Legalization of marijuana and the effects on economy and society from the healthcare professional's perspective

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Abstract

The study explored the legalization of marijuana (cannabis) the effects on economy and society from the healthcare professional's perspective. The objective of this study is to opinion legalization of marijuana policy and effects on economy and society of marijuana from the healthcare professional's perspective. The questionnaire was collected data of 400 samples from healthcare professional's perspective focus in Surat Thani, Thailand. All data were analyzed using SPSS program for frequency, percentage, mean, ANOVA and Person's correlation. The results found that there are most to female samples. They have work experience is about 6 to 10 years and the job title is Registered Nurse and working at Tambon Health Promoting Hospital. The study opinion legalization of marijuana policy and study effects on economy and society of marijuana from the healthcare professional's perspective in Surat Thani were found overall rating scroll is high to level. The analysis of differences in personality factors has effect to legalization of marijuana and its effects on economy and society from the healthcare professional's perspective in Surat Thani. The opinion on the marijuana has liberalization policy in Thailand regarding the legalization of marijuana and the socio-economic impacts of medical personnel in Surat Thani Province, Thailand.

Keywords: Marijuana, Cannabis, Healthcare professional, Medical personnel, Surat Thani

JEL Classification Code: D61, H75, I18

1. Introduction

Currently, in the global and Thai societies, there has been an ongoing debate about the benefits and drawbacks of marijuana use since the Cold War, as evidenced by the continuous use of marijuana that has come from the movement of civil society or intellectuals and who have used marijuana for relaxation at least once since 1970. Scientists have become more interested in using marijuana to treat diseases. For Thailand in the past 1-3 years, there has been a legal demand for marijuana use, and there has been more criticism in Thai society when political parties campaigned on a platform of legalizing marijuana to attract supporters during the important election year of 2019. This has led to both support and opposition to the movement. (Bangkokbiznews, 2022)

Thailand is the first country in ASEAN to legalize the use of marijuana. This was announced after the Narcotics Act (No. 7) was declared effective in February 2019, shortly

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after Anutin Chanvirakul, Deputy Prime Minister and Minister of Public Health, took office. The free cannabis policy, which promotes the cultivation of marijuana for medical purposes, has been included as one of the urgent key policies of the government, and efforts have been made to amend various laws and regulations to allow the use of marijuana extracts for medical and research purposes. However, the use of marijuana for recreational and entertainment purposes is still not covered. But in the general course of human life, four factors are needed for survival. In the past, marijuana was a commonly used medicine for various diseases in Thailand and many other countries around the world for centuries. Marijuana has provided food, fiber, intoxication, and medicine to humans. Cannabinoids are pharmacologically active substances that are produced within the plant, and they interact with the human endocannabinoid system, which is present throughout the body. Different strains of marijuana have different chemical profiles, resulting in a variety of pharmacological properties and effects on the mind and nervous system. (Jirawipas, 2021) Thailand's "unlocking" of marijuana has been enforced since June 9, 2022, allowing greater freedom to deal with cannabis- and hemp-related products.

The government aims to create income opportunities for the public through the cultivation of high-quality marijuana, as Thailand is considered one of the best sources of marijuana in the world. Although the recent changes have removed marijuana from the category of type 5 narcotics, making it a free plant that people can grow for personal and commercial use, the production of marijuana as a health product for sale still requires permission. This has caused concern for many sectors of society, as a small portion of the population may not be aware of the potential dangers of inappropriate use of marijuana. In order to prevent these risks, the Ministry of Public Health has announced that marijuana is a controlled medicinal plant, and its use is prohibited for children under 20, pregnant women, and breastfeeding mothers, effective June 17, 2022, nine days after marijuana was decriminalized. To prevent negative impacts on all sectors, further study is needed on the legalization of marijuana as a way to prevent and reduce inappropriate use and minimize the negative impacts on the body in the short and long term (Sornpaisarn, 2019).

The Office of the Narcotics Control Board of the Ministry of Justice (2020) has studied and analyzed the benefits, risks, and potential impacts of using marijuana for non-medical purposes. The National Narcotics Control and Prevention Center (NNCPC) has appointed a committee to study and analyze legal measures related to drug plants and has proposed that marijuana should be classified as a Category 5 narcotic drug under the Narcotics Act of 1979. As for the impact on businesses, the marijuana industry has

the potential to generate significant revenue and has a promising future ahead. For example, in the Netherlands, tourists come to visit Amsterdam to enjoy coffee shops that offer over two hundred types of marijuana. While Thailand has yet to study and estimate the potential revenue that could be generated by decriminalizing marijuana, it can be said that we have missed a lot of opportunities by not allowing the recreational use of marijuana, but only permitting research for medical purposes. Furthermore, it is difficult to obtain permission to cultivate, distribute, import, export, or possess marijuana for research purposes or medical benefits. One must submit an application with necessary reasons, quantity, or amount, and supporting evidence to the Food and Drug Administration (FDA) to propose to the Prime Minister for consideration by the Ministry of Public Health.

Nukulkit (2020) study found that legalizing marijuana would have a social impact in Thailand, as the society lacks protection in terms of thinking, making it easier for people to access marijuana. The number of marijuana users would increase, and marijuana has a stimulating effect on the nervous system, affecting both the body and the brain. This causes users to experience symptoms similar to those of other addictive drugs. On the other hand, legalizing marijuana also creates a loss of opportunity for medical development. The lack of balanced trade makes Thailand still dependent on importing drugs from other countries.

The aforementioned reasons demonstrate that legalizing marijuana will have economic and social impacts. Opponents argue that it will create problems for Thai youth as the widespread use of marijuana increases, and marijuana is a plant that has active ingredients that affect the body and brain, causing users to have similar symptoms to other types of drug addiction. However, on the other hand, legalizing marijuana could result in missed opportunities for medical development, leaving Thailand reliant on importing medicine from other countries. In some rural areas, traditional healers still use marijuana to treat patients using traditional knowledge. Therefore, researchers want to study the "economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani province" in order to draw conclusions about the impacts, opinions, and recommendations of legalizing marijuana from the perspective of medical personnel. The use of marijuana for medical purposes should have appropriate and effective control standards. Furthermore, this study is intended to review the situation of marijuana use in other countries, both the positive and negative aspects, as well as the risks and challenges in the healthcare system, linked to the legalization of marijuana. The information obtained from this study will be useful for policy-making decisions and can serve as a basis for future research on various aspects of marijuana in the future. The objective of this study to:

1. To study the opinions on the policy of legalizing marijuana from the perspective of medical personnel in Surat Thani province.

2. To study the economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani province.

3. To study the recommendations regarding the economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani province.

2. Literature Review

2.1 Idea and Related Research

Population Characteristics Reviewing the literature on population characteristics, it is found that Upan (2018) defined population characteristics as various factors used as criteria to identify differences in individuals, including gender, age, education level, occupation, and average monthly income. Jirawipas (2021) stated that population characteristics include gender, work experience, position, and affiliation, which are commonly used criteria for dividing the market segment. Population characteristics are important in setting targets and are easier to measure than other variables. People with different population characteristics have different psychological characteristics. Furthermore, Sornpaisarn (2019) explained that population characteristics refer to the analysis of the population in terms of size, distribution, and changes related to economic, social, and cultural factors, including gender, work experience, position, and affiliation. Population factors can be both causes and effects of economic, social, and cultural phenomena.

Based on the study of population characteristics, it can be concluded that population characteristics refer to criteria used to identify differences in individuals as a guide for finding answers regarding different population characteristics, including gender, age, occupation, and place of residence, which affect perception and expectations. Therefore, researchers need to consider population characteristics as important factors in their studies.

2.2 General Knowledge of Marijuana

Marijuana is a type of herbaceous plant that grows easily in hot areas with tall stems reaching about 2-4 feet. Its leaves have notches and the parts that people mainly use are the branches, stems, leaves, and buds of the marijuana plant. They are usually dried or baked and then roughly chopped. There are many differential types and strains of marijuana, and it can also be extracted into products such as hashish oil,

which is a dark brown or amber-colored liquid. It is also used in various industrial products. Marijuana and cannabis are the same species scientifically known as Cannabis sativa L. Botanists classify it in the nettle family (Urticaceae), but later found that the characteristics and properties of marijuana and cannabis are different, leading to different names such as Kanchong, Kanchaa, Yaa pee, and Yaa no. These two names are mostly used in the Kaeng Krachan, Mae Hong Son area, where locals prefer to call the plant based on its beneficial use. As for the terms "ganja" or "hemp," they are used to refer to plants that are used to produce fibers for weaving

Regardless, in the academic field, marijuana is divided into three strains: Cannabis sativa, Cannabis indica, and Cannabis ruderalis, all of which are the main strains in the world. They differ in their properties and physical characteristics, and there are also numerous sub-strains developed by humans through crossbreeding to seek benefits and suitable properties for use (Sangkham, 2020).

Marijuana products are products that contain marijuana extract or active ingredients in marijuana that have medicinal properties. There is clear research data, such as for chemotherapy-induced nausea, difficult-to-treat epilepsy, drug-resistant epilepsy, nerve pain that is not responsive to other treatments, muscle stiffness in people with multiple sclerosis, and chronic pain in adults. Side effects that may occur from using marijuana extracts include drowsiness, dizziness, abnormal vision, nausea, constipation, memory impairment, decreased decision-making ability and control, low blood pressure, dry mouth, tinnitus, and abnormal mental states, such as anxiety or depression. Examples of marijuana products for medical use according to the Ministry of Public Health's announcement in 2019 are as follows.

1. Each formula of marijuana extract that contains cannabinoids, such as tetrahydrocannabinol (THC) and cannabidiol (CBD), is produced by the pharmaceutical industry/hospitals in Apai Phubet.

2. Thai traditional medicine formulas containing marijuana, such as Yasuk Pisai Yasana, Yatham Lai Phra Sumen, and Ya Kae Lom Kae Sen, are Thai traditional medicine formulas that include marijuana as an ingredient, as recommended by the Department of Thai Traditional and Alternative Medicine and the Medical Council of Thailand, as listed in the attached announcement.

3. Local traditional medicine marijuana oil formulas, such as Namman Kancha Suk Thai traditional medicine formula by Detcha, are authorized for production in the country under the Special Access Scheme for specific patients and under authorized research projects by the Food and Drug Administration.

In addition to its medicinal benefits, marijuana is also used in industry and is gaining popularity among

international entrepreneurs and investors. Various parts, such as the stem, fiber, seed, and tissue, are processed to produce products for consumption and consumption, each with different properties (Sewanaphon, 2019).

1. The stem or tissue of hemp can be used as a good industrial construction material. It is mixed with construction materials to insulate against heat, reduce the weight of construction materials, and can also be used in chemical fertilizers.

2. The fibers of hemp-marijuana can be used in the textile industry, which are similar to those of flax fibers. They are flexible, durable, and can absorb moisture well. They are resistant to detergents and bleach, resistant to UV radiation, and do not change color even after being exposed to sunlight for a long time. The durable fibers make hemp fabrics suitable for a variety of fashion products and can also be used in the medical field to produce wound dressings due to their excellent moisture absorption properties.

3. Hemp seeds can be extracted to produce hempseed oil through the cold pressing method. The benefit is that it contains omega-3 and omega-6, which are naturally occurring substances that humans cannot produce. Hempseed oil has sufficient amounts of these substances to meet human needs. There is also research suggesting that hempseed oil may be a part of the biodiesel industry. Furthermore, the extracted oil from hemp seeds can be mixed with cosmetic products such as soap, shampoo, and conditioner. Additionally, hempseed oil has high levels of antioxidants, which make it popular among Europeans for its potential to treat cancer, heart disease, and other health problems.

4. Cambium is the layer of tissue in the trunk that peels off the bark. It has good absorbency and is used to make paper with longer fibers than wood pulp, which makes it resistant to tearing and durable. However, its production cost is much higher. It is also used in construction by mixing it with cement to make the cement more flexible and as a component of glue, paint, and coating.

From the study of marijuana products, it can be concluded that marijuana has many benefits in terms of using it as medicine or combining it with other herbs to treat various diseases and symptoms. However, the extract from marijuana also has properties that may cause some individuals to lose their memory and experience confusion, anxiety, and restlessness. But if viewed from another perspective, marijuana is an opportunity and an alternative for patients who have gained popularity in medical use. It can also be used as a good quality raw material or component for industrial purposes.

2.3 Policy on Marijuana Legalization in Thailand

Cannabis (marijuana) is a controlled plant under the Narcotics Act of 1979 and is classified as a Category 5 narcotic, along with kratom and opium. Its main active ingredient is tetrahydrocannabinol (THC), which affects the control of thoughts, emotions, and behavior of users. Possession, sale, or cultivation of cannabis is punishable by imprisonment for 1 to 15 years, or a fine of 20,000 to 1,500,000 baht, or both. However, possession for research and development purposes can be permitted by the Ministry of Public Health on a case-by-case basis (Office of the Narcotics Control Board: Ministry of Justice, 2020).

The Office of the Narcotics Control Board under the Ministry of Justice (2020) stated that in the year 2016, there were attempts from various groups to propose to the government to remove marijuana from the list of narcotics. Those who supported this move cited the medical benefits and economic reasons for doing so. However, there is still a debate on whether legalizing marijuana would have a negative impact on society and the individuals within it. The accessibility of information regarding marijuana for the general public is also a concern. The government is closely monitoring the situation and ensuring that the policy of legalizing marijuana is still in line with public opinion, and that safe and quality-controlled access to marijuana is achieved while preventing abuse and trafficking. Therefore, opinions on the policy of legalizing marijuana in Thailand depend on various factors.

From studying opinions on the policy of legalizing marijuana in Thailand, it was found that marijuana is being used for medical purposes, even though there are concerns about negative impacts on health and well-being, despite evidence suggesting its benefits for treating various medical conditions. Therefore, opinions on the policy of legalizing marijuana in Thailand depend on various factors such as understanding of the use of marijuana, beliefs about marijuana use, perceived risks of marijuana use, perceived dangers of marijuana use, and perceived obstacles to marijuana use. However, this issue remains a continuous topic of debate and is being used as a variable to study the economic and social impacts of legalizing marijuana, from the perspective of medical personnel in Surat Thani province.

2.4 Concept of Knowledge and Attitude

From studies, academics have defined knowledge and attitude as expressions in some form or another in a state of readiness, in order to support or oppose a situation, institution, person or idea. Sewanaphon (2019) defined knowledge and attitude as a mixture of emotions, thoughts, beliefs, opinions, and knowledge that are expressed towards

things that one likes or dislikes, is satisfied or dissatisfied with, in a state of readiness to support or oppose situations, institutions, individuals, or ideas. In addition, Jirawipas (2021) explained that attitude is a response that determines behavior, positive or negative emotions, and the state of mind that is ready to respond to the responses of that individual. The expression is unique to what happens, like a personal image created. It can be changed. As for behavior, it is motivated by the individual's surroundings.

According to Sornpaisarn (2019), knowledge and attitude refer to the expression of emotions or opinions and feelings of a person towards something or someone, whether it be a person, object, situation, or proposal. Attitude reflects the thoughts and feelings of a person towards an object, environment, or person, including various situations. Attitudes may be influenced by beliefs that affect behavior in response to different situations. Jirawipas (2021) further explains that knowledge and attitude can be broken down into three components: 1. The Cognitive Component, which involves beliefs and thoughts about a person's knowledge or ideas about something. A positive feeling towards something may arise if a person has knowledge and understanding about it, while a lack of knowledge or understanding may result in a negative attitude. 2. The Affective Component, which relates to the emotional connection between a person and something. Different people may have different emotional responses towards the same thing, and 3. The Behavioral Component, which is the manifestation of the cognitive and affective components that influence a person's behavior towards something or someone.

In line with Schiffman and Kanuk (2015), the components of knowledge and attitude can be explained as follows: 1) The Cognitive Component refers to the demonstration of knowledge, perception, and beliefs about something. Knowledge and perception accumulate over time from direct experiences until they become attitudes. 2) The Affective Component is the expression of emotions and feelings towards an idea or something, which is used to evaluate attitudes by rating levels of satisfaction or dissatisfaction. 3) The Conative Component is the consumer behavior towards something or the intention to purchase in order to assess the likelihood of the consumer.

Therefore, knowledge and attitude are the manifestation of feelings and perceptions towards various occurrences, including people, places, and things. These feelings can be categorized into two forms: positive and negative, which are dependent on each person's perception of their environment and their own experiences. Different individual perceptions of situations can lead to different attitudes.

2.5 Economic and Social Impacts

In 2019, Thanee Vorapatr studied the economic impacts of Thailand's status as a marijuana-consuming nation. He collected legal documents and academic articles related to the laws and regulations governing research on the legal reduction of criminal penalties for marijuana use. He found that marijuana is an economic crop that can generate income for the country. However, due to Thailand's legal policy, which restricts its use, many opportunities have been lost compared to other countries such as the Netherlands, Portugal, and Germany. Therefore, reducing criminal penalties for marijuana use will still allow it to be used as a type of drug, but it can also be used for medical treatment, healthcare, drug production, household consumption, and the production of various products for domestic sales and exports. This will help generate income for the country. Reducing criminal penalties related to marijuana will reduce the state's expenses in prevention and suppression, increase access to marijuana under state control, reduce medical expenses, and also provide income to the country by imposing taxes on marijuana-related activities such as production, ownership, and trading.

The politics of the fight for marijuana legalization in Thailand from 2017-2020. Jirawipas (2021) analyzed data from documents and in-depth interviews with key informants involved in the politics of the fight for marijuana legalization in Thailand from 2017-2020. The study consisted of four groups: 1) the state sector, 2) the private sector, 3) civil society, and 4) politics. The concepts and theories of political opportunity structure, resource mobilization, political market, public choice, and interest group were used as a framework for the study. The study found that marijuana was considered a drug for which people were punished for a long time, leading to a predominantly negative attitude and perspective towards it. However, research has shown the benefits of the key substances found in marijuana, changing attitudes and perspectives towards it more positively, which has pushed for law reform and enforcement, and has resulted in the legalization of medical marijuana on February 19, 2021.

Regarding research and education within the framework of the law, it can be said that marijuana legalization in Thailand is semi-legalized and not fully legalized like in many countries where marijuana has been decriminalized and can be used recreationally. The political party used the policy of marijuana legalization to gain support during the March 2019 election and achieved success in the election. The aim was to make marijuana a plant that generates income for the country, leading to the interaction of the government sector, private sector, social sector, and political sector, which are composed of both supporters and opponents with different reasons and beliefs. The supporters

tend to benefit from marijuana legalization, while those who are concerned about the impact of marijuana tend not to support the policy. The government agencies have the main authority to work with other sectors in promoting the economy, allocating social resources, distributing income, maintaining economic freedom, and using state power in cultural dimensions. This is done to promote and support local wisdom, find new marketing channels, promote innovation and service products related to marijuana, and provide health-oriented tourism services.

Dontumprai et al. (2021) has studied the policy of medical marijuana as a plant in his research, collecting and analyzing research on the opinions of free marijuana, which is a political policy of the party in the 2019 election that wanted the state to promote the use of marijuana freely. This has led to a significant wave of support and awareness of marijuana use among the public. However, the evidence supporting the policy of medical marijuana is limited, particularly in the field of alternative medicine, and the negative effects of marijuana are less than other addictive drugs such as cigarettes and nicotine. The impact of the open policy on marijuana will lead to increased use among adolescents, leading to addiction and other negative consequences. Previous research has shown an increase in addiction in many countries due to drug policies. Marijuana can reduce pain symptoms, but it is not as good as nicotine, and it cannot replace standard medication. Moreover, the rate of prescription of addictive drugs is higher among marijuana users than those who do not use it, and the rate of death related to nicotine is also higher in areas with medical marijuana policies.

Jata et al. (2022) studied about the management of the state in promoting medical cannabis in Thailand. The research aims to study the management situation, study the components, and propose a management model. The research shows that Thailand has implemented a policy of managing medical cannabis as a public health policy. There are guidelines and government projects established, and it has an impact on the healthcare system. The goal is to create a supportive social and physical environment for good health and quality of life. The components that affect the state management in promoting medical cannabis in Thailand include 8 areas, as follows: 1) planning, 2) personnel management, 3) training, 4) monitoring and follow-up, 5) supporting resources management, 6) budget management, 7) data and information management, and 8) community organization and proposing management models using ethical principles and the 4-way test to achieve the organization's goals, including vision and the characteristics of good managers.

From studying the economic and social impacts, marijuana is an economically beneficial plant that can provide medical benefits and create economic value for the country. However, due to Thailand's legal policy that restricts its use, opportunities in this area have been lost. Additionally, because marijuana has been considered a drug for a long time, people generally have a negative attitude and perception towards it. However, when there are research studies that demonstrate the benefits of marijuana, it leads to a more positive attitude and perception towards it. This push can result in legal changes to allow for increased access to marijuana. Through the medical marijuana project, promoting the cultivation of marijuana to support the medical marijuana project will reduce government spending in preventing and combating marijuana-related offenses, increasing the chances of treatment for patients in some groups. On the other hand, it may result in unnecessary and excessive use of marijuana, leading to more harmful effects on the body if policies are not strict enough to prevent the potential dangers. Given the above, researchers choose to study the economic and social impacts of opening up freedom regarding marijuana, the perspective of medical professionals including 1) the decision to use marijuana for medical purposes, 2) activities related to marijuana, 3) the penalties and benefits of marijuana, and 4) monitoring and evaluating the use of marijuana to study the economic and social impacts of opening up freedom regarding marijuana, the perspective of medical professionals including their decision to use marijuana for medical purposes, activities related to marijuana, penalties and benefits of marijuana, and monitoring and evaluating the use of marijuana.

2.6 Research Hypothesis

Based on a review of relevant literature and ideas, it can be concluded that in terms of demographic characteristics, gender, work experience, position, and affiliation, as well as opinions on the policy of legalizing marijuana in Thailand, how does it align with the economic and social impacts of legalizing marijuana. The perspectives of medical personnel in Surat Thani province have been studied and two hypotheses have been formulated as follows:

Hypothesis 1: Differences in demographic characteristics have different economic and social impacts on the legalization of marijuana, and these differences have different perspectives among medical personnel in Surat Thani province.

Hypothesis 2: The opinions of medical personnel on the policy of legalizing marijuana in Thailand are related to the economic and social impacts of legalizing marijuana, and these opinions have different perspectives among medical personnel in Surat Thani province.

3. Research Methodology

3.1 Population and Sample

The population used in this research study consists of medical personnel in Surat Thani province, totaling 3,982 individuals. The sample group size was determined using the Krejcie and Morgan's (1970) table of standard sample sizes, which set the proportion of the population of interest to be 0.5 with a margin of error of 5% and a confidence level of 95%. This resulted in a sample size of 351. The researchers increased the sample size by an additional 10% from the original sample group to 400 in order to prevent loss and non-response in the survey. This larger sample group was used to collect data for the study.

3.2 Research Tools

This study is used questionnaires, which are a research tool. The questions, which utilize all variables, were derived from a literature review. Therefore, the content of the questionnaire covers various concepts that have been reviewed in the literature to ensure that they are relevant and aligned with the specified objectives. The questionnaire is divided into four parts as follows:

Part 1 - Questionnaire on the demographic characteristics of the respondents, such as gender, work experience, position, affiliation, and is in the form of a checklist.

Part 2 - Questionnaire on opinions regarding the policy of legalizing marijuana in Thailand, which is in the form of a rating scale with 5 levels.

Part 3 - Questionnaire on the economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani province, which is also in the form of a rating scale with 5 levels.

Part 4 - Questionnaire on additional recommendations regarding the economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani province, which is in the form of open-ended questions.

3.3 Data collection methods

This research study was collected data from two sources as follows:

1. Primary data was collected through questionnaire methods by asking for cooperation from medical personnel in Surat Thani province from hospitals, the Provincial Public Health Office, and health promoting hospitals in the district that have medical personnel within the Surat Thani province area.

2. Secondary data was collected through a study of documents, research databases, academic books and articles related to the subject matter, as well as internet searches to obtain the most complete knowledge possible.

3.4 Statistic Analysis

The researcher conducted data analysis on the collected questionnaire using statistical software and analyzed the data with the following statistical techniques.

3.4.1 Descriptive Statistics
1. Analysis of demographic factors using Frequency distribution and Percentage.
2. Analysis of opinions on the policy of legalizing marijuana in Thailand and its economic and social impact, as well as suggestions from medical professionals in Surat Thani province, using Mean and Standard Deviation.

3.4.2 Descriptive Statistics
1. Use F-Test (One Way ANOVA: Analysis of Variance) to compare the differences in demographic characteristics and opinions on the economic and social impact of legalizing marijuana among medical personnel in Surat Thani province.
2. The opinions on Thailand's policy of legalizing marijuana among medical personnel affect the economic and social impact of legalizing marijuana. The statistics used for analysis is Multiple Regression.

4. Study Results

Analysis of demographic factors from questionnaire respondents' data from a sample group of 400 people. The majority of respondents were female, with 227 people or 56.8%. The remaining 173 people or 43.3% were male. In terms of work experience, 153 people or 38.3% had 6-10 years of experience, 120 people or 30.0% had 11-15 years of experience, 67 people or 16.8% had 16-20 years of experience, and 60 people or 15.0% had 1-5 years of experience. In terms of occupation, 128 people or 32.0% were nurses, 85 people or 21.3% were pharmacists, 77 people or 19.3% were practitioners of Thai traditional medicine, 70 people or 17.5% were doctors, and 40 people or 10.0% were managers/heads of department/heads of faculty, in that order. In terms of affiliation, 134 people or 33.5% were affiliated with public hospitals, 97 people or 24.3% were affiliated with provincial health departments, 89 people or 22.3% were affiliated with universities/colleges, and 80 people or 20.0% were affiliated with hospitals, in that order."

4.1 Analysis on opinions the policy of legalizing marijuana

The result shows that overall, there is a high level of support. The average score is 3.50, based on a scale of 1 to 5. Looking at each aspect individually, the understanding of the use of marijuana has a high level of agreement, with an average score of 3.73. The perception of obstacles related to the use of marijuana also has a high level of agreement, with an average score of 3.66. The perception of the dangers associated with the use of marijuana has a high level of agreement, with an average score of 3.61. The perception of the risks associated with the use of marijuana has a slightly lower level of agreement, with an average score of 3.50. Finally, the belief regarding the understanding of marijuana use has a high level of agreement, with an average score of 2.98. These scores are presented in Table 1.

Table 1: Attitudes towards the policy of legalizing marijuana

Attitudes towards the policy of legalizing marijuana	$\bar{x}$	(S.D.)	Opinion level
Understanding of marijuana used	3.73	0.75	High
Beliefs about perception of marijuana used	2.98	1.04	Moderate
Perceived risks of marijuana used	3.50	0.85	High
Perceived dangers of marijuana used	3.61	0.76	High
Perceived obstacles to marijuana used	3.66	0.69	High
Total	**3.50**	**0.82**	**High**

4.2 Analysis on the economic and social impacts of marijuana legalization from the perspective of medical personnel in Surat Thani

The result shows that overall, there is a high level of opinion regarding the economic and social impacts of marijuana legalization, with an average score of 3.93 on a scale of 1 to 5. In terms of specific aspects, tracking and evaluating the use of marijuana had the highest level of opinion, with an average score of 4.01, followed by the decision to use marijuana for medical purposes and the penalties and benefits of marijuana, both with an average score of 3.92, and activities related to marijuana, with an average score of 3.85, as shown in Table 2.

One of the main objects of the discussion is to set forth a complete and plausible explanation or theory for what was found. No one knows the subject of your research as well as you do; on the other hand, the average reader has no time to re-read the discussion if he/she did not understand it the first time around. You do not want the reader to go through your

paper several times to understand it -he/she simply will not. You have to be clear and logical in what you say and explain it in a way that makes sense the first time around. This is the most difficult part of writing a discussion.

Table 2: Economic and Social Impacts of Marijuana Legalization from the Perspective of Medical Professionals

Economic and Social Impacts of Marijuana Legalization from the Perspective of Medical Professionals	$\bar{x}$	(S.D.)	Opinion level
Decision to use marijuana for medical purposes	3.92	0.62	High
Activities related to marijuana used	3.85	0.60	High
Penalties and benefits of marijuana used	3.92	0.53	High
Monitoring and evaluation of marijuana used	4.01	0.61	High
Total	**3.93**	**0.59**	**High**

Analysis results on the economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani Province show that overall, there is a high level of agreement with an average score of 3.93. Looking at the individual aspects, it was found that opinions on monitoring and evaluating the use of marijuana were high with an average score of 4.01. The decision to use marijuana in medical treatment, penalties, and benefits of marijuana were also highly agreed upon with an average score of 3.92. Lastly, activities related to marijuana had a high level of agreement with an average score of 3.85.

4.3 Analysis of Hypothesized

Regarding the hypothesis 1, which is about the different demographic characteristics affecting the economic and social impacts of legalizing marijuana from the perspective of medical personnel in Surat Thani, the F-test (Analysis of Variance: ANOVA) showed that there is a significant difference in the economic and social impacts based on different demographic factors such as gender, work experience, position, and affiliation. This is in line with the hypothesis at a statistically significant level of 0.05, as shown in Table 3.

Table 3: Testing the correlation between demographic factors and the economic and social impact of marijuana legalization from the perspective of medical professionals

Demographic characteristics	Economic and social impact of marijuana legalization from the perspective of medical professionals
Gender	4.169*
Work experience	4.927*
Position	35.292*
Affiliation	3.371*
* Significant different at level 0.05	

Hypothesis 2 is about the attitudes towards Marijuana Policy in Thailand among Medical Personnel have a Relationship with the Economic and Social Impacts of Marijuana Legalization from the Perspective of Medical Personnel in Surat Thani

According to the analysis of the relationship, it can be concluded that the attitudes towards marijuana policy in Thailand among medical personnel in terms of beliefs about marijuana use, perceived obstacles to using marijuana, perceived risks of using marijuana, and perceived dangers of using marijuana are related to the economic and social impacts of marijuana legalization from the perspective of medical personnel in Surat Thani. This is statistically significant at the 0.05 level, which is in line with the hypothesis. The regression equation is as follows.

$Y = 4.651 - 0.280 (X_1) - 0.357(X_2) + 0.213(X_3) + 0.177(X_4)$

Where X_1 is the beliefs about marijuana used,

X_2 is the perceived obstacles to using marijuana,

X_3 is the perceived risks of using marijuana,

X_4 is the perceived dangers of using marijuana, and

Y is the economic and social impacts of marijuana legalization from the perspective of medical personnel in Surat Thani

Table 4: Results of multiple regression analysis to study medical personnel's attitudes towards the policy of marijuana legalization in Thailand and its economic and social impacts from the perspective of medical personnel

Factor	B	SE	t	Sig.
Constant	4.651	0.163	28.592	0.000
The beliefs about marijuana used (X_1)	-0.280	0.025	-7.488	0.000*
The perceived obstacles to using marijuana (X_2)	-0.357	0.048	4.710	0.000*
The perceived risks of using marijuana (X_3)	0.213	0.045	3.813	0.000*
The perceived dangers of using marijuana (X_4)	0.177	0.047	28.592	0.000*

R square = 0.297 F = 14.536 Sig = 0.000*

4.4 Analysis results of the economic and social impact proposal of legalizing marijuana

After studying opinions and recommendations, it was found that there was a total of 20 respondents out of all survey respondents. It is recommended to establish regulations, limit the quantity, and clearly define the age of marijuana consumers. 8 people identified potential negative health impacts on the population, while 7 people suggested clearly defining work responsibilities for monitoring and evaluating outcomes.

5. Discussion

For From the study on "The Economic and Social Impacts of Marijuana Legalization: Medical Professionals' Perspectives in Surat Thani Province," the researchers presented the following findings based on the study objectives:

1. Opinions on the policy of legalizing marijuana, from the perspective of medical professionals in Surat Thani province, showed a generally high level of support. When considering specific aspects, there was a high level of agreement on understanding the use of marijuana, recognizing the obstacles associated with using marijuana, understanding the risks associated with using marijuana, and assessing the risks of using marijuana. In terms of beliefs about the use of marijuana, the opinions were at a moderate level of agreement.

Regarding understanding of the use of marijuana, it is found that the benefits of using marijuana depend on the differences of each individual. This may be because the public should understand the correct and appropriate way to use marijuana. The use of marijuana has short-term and long-term impacts on politics, society, and the economy. Although marijuana use may have some benefits, it is important to consider the impacts on both individuals and society as a whole, such as respiratory system problems and abnormal mental health. This is consistent with the study conducted by Suphanchaimat and Pavasuthipaisit (2018) on the benefits and risks that may arise from the medical use of marijuana and the legalization of marijuana. It was found that the level of openness to the use of marijuana varies in different countries, ranging from allowing the use of drugs produced from marijuana extracts as supplements or for patients who do not respond to normal treatment, but the impacts on the central nervous system, other organs, and society must be considered.

Regarding beliefs and perceptions about the use of marijuana, it has been found that some believe that marijuana has medical benefits and can be used to manage patients' pain and illnesses. Additionally, some believe that using marijuana reduces one's ability to learn and remember, and that it leads to the use of stronger drugs for treatment. This belief may be due to the fact that many people experience a sense of euphoria or "highness" after using marijuana. Furthermore, there is increasing research that supports the use of marijuana for the treatment of certain illnesses. Ritmoontree and Kanato (2017) study on the effects of marijuana use found that learning from experience in communities led to the belief that marijuana is a body-boosting drug, relieves physical pains and aches, is a good sleep aid, and can be used as a food ingredient to enhance flavor. Sewanaphon (2019) study on the legal issues surrounding marijuana regulation found that the use of

herbal medicine, including marijuana, is often used by individuals who have not been able to find relief from current medical treatments, and that marijuana is a natural remedy that can relieve symptoms or cure illnesses.

On the topic of risks associated with marijuana use, it has been found that recreational marijuana use can be a starting point for using other addictive drugs, possibly because the media often presents a view of marijuana that emphasizes only its benefits in order to get the public to accept and understand the idea of legalizing marijuana. In reality, marijuana can create negative risks in terms of learning and work, and these negative consequences must be considered. Efforts should be made to promote the safe use of marijuana and to take responsibility for the risks associated with its use, especially in the context of legalization and endorsement of marijuana use that is legal. This is consistent with On-kail and Suwannaphant (2020) who studied social factors related to knowledge about marijuana use among health volunteers in Khon Kaen province and found that factors related to knowledge about marijuana use among health volunteers in Khon Kaen province include receiving information about marijuana use and social welfare factors in terms of participation and responsibility at a high and medium level, respectively. This is also consistent with Chiangrang and Muangtham (2021), who studied the guidelines for controlling marijuana use in Thailand and found that many countries around the world are beginning to relax their laws to allow for medical, recreational, and commercial use of marijuana. However, in Thailand, it is currently only allowed for medical use to treat diseases.

Regarding the perception of the dangers of marijuana use, it was found that the media has an impact on public awareness of the risks associated with using marijuana. This may be because the majority of the public is aware that marijuana can cause addiction but believes that its use does not pose a risk of death, and thinks that the government should implement appropriate policies to limit the use of marijuana to prevent harm to the public, including policies that limit access to marijuana for certain groups such as youth and restrictions on driving under the influence of marijuana. Scientific evidence and research should be relied upon when making decisions about the legalization and regulation of marijuana. In line with the study on the toxicology of marijuana, it was found that both acute and chronic poisoning from marijuana can occur, such as increased blood flow to the brain, increased heart rate, and increased blood pressure. However, sometimes there may be low blood pressure due to changes in posture. The dangers of marijuana use can be seen in both physical and mental health.

In terms of perception of obstacles related to marijuana use, it is found that the obstacle to marijuana use is the control of the amount of marijuana used by the public. This may be because it is difficult to use marijuana for medical treatment or to relieve symptoms, and it is understood that the obstacle to marijuana use is the inability to fully utilize marijuana for both medical and recreational purposes. Efforts should be made to reduce barriers to use for those who may benefit from medical marijuana use, while promoting safe and responsible use of the drug. This is consistent with Sangkham (2020) study on attitudes and meanings of marijuana in Thai society, which found that Thai people have the right to access this marijuana and that they have had to fight against the law to do so. Social movements and decision-making and public participation are crucial processes for determining policy. Additionally, Chiangrang and Muangtham (2021) study on setting guidelines for controlling marijuana use in Thailand found that allowing individuals to possess a certain amount of marijuana would prevent Thailand from losing the opportunity to benefit from this plant.

2. The economic and social impacts of legalizing marijuana are widely discussed among medical professionals in Surat Thani province, and there is a high level of opinion on various aspects, including monitoring and evaluating the use of marijuana, making decisions on medical marijuana use, the penalties, and benefits of marijuana, and conducting activities related to marijuana.

Regarding the decision-making on medical marijuana use, it is found that the decision to research and develop medical marijuana should align with the legalization of marijuana for economic and social benefits. The involvement of stakeholders in the decision-making process for the development of medical marijuana should ensure a balance of factors to ensure maximum benefits while minimizing risks and negative consequences. According to Sangkham (2020), who studied the attitudes and meanings of marijuana in Thai society, new social movements related to marijuana rely heavily on public participation in decision-making processes to establish policies.

The activities related to marijuana have been found to create benefits for large-scale business operators when used for medical purposes, possibly due to the significant cost of processing large amounts of marijuana for medical use, resulting in a profitable investment for large-scale operators in the industry. With the liberalization of marijuana, the use of medical marijuana has increased, so clear regulations should be established to prevent the dangers that may arise from the misuse of marijuana. In addition, organizations should be established with clear roles and responsibilities, and activities to conserve the environment affected by the liberalization of marijuana should be implemented. In line with Sangworng (2020) study on the opinions of community enterprise groups in Nong Khai Province regarding the policy of marijuana liberalization, it was found that

activities should be promoted to promote actual activities. Each step of the activities should involve clear meetings related to the investment of the community enterprise group. A strict control plan should be planned for activities related to marijuana.

The advantages and disadvantages of marijuana have been found, and it has been suggested that the government should establish clear laws for the medical use of marijuana by those who will possess it, and that marijuana for medical purposes should be regulated by laws and overseeing agencies. This may be because medical marijuana may be addictive if used in large quantities, and the supervision needs to be more stringent. The control of receiving, dispensing, and storing marijuana must be monitored closely. The use of marijuana needs to be balanced between the risks and benefits that may arise. The establishment of clear regulations and laws is necessary to ensure the safe and legal use of drugs, especially in the case of medical marijuana. Upan (2018) conducted a study on the legal status and control measures for the use of marijuana in Thailand and found that marijuana is classified as a narcotic drug under the Narcotics Act, which imposes penalties for drug addiction as before. However, if the use of marijuana is under the limited conditions stipulated by the law in advance, the use of marijuana for benefits would be a legal act and the offender would not be liable to criminal punishment. Suphanchaimat and Pavasuthipaisit (2018) also conducted a study on the benefits and disadvantages that may arise from the use of marijuana for medical purposes and the liberalization of marijuana use. The study found that the openness of marijuana use varies in different countries, ranging from allowing the use of drugs produced from marijuana extracts as supplements or for patients with certain diseases, to legalizing the use of marijuana for recreational purposes.

The tracking and evaluation of marijuana use has been found to play a role in monitoring and assessing the socioeconomic and societal impacts of medical marijuana use, to cater to the policy of liberalizing marijuana. This may be due to the involvement in establishing committees for tracking and evaluating the use of medical marijuana and the use of funds from medical marijuana organizations. The establishment of efficient committees and groups and the monitoring of important indicators by the government and other relevant agencies can guarantee the safety and effectiveness of medical marijuana use. Sangworng (2020) conducted a study on the opinions of a community enterprise group in Nong Khai province regarding the policy of liberalizing marijuana and found that the tracking and evaluation process should involve the appointment of an impartial, fair, and transparent committee, and should be promoted seriously and clearly to ensure fairness.

3. The economic and social impacts of legalizing marijuana. Respondents suggested that regulations should be put in place to limit the quantity and age of marijuana consumers clearly. They also highlighted the negative impacts on public health and the need for clear guidelines for monitoring and evaluation. Policies that have clear regulations and guidelines are essential to ensure that the legalization of marijuana is well managed, reduces health risks, and ensures public safety. These policies may include restricting high-risk groups from consuming marijuana and enforcing strict regulations for packaging and labeling marijuana products to ensure the safety of vulnerable populations such as children, the elderly, and pregnant women. Additionally, legalizing marijuana can promote it as an economic plant, generating revenue for the government, which can be used as a fund for education, health care, and other public services.

6. Recommendations

1. Based on the study, policies, and practices for the safe and effective use of medical marijuana should be developed, while also considering the potential negative impact on public health and society as a whole.

2. Continuous training should be provided to medical personnel on good practices and research related to the use and management of medical marijuana to ensure that patients receive the highest quality care possible from the legalization of medical marijuana.

3. Based on the study of the economic and social impacts of the legalization of marijuana, particularly in terms of its impact on employment rates, crime rates, and public safety, this information should be used to inform policy and regulatory decisions.

As this research may not have covered all aspects, the researcher would like to propose the following suggestions for future research:

1. In the next study, it is recommended to collect a larger and more diverse sample of medical personnel, including personnel from different regions, hospital types, and specialties. This will ensure that there are more representative samples and a better understanding of the perspectives on the legalization of marijuana.

2. Expand the scope of the study to include the perspectives of other stakeholders such as patients, legal authorities, policymakers, and the general public. This will provide a more comprehensive picture of the economic and social impacts of the legalization of marijuana.

3. Use a mixed-method approach that combines quantitative and qualitative data collection and analysis methods. This will provide a more detailed and in-depth understanding of the economic and social impacts of the legalization of marijuana in Surat Thani province and help identify factors that may influence these impacts.

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