized packaging of herbal cough relief medicine.				
2.	I trust Thai Herbal Medicine.				
3.	I think herbal medicine is an important part of our cultural heritage.				
4.	I will consume only Herbal Medicine that has a good brand reputation.				
5.	I have good experience with Herbal Medicine.				
6.	I don't like to consume any kind of medicine.				

Dependent Variable

Purchase Intention					
No.	Statements	1	2	3	4
1.	I prefer to buy herbal cough relief products based on my previous experience with them.				
2.	I want to buy herbal cough relief medicines because they are cheaper than western medicine				
3.	I prefer to buy herbal cough relief products that come with clear usage instructions.				
4.	I wish to buy herbal cough relief remedies since I see them as trustworthy.				
5.	I love the idea of purchasing herbal medicine for cough relief due to its potential health benefits.				
6.	I like herbal cough relief medicine because it is easy to buy.				

Demographic Questions

1. What is your age range?

- 18-24 25-34 35-44
 45-54 55+

2. How do you identify your gender?

- Male Female Other
 Prefer not to say.

3. What is your personal monthly income?

- 15,000 THB - 30,000 THB 30,001 THB - 50,000 THB
 50,001 THB - 70,000 THB 70,001 THB - 100,000 THB
 More than 100,000 THB

4. What is your education level?

- Less than high school High school
 Bachelor's degree Master's degree
 Higher than master's degree

End of survey. Please help me gather respondents by sharing this survey to your colleagues, friends, family and encourage them to do the survey. Thank you for your kindness.