



The Attitude Of Thai People Toward Covid-19 Vaccination

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Abstract

One of the key successes to battle Coronavirus pandemic is vaccination. However, there is hesitancy of Covid-19 vaccine among Thai people due to doubt in its efficacy and side effects. This study aims to explore the attitude of Thai people toward Covid-19 vaccine regarding its efficacy and side effects. Cross-sectional study was conducted with 634 cases by using an online questionnaire. The content validity was checked by the experts and reliability was 0.708. Most participants are female (66.3%), mean age is 44.4 (± 12.205). 72.1% were vaccinated with Sinovac (48.6%), AstraZeneca (46.6%), Sinopharm (3.3%) and combined types of vaccine (1.5%). 27.9% have not been vaccinated regarding age less than 18 years old (26.0%), unable to reserve the vaccine (16.9%), medical limitation (2.3%), and undesirable to get the vaccine (54.8%) because fear of its side effects and unsure of its efficacy. The participants received information about fear side effects of Covid-19 vaccine from social media (3.23 ± 1.312), which caused worriedness of vaccine side effects and efficacy. They thought that Thailand has not well managed vaccination for Thai people (1.87 ± 1.022) especially the distribution of vaccines (1.84 ± 1.018) and the efficacy of provided vaccines (2.22 ± 1.172). In conclusion, people hesitate to receive the Covid-19 vaccine due to uncertainty about its efficacy and fear side effects. Social media should play a crucial role in disseminating positive information to encourage people to get the vaccine.

Keywords: Covid-19 vaccine, vaccine hesitancy, vaccination, vaccine efficacy, vaccine side effect

Introduction

Since 2019, COVID-19 pandemic has produced enormous effects to all people around the world causing 517,082,431 infected cases, even though, 471,771,030 were recovered but 6,276,050 cases of world population were deaths. The Coronavirus has badly hit Thailand as well as other countries. There were 4,324,850 infected, 4,204,483 recovered, and 29,091 deaths cases¹ although several strictly preventive measures have been implemented.

Vaccination and the advancement of vaccine production are the most main efficient method of protecting infectious diseases which has a positive effect on public health though preventing the spreading and transmitting of communicable diseases

to the risky or vulnerable people such as children, elderly, or immunocompromised patients². As well as Coronavirus infection, vaccination has been recognized as the best strategy to ending the COVID-19 pandemic. World Health Organization has extremely encouraged equitable access to safe and effective vaccines to all continents of the world³. Thailand has administered about 110 million doses of COVID-19 vaccine and about 70% are fully vaccinated, the rate is about 375,000 doses per day. The majority of COVID-19 vaccines provided in Thailand are including Sinovac, AstraZeneca, and Sinopharm⁴.

Vaccine hesitancy is rising public health problem worldwide which is negative effect to the consolidation of immunization program achievements and vaccine-purposed diseases².

Hesitancy has been defined as a “delay in acceptance or refusal of vaccination despite the availability of vaccination services”⁵. Anti-vaccination attitudes, behavior, and relevant misconceptions are widely worldwide. The reasons for COVID-19 vaccination hesitancy have various reasons which varied and unclear. Someone anxious regarding the efficacy and safety of the vaccine, trust in social media so high that unbelieve in scientists, medics, and biomedical science, as well as low trust in government were all recognized COVID-19 vaccine^{2,5}. Controlling the spread young people with eligible people. COVID-19 vaccine will have a huge influence on everyone's immunization. Increasing vaccination rates must consider the reluctance of parents⁶. This research aimed to explore the attitude of Thai people toward COVID-19 vaccine regarding its efficacy and side effects.

Materials and methods

Research design and participants

A Cross-sectional survey research was conducted in June 2021 by using online questionnaire platform. The participants were Thai population recruited by convenient sampling whose age more than 15 years old and be able to read and understand Thai language.

Measurement

The online questionnaire was constructed by the researcher and check content validity by experts. The Cronbach's alpha was tested for reliability with 0.708. The questionnaire consisted of four parts including (1) general information, (2) COVID-19 vaccination information, (3) side effects of COVID-19 vaccine, and (4) attitude toward COVID-19 vaccination.

The questions for general information were asked for Socio demographic characteristics including age, gender, educational level, and occupation.

The questions for COVID-19 vaccination information were including vaccination history, types of vaccine, the figures of vaccination, and the reasons of unvaccinated and vaccine refusal.

The questions for side effects of COVID-19 vaccine including the symptoms after vaccination and period of onset of side effects.

The questions for attitude toward COVID-19 vaccination were asked and rated the scale from 1-5 regarding the opinion of the participants about the requirement to receive the vaccine, the safety of COVID-19 vaccine, anxiety of vaccine's side effects, vaccine effectiveness, vaccine accessibility for Thai people, the impacts of social media toward vaccination, the purchasing of effective vaccine for Thai people, the effective of vaccine transportation and distribution across the country, the effective of vaccine management system, and the vaccination is the solution to ending the pandemic.

Data collection

The data collection was done in June 2021 by distributing the online questionnaire via social media and LINE application. The participants were informed their rights of voluntary participation and withdrawal from the study including the confidentiality of data collection, analysis and presentation.

Data Analysis

Data analyses were carried out by IBM Statistics version 27. Socio demographic characteristics and other responses of participants were used descriptive statistics for analysis of mean (SD) for continuous data.

Results

The data collection has been done by online questionnaire during June 2021. There were 634 participants responded to this survey which 33.1% were male, 66.3% were female, and 0.6% were not prefer to say for their gender, respectively. The age of participants were 40-59 years old (71.6%), 20-39 years old (13.7%), lower than 19 years old (10.1%), and more than 60 years old (4.6%), respectively. Moreover, there were bachelor's degree that was the highest percentage at 51.3%, while the lowest percentage was primary school at 0.5% and there were secondary school, high school, college and higher than bachelor's degree at 2.1%, 9.8%, 0.9% and 35.4%, respectively. According to occupation, in the top three stand out, the first occupation was civil servant at 34.2%. The second was employee at 25.6%. Lastly, there was student at 10.1% (**Table 1**).

Table 1: Socio demographic characteristics

Socio demographic characteristics	Numbers (n)	Percentage (%)
Gender		
- Male	210	33.1
- Female	420	66.3
- Not prefer to say	4	0.6
Age (years old)		
- Lower than 19	64	10.1
- 20-39	87	13.7
- 40-59	454	71.6
- More than 60	29	4.6
Educational level		
- Primary School	3	0.5
- Secondary School	13	2.1
- High School	62	9.8
- College	6	0.9
- Bachelor's Degree	325	51.3
- Higher than Bachelor's Degree	225	35.4
Occupation		
- Civil servant	217	34.2
- Businessman	63	9.9
- Employee	162	25.6
- Farmer	9	1.4
- Retirement	12	1.9
- Seller	35	5.5
- Student	64	10.1
- State enterprise	6	1.0
- Freelance	13	2.1
- No job	49	7.7
- Not specific	4	0.6

Participants provided the vaccination information. The one of significant information was vaccination history by divided into received and not received. For people who received was at 72.1%, while people who not received was 27.9.% In addition, the survey mentioned the types of vaccines by which most people chose

Sinovac for 48.6%. The rest were AstraZeneca for 46.6%, Sinopharm for 3.3% and combined types of vaccine for 1.5%. This survey also illustrated times of vaccine including first dose, second dose and third dose at 52.1%, 47.0% and 0.9%, respectively. Some people were not vaccinated by their own reasons. There were age less than 18 years old (26.0%), unable to reserve the vaccine (16.9%), have not made an appointment yet (37.3%), medical limitation (2.3%), and undesirable to get the vaccine (17.5%) because fear of its side effects and unsure of its efficacy. Typically, the onset of symptoms after vaccination was normal, but the level of severity be different. This began from no symptom at 33.7%, mild side effects at 64.1% and severe side effects at 2.2% (Table 2).

Table 2: Vaccination information

Vaccination information	Numbers (n)	Percentage (%)
Vaccination history		
- Received	457	72.1
- Not receive	177	27.9
Types of vaccine		
- Sinovac	222	48.6
- AstraZeneca	213	46.6
- Sinopharm	15	3.3
- Sinovac and AstraZeneca	5	1.1
- AstraZeneca and other	1	0.2
- Sinovac and Sinopharm	1	0.2
Times of vaccination		
- First dose	238	52.1
- Second dose	215	47.0
- Third dose	4	0.9
the reasons of unvaccinated		
- Age less than 18	46	26.0
- Unable to reserve the vaccine	30	16.9
- Not appointment yet	66	37.3
- Medical limitation	4	2.3
- Unsure of vaccine efficiency	21	11.9
- Fear of vaccine side effects	8	4.5
- Fear of deadly side effects	2	1.1
Symptoms after vaccination		
- No symptom		33.7
- Mild side effects	154	64.1
- Severe side effects		2.2

Vaccination information	Numbers (n)	Percentage (%)
	293	
	10	

The significant information illustrates attitude of Thai people toward COVID-19 vaccination. There was a variety of questions including requirement to receive the vaccine, the safety of COVID-19 vaccine, anxiety of vaccine’s side effects, vaccine effectiveness, vaccine accessibility for Thai people, the impacts of social media toward vaccination, the purchasing of effective vaccine for Thai people, the effective of vaccine transportation and distribution across the country, the effective of vaccine management system, and the vaccination was the solution to ending the pandemic had mean at 4.61, 3.65, 2.78, 2.78, 3.21, 3.04, 3.82, 3.23, 2.22, 3.03, 1.84, 1.87 and 3.59, respectively, while S.D. values were at .812, 1.012, 1.052, 1.361, 1.146, 1.097, 1.312, 1.129, 1.018, 1.022 and 1.198, respectively (Table 3).

Table 3: Attitude of Thai people toward COVID-19 vaccination

Attitude toward COVID-19 vaccination	1		2		3		4		5		Mean	S.D.
	n	%	n	%	n	%	n	%	n	%		
How much do you need to get COVID-19 vaccination?	7	1.1	17	2.7	40	6.3	91	14.3	479	75.6	4.61	.812
In your opinion, how safe of COVID-19 vaccine?	30	4.7	33	5.2	195	30.8	247	39.0	129	20.3	3.65	1.012
In your opinion, how severe of COVID-19 vaccine side effects?	94	14.8	128	20.2	265	41.8	120	18.9	27	4.3	2.78	1.052
How worried are you about getting vaccinated?	158	24.9	113	17.8	162	25.6	115	18.1	86	13.6	2.78	1.361
How much confidence is in the effectiveness of the COVID-19	72	11.4	70	11.0	225	35.5	189	29.8	78	12.3	3.21	1.146

Attitude toward COVID-19 vaccination	1		2		3		4		5		Mean	S.D.
	n	%	n	%	n	%	n	%	n	%		
vaccine?												
In your opinion, how much of COVID-19 vaccine can protect yourself from COVID-19 infection?	75	11.8	95	15.0	244	38.5	171	27.0	49	7.7	3.04	1.097
Do you think all Thai people have easily accessed the COVID-19 vaccine?	57	9.0	65	10.2	105	16.6	116	18.3	291	45.9	3.82	1.347
Do you think the news from the media has influenced you to fear getting vaccinated against COVID-19?	87	13.7	90	14.2	182	28.7	138	21.8	137	21.6	3.23	1.312
Do you think Thailand has purchased the efficient COVID-19 vaccine?	234	36.9	146	23.0	160	25.3	68	10.7	26	4.1	2.22	1.172
Do you think Thailand has an effective transportation and storage of the COVID-19 vaccine?	78	12.3	104	16.4	231	36.4	164	25.9	57	9.0	3.03	1.129
Do you think Thailand has an effective	315	49.7	164	25.9	111	17.5	30	4.7	14	2.2	1.84	1.018

Attitude toward COVID-19 vaccination	1		2		3		4		5		Mean	S.D.
	n	%	n	%	n	%	n	%	n	%		
distribution system for the COVID-19 vaccine to all Thai people?												
Do you think Thailand has an effective management system for COVID-19 vaccine?	306	48.3	164	25.9	120	18.9	30	4.7	14	2.2	1.87	1.022
Do you think that the COVID-19 vaccination will solve the problem of this COVID-19 outbreak?	44	6.9	66	10.4	174	27.5	170	26.8	180	28.4	3.59	1.198

Discussion

This survey aimed to explore the attitude of Thai people toward Covid-19 vaccine regarding its efficacy and side effects. Furthermore, the results in this study demonstrated that the percentage of COVID-19 vaccine acceptance in general people was 72.1% which corresponds to the narrative review from 15 studies entitled “Vaccine hesitancy in the era of COVID-19” by Troiano (2021) which found that the vaccine acceptance in general people was 77.6%⁷.

One of the most significant information was vaccination history. We are able to explore that people who received Sinovac 35%, AstraZeneca 33.6%, Sinopharm 2.4%, while “The ASEAN COVID-19 vaccines for all” research provides information concerning Thailand received doses of vaccine from COVAX AstraZeneca-Vaxzevria (donated by UK) 14.2%, Pfizer BioNTech-Comirnaty (donated by USA) 51.5%, Sinovac-CoronaVac (donated by China) 34.3%⁸.

We earned information that most people refuse COVID-19 vaccine as concern regarding safety and efficiency of COVID-19 vaccine⁷. Furthermore, Attitude of Thai people toward COVID-19 vaccination associated with safety and efficiency which has mean value at 3.65 and 3.21, respectively.

Conclusion

People hesitate to receive the Covid-19 vaccine due to uncertainty about its efficacy and fear of its side effects. Social media should play a crucial role in disseminating positive information regarding Covid-19 vaccination to encourage people for vaccination. This survey will be beneficial for all healthcare providers to promote attitude of people towards vaccination in order to manage the pandemic.

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